Alternate Wetting & Drying Rating Framework V1.0

WHITEPAPER

Sylvera

Executive Summary

This document sets out the V1.0 Rating framework logic for the Alternate Wetting & Drying (AWD) project type.

Alternate Wetting & Drying (AWD) projects reduce methane emissions from irrigated rice by periodically draining flooded paddies during the growing season instead of keeping them continuously flooded. Continuous flooding creates the anaerobic soil conditions in which bacteria generate methane (CH_4); introducing dry-down periods reintroduces oxygen and suppresses methane formation while maintaining rice yields. Credits are generated from the difference between methane emitted under a continuously flooded baseline and the project's intermittently flooded water regime.

Sylvera assesses AWD projects across four pillars — **Carbon Accounting, Additionality, Permanence**, and **Safeguarding & Co-Benefits**. The first three combine into an overall **Rating Grade from AAA to D**; Safeguarding & Co-Benefits is reported alongside but not folded into the grade.

For each component, this whitepaper provides a **description**, the **scoring logic** used to derive a quality score, and the **data inputs** required to apply it.

Rating Grade

Pt.1

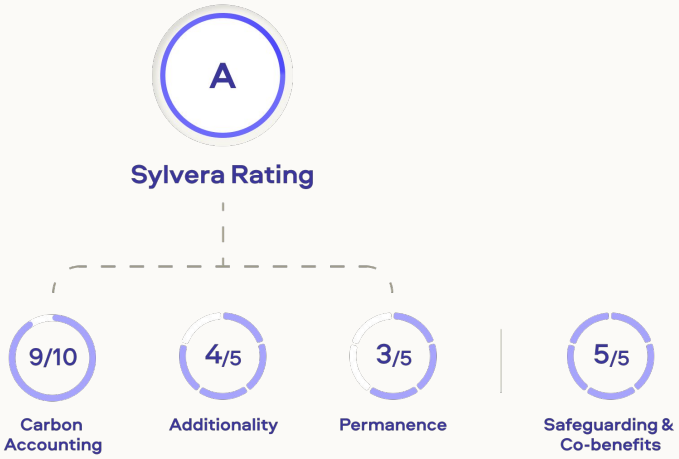
Rating Grade

AAA — D

Description

The eight point **Rating Grade** spans **AAA–D**, reflecting carbon integrity — the likelihood that each credit represents 1 tCO2e reduced. The **Rating Grade** combines each scoring pillar, **Carbon Accounting**, **Additionality** and **Permanence,** mapping these against Ratings matrices to ensure that fundamental flaws or underperformance in key areas drives integrity insights.

A **Safeguarding and Co-Benefits** scoring pillar is also calculated to assess beyond-carbon aspects but is not factored into the **Rating Grade.**



Carbon Accounting	Additionality	Permanence	Safeguarding & Co-Benefits
Assesses over-crediting risk — whether the project's methane reductions are accurately monitored and conservatively quantified.	Assesses the likelihood that the AWD activity would not have occurred without carbon finance.	Evaluates reversal risk; because AWD avoids methane emissions, the reductions are permanent and risk is very low.	Assesses community and biodiversity impacts — safeguards against harm and additional co-benefits.

Notes:

High scores indicate low risk. Carbon Accounting scored on 1-10 scale; all other pillars scored on 1-5 scale.
(10 = very low risk; 1 = very high risk).
(5 = very low risk; 1 = very high risk).

Rating Grade

Pt.2

Scoring Logic - Ratings matrices

Step 1: The unrounded (1-10) **Additionality** and **Carbon Accounting** scores are combined to create a **"Carbon Impact"** score. This score represents the maximum impact of a project, or the likelihood that each claimed credit represents an accurately quantified, and additional tCO2e reduced, assuming there is no risk of reversal.

Carbon Impact

Carbon Accounting \ Additionality	1	2	3	4	5	6	7	8	9	10
1	1	1	1	1	1	1	1	1	1	1
2	1	2	2	2	2	2	2	2	2	2
3	1	2	3	3	3	3	3	3	4	4
4	1	2	3	4	4	4	4	4	5	5
5	1	2	3	4	5	5	5	5	5	5
6	1	2	3	4	5	5	6	6	6	6
7	1	2	3	4	5	6	7	7	7	7
8	1	2	4	5	5	6	7	8	8	8
9	1	2	4	5	5	7	8	9	9	9
10	1	2	4	5	5	7	8	9	9	10

Carbon Accounting

Additionality

Step 2: The **Carbon Impact** and unrounded **Permanence** scores are combined to produce the **Rating Grade,** representing the likelihood that one credit represents one tCO2e reduced for an atmospherically significant amount of time.

Rating

Carbon Impact (Carbon Accounting x Additionality) \ Permanence	1	2	3	4	5	6	7	8	9	10
1	D	D	D	D	D	D	D	D	D	D
2	D	D	D	D	D	D	D	D	D	D
3	D	D	C	C	C	C	C	C	C	C
4	D	C	C	B	B	B	B	B	B	B
5	D	B	B	B	BB	BB	BB	BB	BB	BB
6	D	B	B	BB	BB	BBB	BBB	BBB	BBB	BBB
7	D	B	B	BB	BBB	BBB	BBB	BBB	BBB	BBB
8	D	B	B	BB	BBB	A	A	A	A	A
9	D	B	B	BB	BBB	A	A	A	AA	AA
10	D	B	B	BB	BBB	AA	AA	AA	AA	AAA

Carbon Impact (Carbon Accounting x Additionality)

Permanence

Carbon Accounting

Description

This component assesses the over-crediting risk of the project — whether the emission reductions from AWD activities are accurately reported and conservatively quantified. A project scores well where its monitoring of water management and methane and nitrous oxide fluxes is robust, and where its carbon accounting choices are evidence-based and conservative.

Scoring Logic

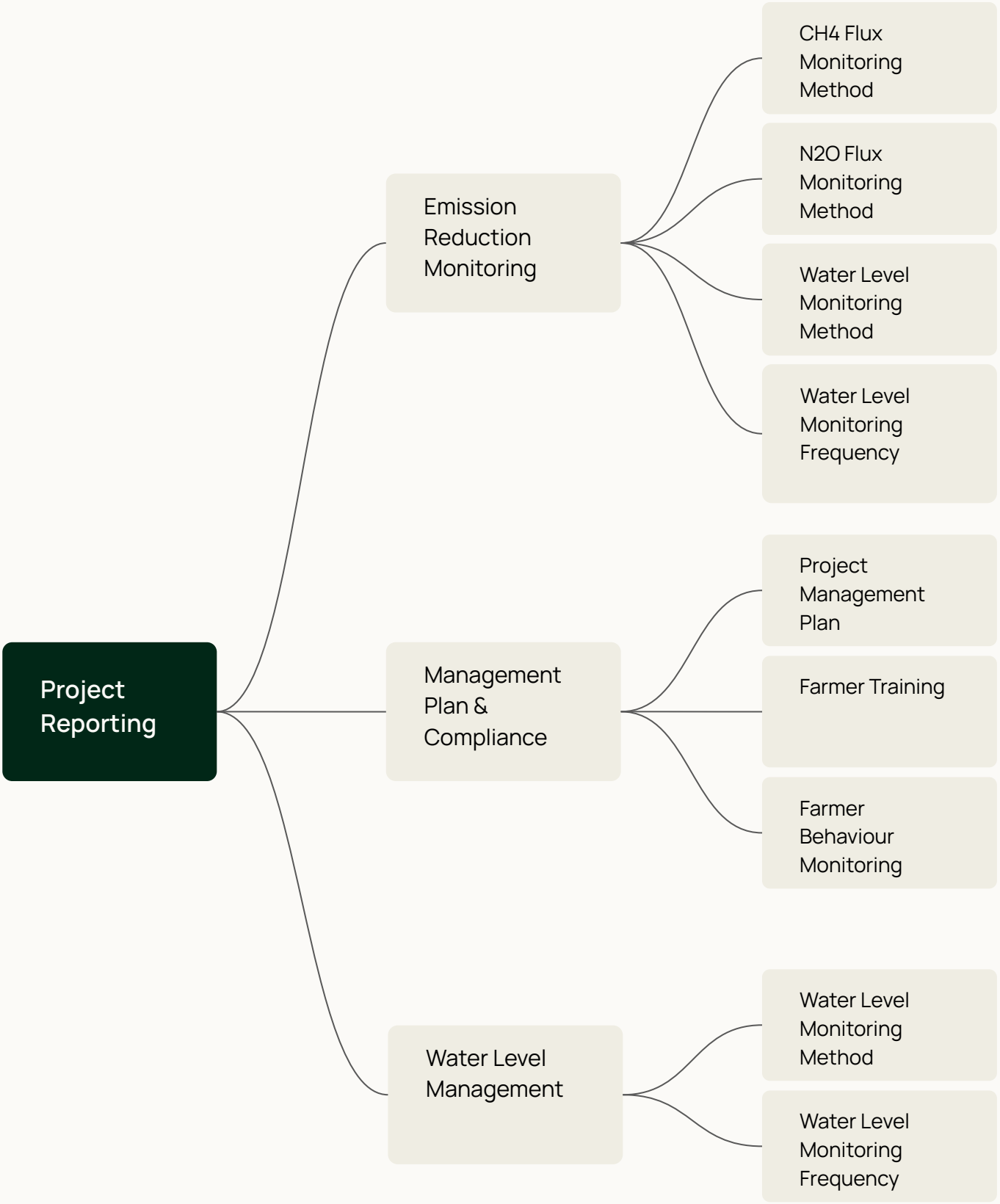
The Carbon Accounting score combines two equally weighted components: **Project Reporting** and **Carbon Modeling**.

Project Reporting assesses how reliably the project measures its activity and resulting emission reductions in the field — methane and nitrous oxide flux monitoring, the method and frequency of water-level monitoring, and the management plan covering farmer training and behaviour monitoring.

Carbon Modeling assesses the accounting choices used to quantify net emission reductions — the continuously flooded baseline assumptions, accounting boundaries (e.g. nitrous oxide and soil organic carbon), baseline and project emission factors, global warming potential values, leakage, and uncertainty deductions.

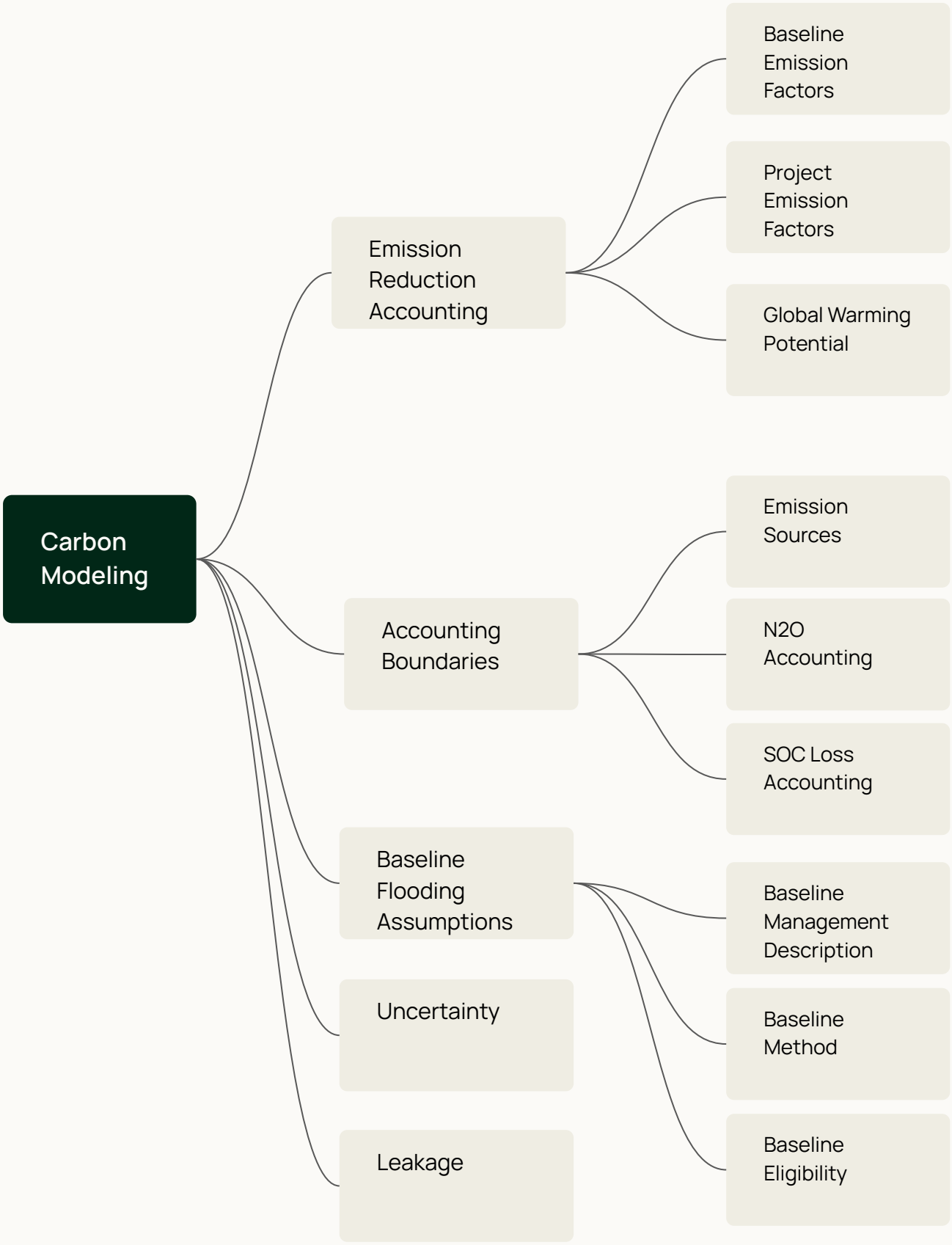
Carbon Accounting

Pt.1



Carbon Accounting

Pt.2



Project Reporting

CARBON ACCOUNTING

Description

This component assesses the strength and accuracy of methods used to monitor the implementation of AWD activities and measuring the resulting methane and nitrous oxide gas fluxes following the implementation of AWD activities. . Robust, frequent and well-evidenced monitoring lowers the risk that reported emission reductions diverge from the actual implementation of AWD activities in the paddies.

Scoring Logic

The Project Reporting score combines **Emission Reduction Monitoring** (how methane and nitrous oxide fluxes and paddy water levels are monitored — both method and frequency), **Management Plan & Compliance** (the project management plan, farmer training and monitoring of farmer behaviour), and **Water Management Quality** (whether the water regime applied represents a genuine alternate wetting and drying practice). Each component is scored for accuracy, conservativeness and the strength of supporting evidence. The overall score combines these components in a weighted average,

Emission Reduction Monitoring

CARBON ACCOUNTING – PROJECT REPORTING

Description

This sub-component assesses the method used to monitor gas fluxes (CH_4 and N_2O) resulting from the implementation of AWD activities. This component considers whether direct gas chamber measurements are taken, and the quality of such measurement regimes, or if the uses a modeled approach, applying emission factors (EF) to quantify gas fluxes.

Scoring Logic

The **Emission Reduction Monitoring** score combines the **CH_4 Flux Monitoring Method**, the **N_2O Flux Monitoring Method**, and the method and frequency of **Water Level Monitoring**. Higher scores are awarded where fluxes and water levels are measured with frequent, direct measurement methods that are applied consistently across the project area and follow robust, well-evidence sampling and data-collection regimes, lowering the risk of over-stated reductions.

CH_4 Flux Monitoring Method

CARBON ACCOUNTING – PROJECT REPORTING – EMISSION REDUCTION MONITORING

Description

The method used to measure CH_4 gas fluxes. Methods range from direct in-field measurement (e.g. closed-chamber or eddy-covariance flux sampling) to modelled estimates calibrated to local soil, climate and water-management conditions. Direct gas chamber measurements are considered more accurate than those relying on EFs, provided measurement regimes are be robust.

Scoring Logic

The **CH_4 Flux Monitoring Method** score reflects how directly and reliably methane emissions are measured. **Direct, field-level flux measurement** across all relevant strata — for example closed-chamber sampling with strong spatial and temporal coverage — scores highest. **Calibrated models** validated against local measurement score in the middle range, and measure-and-model or transformed approaches (where not all strata are directly monitored) score lower as more is inferred. **Default or uncalibrated factors** score lowest, carrying the greatest risk that the methane reduction is misstated. The assessment also considers how consistently the method is applied across the project area and over the crediting period.

Data Inputs

Input name	Description
CH_4 flux monitoring method	Method used to quantify the project's methane flux — e.g., default factors; direct gas-chamber measurement measure-and-model; etc..

N_2O Flux Monitoring Method

Description

The method used to measure N_2O gas fluxes. Dry-down periods can increase N_2O emissions even as methane falls, so monitoring N_2O is essential to ensure the project's net emission reductions are not over-stated. Direct gas chamber measurements are considered more accurate than those relying on EFs, provided measurement regimes are be robust.

Scoring Logic

The **N_2O Flux Monitoring Method** score rewards projects that explicitly monitor or conservatively account for nitrous oxide. **Direct measurement** of N_2O fluxes scores highest; **calibrated modelling** validated against local data scores moderately; and transformed or partial measurement scores lower. **Default or uncalibrated factors** score lowest, carrying the greatest risk that the methane reduction is misstated The assessment weighs both the rigour of the method and whether any assumptions made are demonstrably conservative.

If a project omits N_2O from carbon accounting, this component is nullified and not included in the **Emission Reduction Monitoring** score. The risk of omitting N_2O is addressed in the **Carbon Modeling** component.

Data Inputs

Input name	Description
N_2O flux monitoring method	Method used to quantify nitrous oxide flux — e.g., default factors; direct gas-chamber measurement; measure-and-model; etc.

Water Level Management

Description

Water level is the core activity variable in AWD — methane suppression, and potential nitrous oxide emissions and emissions from soil organic carbon losses increases depends on how far and how often the soil is allowed to dry. This sub-component assesses the approach used to monitor drying and re-flooding events. Ensuring the water management plan is carried out as described, and delivers the expected emissions reductions requires robust monitoring, supported by clear evidence of drying and re-flooding events, and water levels.

Scoring Logic

The **Water Level Management** score reflects how reliably the project evidences its water regime following the adoption of AWD activities — the core driver of methane suppression and potential increases from other emission sources.

The score considers the method used to monitor water levels, and the frequency at which measurements are taken, combining the **Water Level Monitoring Method** score and the **Water Level Monitoring Frequency** score.

Water Level Monitoring Method

Description

The sub-component assesses the approach to monitor implementation of drying and flooding events. Methods that provide reliable assessments of water levels (e.g., digital sensors, perforated tubes with graduated intervals) and granular site coverage (e.g., field level monitoring with field identification) provide stronger confidence that AWD activities are accurately monitored and reported, and the subsequent effect on emissions can be correctly measured.

Scoring Logic

The **Water Level Monitoring Method** score reflects how reliably the project evidences its water regime following the adoption of AWD activities — the core driver of methane suppression and potential increases from other emission sources. **Digital sensors**, or frequent readings from **graduated perforated tubes** with clear field identification, score highest. **Ungraduated tubes or periodic manual checks** score moderately, and **unverified or self-reported** water management scores lowest. The assessment also considers spatial coverage: monitoring spanning all fields (with identification) is stronger than a sample, which in turn is stronger unevidenced or unclear coverage. Weak monitoring raises the risk that the credited reductions do not reflect what was achieved in the field.

Data Inputs

Input name	Description
Water level monitoring method	How paddy water level is measured — e.g., graduated perforated tube; ungraduated perforated tube; digital water-level sensor; etc.
Water level monitoring coverage	Spatial coverage — e.g., if all fields with identification; sample of fields; etc.

Water Level Monitoring Frequency

Description

The frequency at which paddy water levels are recorded across the crediting period. Monitoring at each drainage event with clear evidence that monitoring was conducted (e.g., time, date, field) provide stronger confidence that AWD activities, and subsequent emissions are accurately reported and monitored. Because AWD benefits depend on the number and timing of dry-down events, infrequent monitoring can fail to confirm whether the intended water regime was actually achieved.

Scoring Logic

The Water Level Monitoring Frequency score rewards a monitoring cadence sufficient to capture each wetting and drying cycle, since AWD benefits depend on the number and timing of dry-down events. **Continuous monitoring**, or recording at each drainage and re-flooding event with a verifiable record, scores highest. **Event-based monitoring without a clear record**, or weekly to per-season checks, score moderately. **One-off, end-of-season, or absent** monitoring scores lowest. Infrequent monitoring cannot confirm whether the intended dry-downs actually occurred, raising the risk that reductions are credited for a water regime that was only partially implemented.

Data Inputs

Input name	Description
Water level monitoring frequency	How often water level is recorded — e.g., at each drainage and re-flooding event; unclear frequency; no direct monitoring; etc..

Management Plan Monitoring & Compliance

Description

This sub-component assesses if the project has provided a complete description of the project activities, monitoring of on-the-ground implementation, and efforts to promote compliance. As the volume of emission reductions is dependant on AWD implementation, ensuring compliance, and clear records of implementation increase confidence that claimed reductions have been achieved, and claims can be adjusted in case of any divergence between project design and implementation.

Scoring Logic

The **Management Plan & Compliance** score combines the quality of the **Project Management Plan**, **Farmer Training**, and **Farmer Behaviour Monitoring**. Higher scores reflect documented, well-resourced systems that make sustained adoption of dry-down practices — and detection of non-compliance — likely across the project area.

Project Management Plan

Description

The plan governing how the AWD activity is implemented and maintained — the level of detail provided in the description of AWD activities (e.g., on-season management organic amendments, pre-season management, fertilizers, no. growing seasons, cultivars, etc.) provide confidence that all factors that may affect emissions volumes have been appropriately considered.

Scoring Logic

The **Project Management Plan** score rewards plans that are **detailed, project-specific and resourced**. Plans setting out clear implementation, and consideration of all factors of rice cultivation that may affect emission reductions volumes score highest; **generic or incomplete** plans score lowest, as they raise the risk that land management practices that may affect emissions volumes have not been factored into the claimed reductions .

Data Inputs

Input name	Description
Project management plan	The documented plan governing AWD implementation — e.g.,irrigation scheduling, fertilizer application rates, organic amendments, length of growing seasons, off-season conditions, etc.

Farmer Training

Description

Assesses if the project provides a clear description of training provided to farmers to support AWD implementation and record keeping.

Scoring Logic

The **Farmer Training** score rewards projects that provide clear evidence that farmers have been provided with training on AWD implementation and any required record keeping. Strong training increases confidence that AWD practices are implemented as planned, reducing the risk of misapplication or abandonment over the crediting period and that claimed reductions reflect what has been achieved on-the-ground.

Data Inputs

Input name	Description
Farmer training	Training and support provided to participating farmers — a detailed programme; detailed documentation (registers, materials, dates); reference only; some documentation; or no information.

Farmer Behaviour Monitoring

Description

Assesses how the project monitors on-the-ground farmer adherence to the project management plan and correct implementation of AWD activities (e.g., logbooks, digital records).

Scoring Logic

The **Farmer Behaviour Monitoring** score rewards **objective, frequent verification** of farmer practice. Clear record keeping scores highest; weak evidence of farmer monitoring scores lowest, as it weakens confidence that credited reductions actually occurred and reflect practices implemented on the ground.

Data Inputs

Input name	Description
Farmer records	Evidence of any farmer records, e.g., logbook or digital records verifying adherence to the AWD water regime, and other elements of the project plan (e.g., harvest and input records); or no record-keeping.

Carbon Modeling

CARBON ACCOUNTING

Description

This component assesses the quantification of net emission reductions associated with gas fluxes (activity data) in terms of tCO_2e, considering emission factors (EFs), assumptions made in the carbon modeling approach, and approaches to accounting, leakage and uncertainty.

Scoring Logic

The Carbon Modeling score assesses the choices used to quantify net reductions: combining the **Baseline Flooding Assumptions** (the continuously flooded counterfactual) score, the **Accounting Boundaries** (which gases and pools are included — notably nitrous oxide and soil organic carbon) score, the **Emission Reduction** score (benchmarking claimed baseline and project emission values), and the **Leakage** and **Uncertainty** deductions. Conservative, well-evidenced choices score highest.

Baseline Flooding Assumptions

Description

Assesses whether the claimed baseline water management scenario is plausible and supported by strong evidence. As the baseline water management influences the volume of total achieved emission reductions, ensuring the claimed baseline water management is justified is important to understanding the risk of over-crediting.

Scoring Logic

The **Baseline Flooding Assumptions** score rewards baselines that are **evidence-based and region-specific** — grounded in data on local, site specific irrigation practices and supported by strong evidence. Baselines that **overstate continuous flooding** relative to actual practices, or baseline rice cultivation practices that do not meet crediting eligibility requirements score lowest, as this may risk inflating the methane reduction claimed.

The score combines the **Baseline Management Description** (the level of detail provided on baseline rice cultivation to ensure all factors that affect baseline emissions has been factored into carbon accounting), **Baseline Method** (the method used to define the baseline water-management scenario), and **Baseline Eligibility** (an assessment that the baseline cultivation scenario meets all eligibility criteria for crediting) scores.

If **Baseline Eligibility** is failed, this caps the overall **Baseline Flooding Assumptions** score. Otherwise, the overall score is a weighted average of the **Baseline Method** and **Baseline Management Description** scores.

Baseline Management Description

CARBON ACCOUNTING – CARBON MODELING – BASELINE FLOODING ASSUMPTIONS

Description

Assesses if the baseline scenario and management plans are well defined with a detailed description, considering all elements for land management that would influence baseline emissions (e.g., on-season water management, off-season water management, rice cultivars, growing seasons, organic amendments, etc.).

Scoring Logic

Higher scores are awarded to projects with all relevant details and evidence describing baseline water regimes and other elements of rice cultivation practices documented.

Complete baseline management plans increase confidence that baseline emissions accurately reflect on-the-ground practices and are not inflated due to unconfirmed assumptions about baseline land-management.

Data Inputs

Input name	Description
Baseline water management	Pre-project water regime — continuous flooding; a single mid-season drainage; multiple drainage events; or unclear.
Baseline scenario evidence	Strength of the evidence supporting the claimed baseline water regime and other elements of baseline rice cultivation (e.g., rice cultivars, fertilizer inputs, organic amendments, etc.).

Baseline Method

Description

Assesses if the method to identify baseline water management is robust, and supported by strong project area specific evidence. Methods such as field-level remote sensing (e.g., SAR), or field-level farmer management records increase confidence that the baseline scenario is accurate and justified compared to methods relying on regional or national trends.

Scoring Logic

Higher scores are awarded where the baseline water regime is **documented with field-level evidence** (e.g. historic irrigation records or remote sensing). **Assumed** baselines or baselines relying on **less geographically-specific data** (e.g., national trends), score lowest.

Data Inputs

Input name	Description
Baseline method	How the baseline regime was established — remote sensing of project fields; project management records; farmer attestations; or regional/national cropping trends.

Baseline Eligibility

Pt.1

CARBON ACCOUNTING – CARBON MODELING – BASELINE FLOODING ASSUMPTIONS

Description

Red flag check that the project is eligible for crediting. This component uses geospatial data to check that the project area was not cleared of forests to establish rice cultivation, that evidence indicates the baseline scenario was practiced within 5 years of the project start date, and that rice cultivars are the same in the baseline and project scenario.

Scoring Logic

The **Baseline Eligibility** score follows three individual checks.

First, geospatial analysis using Hansen Global Forest Change (2013)[1] data on the project area shapefile checks that the project area was not cleared of native forests within the ten years before the project started to establish rice paddies and AWD activities. Evidence of significant clearances suggests there is no net reductions due to the loss of forest biomass prior to project activity implementation.

Second, project documentation is checked to ensure that information provided on the claimed baseline scenario reflects practices that have been occurring within 5 years of the project start date.

Finally, the project documentation is checked to ensure that the rice cultivars are the same in the baseline scenario and project scenario. If there is any variation in cultivars, project documentation should provide a strong justification that this does not materially affect emissions.

The final score takes the minimum score derived from the three checks described.

1. Hansen, M. C., Potapov, P. V., Moore, R., Hancher, M., Turubanova, S. A., Tyukavina, A., ... & Townshend, J. R. G. (2013). High-resolution global maps of 21st-century forest cover change. *Science*, 342(6160), 850-853.

Baseline Eligibility

Pt.2

CARBON ACCOUNTING – CARBON MODELING – BASELINE FLOODING ASSUMPTIONS

Data Inputs

Input name	Description
Pre-project conditions	Documented evidence that the claimed baseline irrigation and cultivation practices reflects practices conducted within 5 years of the project start date.
Project start date	Date the project started.
Hansen FNF	Hansen Global Forest Change (2013) — % area of forest loss within the project area in the ten years before the project start date.
Rice cultivars	Information on rice cultivars in the baseline and project scenario.

Emission Reduction Accounting

Pt.1

CARBON ACCOUNTING - CARBON MODELING

Description

Assesses the quantification of net emission reductions following AWD implementation. The choice of emission factors (EFs), global warming potential (GWP) values, and other parameters when calculating paddy emissions in the baseline and project scenarios influences claimed net emission reduction volumes. Conservative and representative values are required for accurate emission reduction claims. To assess if a project's reported emission reductions are reasonable, Sylvera compares project values to a simplified model reconstructing net emission reductions to check is claimed reductions fall in a reasonable range.

Scoring Logic

The **Emission Reduction Accounting** score assesses if the volume of claimed reductions per season is reasonable. Project reported net emission reductions (net ERs) underlying each carbon credit issued, is calculated as:

$$\text{Project Net ER} = (\text{Reported baseline CH4} - \text{Reported project CH4} - \text{Reported AWD N2O} - \text{Reported fertiliser N2O} - \text{Reported leakage}) \times (1 - \text{project uncertainty deduction\%})$$

Sylvera models a net emission reductions benchmarks using independent baseline and project emission benchmarks, calculated using the relevant IPCC Tier 1 emission factors and applying a fixed 15% uncertainty deduction:

$$\text{Sylvera benchmark Net ER} = (\text{Benchmark baseline CH4} - \text{Benchmark project CH4} - \text{Benchmark AWD N2O} - \text{Benchmark fertiliser N2O} - \text{Reported leakage}) \times (1 - 15\%)$$

Reported net reductions are compared against Sylvera's benchmark. Net reduction claims significantly above the benchmark indicate over-crediting risk. As some divergence, especially when direct measurements are used, is expected, only significant discrepancies are flagged as a risk.

Pre-issuance scoring: compares annualized reported vs modeled ex-ante net ERs.

Post-issuance scoring: comparison is made cumulatively on ex-post monitored net ERs from each reported vintage.

Emission Reduction Accounting

Pt.2

CARBON ACCOUNTING – CARBON MODELING

Data Inputs

Input name	Description
Reported CH4 baseline emissions (per season)	Reported baseline CH4 emissions (tCO2e)
Reported project CH4 emissions (per season)	Reported project-scenario CH4 emissions (tCO2e)
Reported rice AWD N2O emissions (per season)	Reported project-scenario rice paddy N2O emissions following AWD implementation (tCO2e)
Reported fertilizer N2O emissions (per season)	Reported project-scenario fertilizer N2O emissions(tCO2e)
Reported leakage (per season)	Reported leakage emissions (tCO2e)
Project uncertainty deduction (per season)	Reported uncertainty deduction (%)
Benchmark baseline CH4 (per season)	Sylvera modeled baseline emissions (tCO2e). Derived in *Baseline Emission Factors*.
Benchmark project CH4 (per season)	Sylvera modeled project-scenario CH4 emissions (tCO2e). Derived in *Project Emission Factors.*
Benchmark rice AWD N2O (per season)	Sylvera modeled project-scenario AWD N2O emissions (tCO2e). Derived in *Project Emission Factors*.
Benchmark fertilizer N2O	Sylvera modeled project-scenario fertilizer N2O emissions (tCO2e). Derived in *Project Emission Factors* when relevant.
Sylvera standard uncertainty deduction	15%

Baseline Emission Factors

Pt.1

CARBON ACCOUNTING – CARBON MODELING – EMISSION REDUCTION ACCOUNTING

Description

Assesses the volume of emissions the project claims will be released in the baseline scenario, and the method used to derive these values to ensure emission reductions are not inflated. Baseline emissions are benchmarked against a simplified emissions accounting model using default factors to check that claimed baseline emissions are within a reasonable range.

Scoring Logic

The **Baseline Emission Factors** score assesses if the project has conservatively quantified the emissions that would have occurred in the absence of the AWD intervention — typically from continuously flooded rice paddies, which produce methane (CH4) through anaerobic decomposition. To assess whether a project's reported baseline emissions volume is credible, Sylvera constructs an independent emissions benchmark. Sylvera calculates the modeled benchmark using IPCC Tier 1 CH4 emission factors (EFs), scaling factors (SFs) and global warming potential (GWP) (IPCC 2019 Refinement to the 2006 Guidelines), selected based on project's specific regional conditions, and baseline rice cultivation conditions (e.g., water management practices, pre-season conditions, cropping season length, etc.). The benchmark is then compared to the claimed baseline emission volume using a ratio.

Pre-issuance score: Where only ex-ante design data is available, the comparison is conducted on an annualized basis (comparing reported vs modeled average annual emissions).

Post-Issuance score: Where ex-post reported baseline emission are available, each reporting year (or vintage) is assessed individually against the benchmark. Scoring takes a vintage weighted approach across all reported monitoring periods.

Project reported baseline emission volumes significantly above the benchmark is a flag for non-conservatism and over-crediting risk, inflating net emission reductions claimed. Project reported baselines reasonably consistent with or below the benchmark indicate conservatism.

Baseline Emission Factors

Pt.2

Data Inputs

Input name	Description
Reported CH4 baseline emission factor	Reported baseline CH4 EF (used to construct project side of the baseline emissions ratio if reported CH4 baseline emissions [per season] in tCO2e) not reported)
Reported CH4 baseline emissions (per season)	Reported baseline CH4 emissions (tCO2e)
Project area (ha)	Used to calculate modeled benchmark to convert benchmarked EFs into total baseline emissions tCO2e.
Project region	Global region the project is in. Used to select relevant EFs and SFs to calculate modeled benchmark
Regional default CH4 EF	Base unadjusted benchmark CH4 EF for the region. From IPCC AR6.
Baseline water management	E.g., continuous flooding, single drainage, etc. Used to select relevant SF to calculate modeled benchmark.
Water regime scaling factor	Selected SF used to adjust the benchmark EF (regional default CH4 EF) for baseline water management conditions.
Pre-season conditions	E.g., flooded vs non-flooded, and length of pre-season. Used to select relevant SF to calculate modeled benchmark.
Pre-season scaling factor	Selected SF used to adjust the benchmark EF (regional default CH4 EF) for pre-season conditions.
Cropping season length	Length of season in days. Used to adjust the benchmark EF.
CH4 GWP	27.9. Converts CH4 mass into tCO2e to calculate benchmark baseline CH4 emissions volume. From IPCC AR6.

Project Emission Factors

Pt.1

CARBON ACCOUNTING – CARBON MODELING – EMISSION REDUCTION ACCOUNTING

Description

Assesses The project's quantification of paddy rice emissions (CH4; N2O) following AWD implementation. The reported project-scenario CH4 and N2O emissions values are assessed to ensure reductions are not inflated. Values are compared to a modeled benchmark quantifying the potential scale of project emissions to check if project claims fall within a reasonable range.

Scoring Logic

The **Project Emission Factors** score assesses the project reported emissions that continue under the AWD water management intervention, covering both methane (CH4) and nitrous oxide (N2O). Sylvera benchmarks each gas independently by constructing a modeled emissions benchmark using IPCC Tier 1 defaults, comparing the project's reported figures against the benchmark — with higher reported residual emissions considered conservative, as the project is not understating the emissions that remain after intervention.

AWD water management reduces but does not eliminate methane emissions from flooded soils. Residual reported project CH4 emission volumes are benchmarked against Sylvera's modeled CH4 emissions, calculated using IPCC defaults adjusted for the project's specific drainage regime.

As AWD can increase N2O emissions, accurate N2O accounting is critical to the integrity of net reduction claims. Two N2O sources are assessed: emissions from AWD water management (rice AWD N2O), and where applicable, emissions from increased nitrogen fertilizer application (fertiliser N2O), both benchmarked against Sylvera's emission values, calculated using relevant IPCC Tier 1 defaults. Projects that do not report N2O emissions despite the benchmark indicating potential material increases carry over-crediting risks.

As with the baseline assessment, issuing projects are scored on each reported vintage, while ex-ante projects are assessed on an annualized basis.

Project Emission Factors

Pt.2

Data Inputs

Input name	Description
Reported CH4 project emission factor (per season)	Reported project-scenario CH4 EF (used to construct project side of the project emissions ratio if reported CH4 project emissions [per season] in tCO2e) not reported)
Reported CH4 project emissions (per season)	Reported project-scenario CH4 emissions (tCO2e)
Project area (ha)	Used to calculate modeled benchmark to convert benchmarked EFs into total baseline emissions tCO2e.
Project region	Global region the project is in. Used to select relevant EFs and SFs to calculate modeled benchmark
Regional default CH4 EF	Base unadjusted benchmark CH4 EF for the region. From IPCC AR6.
Project water management	E.g., continuous flooding, single drainage, etc. Used to select relevant SF to calculate modeled benchmark.
Water regime scaling factor	Selected SF used to adjust the benchmark EF (regional default CH4 EF) for baseline water management conditions.
Pre-season conditions	E.g., flooded vs non-flooded, and length of pre-season. Used to select relevant SF to calculate modeled benchmark.
Pre-season scaling factor	Selected SF used to adjust the benchmark EF (regional default CH4 EF) for pre-season conditions.
Cropping season length	Length of season in days. Used to adjust the benchmark EF.
CH4 GWP	27.9. Converts CH4 mass into tCO2e to calculate benchmark baseline CH4 emissions volume. From IPCC AR6.

Project Emission Factors

Data Inputs

Input name	Description
Reported rice AWD N2O emissions (per season)	Reported project-scenario rice paddy N2O emissions following AWD implementation (tCO2e)
Reported fertilizer N2O emissions (per season)	Reported project-scenario fertilizer N2O emissions.
Project N application rate	Used to quantify benchmark N2O emissions. Application rate set ton IPCC default constant of 25 kg N/ha if not given.
Baseline N application rate	Used to quantify if N application rates have incrementally increased in the project-scenario.
Project region	Global region the project is in. Used to select relevant EFs and SFs to calculate modeled benchmark
Default AWD N2O EF	0.00314. IPCC Tier 1 default N2O emission factor for AWD water management.
Default fertiliser N2O EF	IPCC Tier 1 N2O EF for flooded rice fields under single and multiple drainage, used to benchmark incremental fertiliser N2O
N2O GWP	273. Converts N2O mass into tCO2e to calculate benchmark baseline CH4 emissions volume. From IPCC AR6.
N to N2O molecular weight conversion	44/28. Used in benchmark calculation to convert nitrogen mass to N2O mass when quantifying quantify N2O emissions in terms of tCO2e.

Global Warming Potential

Description

A standard metric measuring how much heat different greenhouse gases (GHGs) trap in the atmosphere over a 100-year period compared to CO2. Global warming potential (GWP) values for CH4 and N2O applied are assessed for conservatism and alignment with the most recent IPCC values.

Scoring Logic

The **Global Warming Potential** score assesses whether the project uses scientifically current global warming potential values to convert greenhouse gas emissions into CO2 equivalent. Using outdated or inflated GWP values overstates emission reduction claims.

Sylvera benchmarks the project's stated GWP values against the IPCC Sixth Assessment Report (AR6) standard values of 27.9 for CH4 and 273 for N2O. Projects using AR6 values score best; projects using higher-than-AR6 CH4 values are penalized as this inflates CH4-based credit claims, while projects using below-AR6 N2O values are also penalized as this understates N2O emissions.

Pre-issuance score: ex-ante GWP values the project states it will use are assessed for both CH4 and N2O.

Post-issuance score: ex-post GWP values are assessed per reporting year and scoring is averaged across all reported vintages.

Global Warming Potential

Pt.2

Data Inputs

Input name	Description
Project CH4 GWP (ex-ante)	Project-reported GWP value applied to convert CH4 mass to tCO2e in ex-ante emissions reduction projections.
Project N2O GWP (ex-ante)	Project-reported GWP value applied to convert N2O mass to tCO2e in ex-ante emissions reduction projections.
Project CH4 GWP (ex-post, per vintage)	Project-reported GWP value applied to convert CH4 mass to tCO2e in ex-post monitored emissions reductions.
Project N2O GWP (ex-post, per vintage)	Project-reported GWP value applied to convert N2O mass to tCO2e in ex-post monitored emissions reductions.
IPCC CH4 GWP	Benchmark CH4 GWP value from IPCC AR6 over 100-year event horizon.
IPCC N2O GWP	Benchmark N2O GWP value from IPCC AR6 over 100-year event horizon.

Accounting Boundaries

Description

Assesses the emissions sources included within the net emission reduction calculation. All emissions sources that have the potential to significantly change between the baseline and project scenarios should be included in carbon accounting to ensure conservative emission reductions quantification.

Scoring Logic

The **Accounting Boundaries** score combines the **Emission Sources**, **N2O Accounting** and **SOC Loss Accounting** sub-components. The score evaluates the comprehensiveness and conservatism of the project's accounting boundary — specifically that all material emission sources are included. How potential N2O increases from AWD water management are treated, and whether soil organic carbon losses are accounted for are given particular weight within the score. The score is a weighted combination of three sub-scores with the largest potential emissions sources carrying the greatest weight as these will have the greatest impact on the volume of net emissions claimed.

Emission Sources

Description

Checks that all relevant emissions from baseline and project land management are included in carbon accounting. A cradle-to-grave approach considering emissions from project establishment, emissions from project land management and project end-of-life emissions is considered the most conservative choice.

Scoring Logic

The **Emission Sources** score evaluates is all material emission sources are included in the baseline- and project-scenarios.

Baseline emission sources: including only CH4 paddy emissions is considered the most conservative approach, since the baseline scenario (continuous flooding) does not typically generate material N2O or SOC losses.

Project emission sources: a cradle-to-grave approach — including CH4 paddy emissions, N2O paddy emissions, SOC losses, fertilizer N2O where applicable, and any material emissions from project establishment and end-of-life — is the most conservative. Omitting potential emission increases is less conservative — excluding N2O paddy emissions is the highest-weighted risk factor.

Data Inputs

Input name	Description
Baseline emission sources	List of reported baseline emission sources (e.g., CH4 rice paddy emissions)
Project emission sources	List of reported project emission sources (e.g., CH4 rice paddy emissions, N2O rice emissions, emissions from project establishment, etc.)

N2O Accounting

Description

AWD can increase N2O emissions. This component assesses if the project includes N2O emissions, or provides a strong justification that N2O emissions are de-minimis. Risks are scaled based on the potential for N2O increases related to the type of water management practices implemented.

Scoring Logic

The **N2O Accounting** score assesses the relative over-crediting risk of omitting N2O paddy emissions in projects where N2O paddy emissions are not explicitly included. The score considers two factors: water depth during drainage events is maintained below the threshold of aggressive drying that can cause more severe N2O emissions (i.e., not exceeding 15 cm below soil surface or ≤20 kPa water potential), and the quality of evidence that water management is being implemented as planned. Projects that include N2O in their accounting boundaries score highest. Where N2O is omitted, the score reflects the combination of water drawdown depth constraint and quality of water management evidence.

Data Inputs

Input name	Description
Project emission sources	List of reported project emission sources (e.g., CH4 rice paddy emissions, N2O rice emissions)
Project water-level management	Reported water depth during drying events
Project water management quality	Method to assess water depth (e.g, perforated tubes, digital sensors) and supporting evidence of water-level management and monitoring (e.g., records, frequency, field-level measurement).

SOC Loss Accounting

Description

AWD activities can increase soil organic carbon (SOC) losses. This component checks if the project considers SOC loss emissions, or provides a strong justification that SOC losses are de minimis. Risks are scaled based on the potential for SOC losses related to water management practices and soil type.

Scoring Logic

The **SOC Loss Accounting** score assesses whether the project accounts for potential SOC loss emissions risk and, where it does not, the likelihood that SOC losses would be material given the project's soil type and water management practices. Sandy soils and well-controlled water management (i.e., drawdown not exceeding 15 cm below the soil surface) are associated with lower SOC loss risk. The score rewards projects that explicitly account for SOC loss, and applies graduated penalties where SOC loss is omitted depending on the relative potential scale of SOC based on loss soil texture and water management.

Data Inputs

Input name	Description
Project emission sources	List of reported project emission sources (e.g., CH4 rice paddy emissions, SOC loss)
Project water-level management	Reported water depth during drying events
Project water management quality	Method to assess water depth (e.g, perforated tubes, digital sensors) and supporting evidence of water-level management and monitoring .
Soil texture	Soil texture (e.g., sandy, clayey, loamy, etc.)

Uncertainty

Description

Assesses if the project applies conservative deductions to net emission reduction claims to account for potential uncertainty and error in accounting parameters.

Scoring Logic

The **Uncertainty** score evaluates if, and how, a project accounts for measurement uncertainty in its emission calculations. Two factors are considered: the approach used (statistical analysis of individual parameters versus deduction factors), and the size of the deduction applied. Statistical analysis is the more rigorous approach as it quantifies uncertainty at the parameter level. Where a flat deduction is used, Sylvera considers whether the deduction is commensurate with the likely scale of measurement error. The standard minimum deduction recommended by IPCC guidance is 15%; deductions above this provide greater confidence, while deductions below it are non-conservative. No consideration of uncertainty is the least-conservative choice.

Data Inputs

Input name	Description
Uncertainty approach	Method to quantify uncertainty (e.g., percentage deduction; no deduction; statistically derived based on measured variance)
Uncertainty deduction (ex-ante)	Reported uncertainty deduction as a % or in tCO2e in ex-ante net emission reduction projections (pre-issuance projects)
Uncertainty deduction (ex-post)	Ex-post uncertainty deduction as a % or in tCO2e for each reported vintage (issuing projects)

Leakage

Description

Assesses emissions that may increase outside the project boundary as a result of the AWD activity — for example shifts in cultivation area, water use or input use that displace emissions rather than genuinely reducing them.

Scoring Logic

The Leakage score rewards projects that **identify and conservatively deduct material leakage**. Where leakage risks are assessed and accounted for, scores are higher; where potential leakage is **unassessed or dismissed without evidence**, scores are lower.

Data Inputs

Input name	Description
Leakage accounting method	How leakage outside the project boundary is treated — assumed negligible with justification; explicitly accounted and deducted; a deduction factor applied; or not accounted for.

Additionality

Description

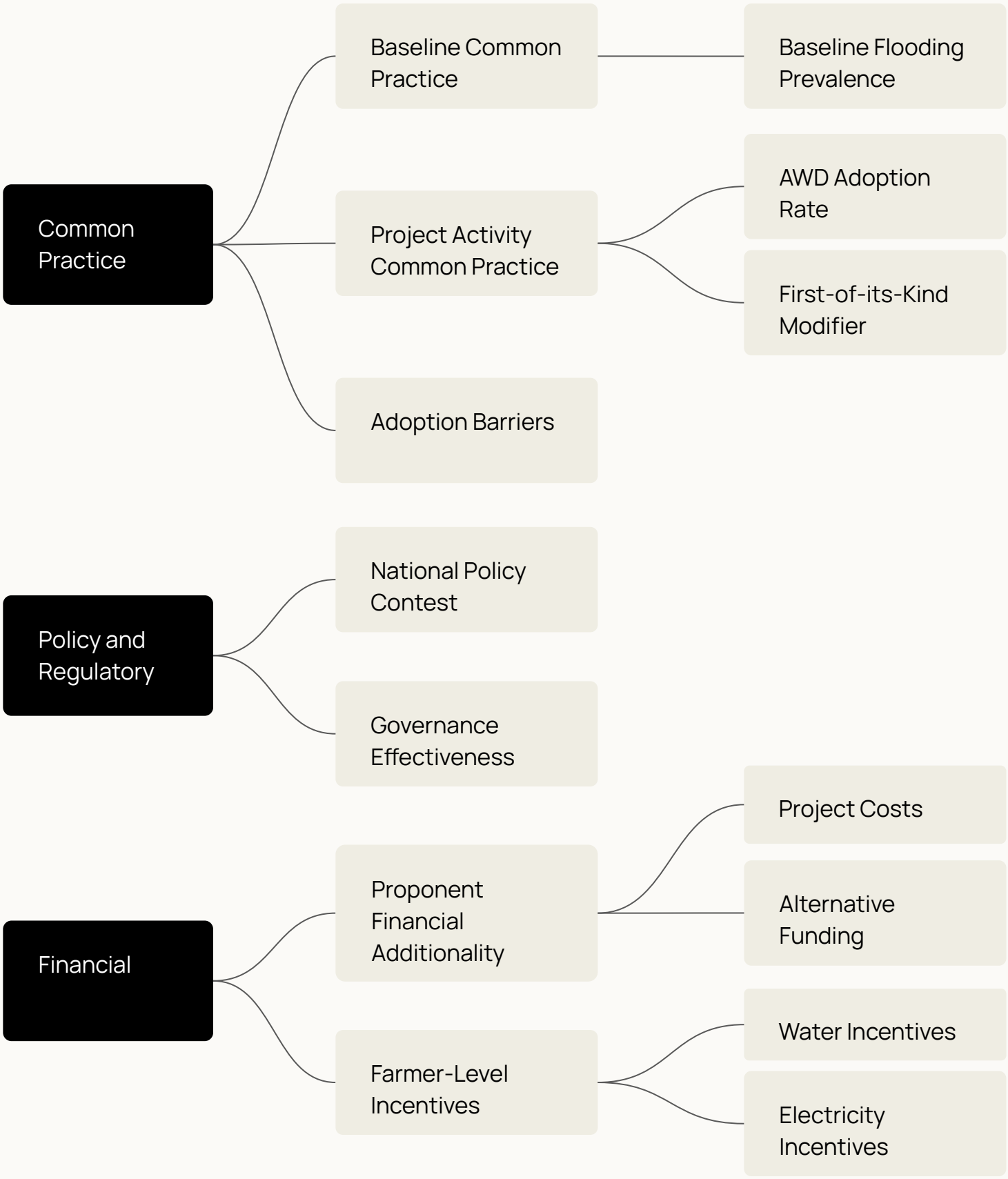
Additionality assesses the likelihood that the project's emission reductions would not have occurred without carbon finance — that AWD implementation, and resulting emission reductions, are driven by the carbon market rather than being business-as-usual.

Scoring Logic

The **Additionality** score assesses whether a project is additional through three aspects: **Common Practice** (whether AWD is already standard in the region), **Financial Additionality** (whether the project and participating farmers depend on carbon revenue to adopt AWD activities), and **Policy & Regulation** (whether AWD is already mandated or incentivised in the local policy landscape).

The score takes a gated approach where the weakest component drives the score. Taking the minimum ensures a single decisive barrier that indicates non-additionality cannot be masked by positive indicators elsewhere.

Additionality



Common Practice

ADDITIONALITY

Description

Examines whether the project activities were already common practice in the region, that the claimed business-as-usual (BAU) scenario is plausible, and identifies any significant barriers to project activity implementation.

Scoring Logic

The **Common Practice** score combines the **Baseline Common Practice** (how prevalent continuous flooding is in the region), the **Project Activity Common Practice** (the existing adoption rate of AWD and whether the project is first-of-its-kind), and an **Additional Barriers** modifier capturing socio-economic obstacles to AWD adoption.

Baseline Common Practice

ADDITIONALITY – COMMON PRACTICE

Description

Examines the credibility of the proposed baseline flooding scenario (or BAU scenario) by assessing the prevalence of existing water management practices in the country/region. A higher prevalence of the claimed BAU water management practices practice indicates the baseline scenario is plausible.

Scoring Logic

The **Baseline Common Practice** score considers whether the claimed baseline water management scenario is well-evidenced in the project documentation, and Sylvera's independent assessment of rice cultivation practices does not contradict the project claims.

The score assesses the prevalence of the claimed most-likely baseline water management scenario— usually continuous flooding — through two aspects: the strength of evidence that continuous flooding was conducted by participating within the project area before the project started and where external evidence/literature indicates **continuous flooding** is clearly the **dominant local practice** in regional rice cultivation. Where the project's claimed baseline water management is supported by granular field-level data (e.g., geospatial analysis [SAR data], or identified farmer records) the confidence that continuous flooding was occurring across enrolled farmers in the project area, and that AWD adoption is additional. Where Sylvera's independent desk-based assessment, indicates continuous flooding is prevalent in the region, this further supports baseline scenario plausibility and additionality.

Where the project's claimed BAU water management scenario is not supported by locally-specific robust data (e.g., national trends) and external evidence does not clearly indicate continuous flooding is the prevalent BAU activity, or shows that AWD or intermittent flooding is already practised in a BAU scenario, the risk that claimed emission reductions are non-additional increases.

Baseline Common Practice

Data Inputs

Input name	Description
Baseline water management	The project-reported most-likely BAU water management regime — e.g., continuous flooding, single drainage, etc..
Baseline water management method	The method used to determine the project-reported most-likely BAU water management regime — e.g., geospatial SAR data, farmer records, regional data, national data.
Regional flooding prevalence	Prevalence of continuous flooding among comparable farmers in the project region derived from desk based research.
Unintentional drying evidence	Evidence of unintentional drying events in the project region derived from desk based research.

Project Activity Common Practice

Description

Assesses whether the project activities (AWD implementation) are already prevalent in the region. Existing or increasing AWD prevalence would indicate it is already common practice adoption by enrolled farmers would occur a BAU scenario without carbon market incentives from carbon revenue and would not result in additional reductions.

Scoring Logic

The **Project Activity Common Practice** score combines the **AWD Adoption Rate** (the observed prevalence of AWD activities in the region at the project-start date) and **the First-of-its-Kind Modifier** (identifies contexts where AWD is particularly novel activities).

High scores are achieved where the observed rate of AWD adoption indicates that AWD was not relevant when the project started, providing confidence that AWD adoption goes beyond common practice.

The **First-of-its-Kind Modifier** only ever has a positive impact on the score, providing additional uplift where the project is pioneering in introducing AWD to a region and is clearly additional.

AWD Adoption Rate

Description

Assesses the extent to AWD and AWD-like activities have already been adopted in the country or region as indicated by the observed rate of adoption of comparable interventions derived from external literature.

Scoring Logic

The AWD Adoption Rate score is highest where adoption is **low and the practice is not increasing autonomously**. As the regional adoption rate rises, the score falls, reflecting weaker additionality. Rates of adoption equal to or above 20% indicate that AWD activities are not additional and any continued AWD adoption by farmers enrolled in the project would be considered spontaneous adoption.

Data Inputs

Input name	Description
AWD adoption rate	Share of farmers in the project region already practising alternate wetting and drying derived from desk based research
Adoption trend	Whether AWD adoption is rising autonomously without carbon finance derived from desk based research.
Data source	Source for the adoption estimate — field survey; government data; or remote sensing.

First-of-its-Kind Modifier

Description

Assesses how novel the project activities are by considering when efforts to promote AWD adoption began in the country relative to the project's start date.

Scoring Logic

The **First-of-its-Kind Modifier** rewards projects that are **among the first to deploy AWD at scale** in their context (i.e., year where there is evidence AWD activities were first implemented in the region < 5 years before the project start date) . Where comparable AWD projects are **already established**, no further uplift is applied and this component is nullified.

Data Inputs

Input name	Description
Project start date	Date the project started.
Year of first AWD activity	Year from which there is evidence of efforts to support a similar alternate wetting and drying activity in the region.

Adoption Barriers

ADDITIONALITY – COMMON PRACTICE

Description

Considers barriers that might prevent participant farmers from adopting similar AWD activities in absence of the project. E.g., financial barriers, cultural preferences, knowledge of implementing AWD, relative poverty, relative isolation of rural communities, market access, etc.

Scoring Logic

The **Additional Barriers** modifier only applies a positive signal to the **Common Practice** score. Where evidence from project documented and external desk-based research is deemed to show that participant farmers face **significant obstacles to independent AWD adoption, the Additional Barriers component uplifts the Common Practice** score. This approach rewards projects conducting targeted activities among marginalized farmers and rural communities in regions where AWD adoption may be growing among other actors as such groups may not be represented by regional or national agricultural trends showing

In the absence of extreme additional barriers, no uplift is applied.

Data Inputs

Input name	Description
Gross National Income(GNI)	The country's development status at the project start date (World Bank)
Poverty Rate	The national poverty rate (World Bank)
Additional adoption barriers	Localized barriers specific to farmers in the region reported and evidenced in project documentation, and confirmed through desk-based research.

Policy & Regulation

ADDITIONALITY

Description

Examining the policy and regulatory environment to identify policies or regulations that incentivize or mandate activities undertaken by the project. Policies or regulations promoting or mandating project activities undermines additionality.

Scoring Logic

The **Policy & Regulation** score combines a **National Policy Context** score (whether effective laws or policies mandate or promote AWD existed in the country/region at the time the project started) with a **Governance Effectiveness** modifier reflecting the national capacity to achieve policy aims and enforce legal mandates

This approach ensures that only policies and regulations countries with strong governance and rule of law — where policy aims are likely to be achieved and mandates enforced — signal a strong risk of non-additionality. Where policy aims or laws may be in place, but are unlikely to be successful or enforced, a project's activities may still be considered plausibly additional.

National Policy Context

ADDITIONALITY – POLICY AND REGULATORY

Description

Screens relevant national and sub-national policies/regulations that mandate/incentivize AWD, water-saving irrigation, or methane reduction in rice cultivation. All relevant policies that apply in the project's country are taken into account. Relevant, extensive and effective policies and regulations suggest that AWD or other methane reduction in rice cultivation would be mainstreamed through policy, or legal regulatory mechanisms, and would not be additional.

Scoring Logic

Relevant policies in the country/region are identified through desk-based research. Relevant policies are assessed for their scope, effectiveness, funding resources, etc. Projects in contexts where **binding mandates or strong financial incentives** from policy schemes for AWD or similar methane reducing activities already exist score lowest. Higher scores are achieved in contexts where AWD is not effectively **promoted or required** by policies or regulations.

Data Inputs

Input name	Description
Country	The project's country, used to screen the relevant policy environment.
AWD / water-saving mandates	Whether laws or programmes require or promote AWD or water-saving irrigation.
Methane / rice policy	Policies targeting methane or rice-sector emissions.

Governance Effectiveness

ADDITIONALITY – POLICY AND REGULATORY

Description

A modifier applied to the national policy context score in contexts with weak governance. Governance effectiveness can affect whether policies or regulations are effectively implemented or enforced. In national contexts with weak governance, any identified policies or regulations may not be effective enough to have such a significant impact on additionality.

Scoring Logic

The **Governance Effectiveness** score is a positive modifier that uplifts the **Policy & Regulatory** score in contexts where governance is weak and policies/regulations are likely to only exist "on paper" and may not be reliably supported or enforced. This reduces the effect of any identified policies and regulations on additionality in weak governance contexts.

In contexts where governance is **strong and policies are reliably enforced**, this component is neutral and the **Policy & Regulatory** score is driven by an unmodified **National Policy Context** score.

Data Inputs

Input name	Description
Governance effectiveness	An indicator derived from a combination of Worldwide Governance Indicators reflecting the quality of public institutions, regulatory effectiveness, and government capacity in the project's host country.
Country	Country the project operates in

Financial Additionality

ADDITIONALITY

Description

Assesses whether the project activities would only have gone go ahead with incentives from carbon finance.

Scoring Logic

The **Financial Additionality** score combines **Proponent Financial Additionality** (whether the project depends on carbon revenue to cover its costs and and that costs are not covered by alternative funding/revenue) and **Farmer-Level Financial Incentives** (whether adopting AWD is financially beneficial to farmers outside of carbon markets [e.g., reduction in input costs]).

Proponent Financial Additionality

Description

Assesses whether it would be financially viable for the project developer to implement project activities without carbon finance, by examining project costs and the availability of alternative funding sources.

Scoring Logic

The **Proponent Financial Additionality** score combines the **Project Costs Assessment** score and the **Alternative Funding** score.

Projects that demonstrate both material project costs and no alternative funding to cover these costs are are **clearly dependent on carbon finance** and score as more additional. If a project cannot demonstrate operational costs, or there is significant alternative funding to cover costs then the project scores as less additional.

Project Costs Assessment

Description

Looks at the scale and nature of project implementation costs to evaluate whether the financial burden on the project proponent is sufficient to justify the need for carbon revenue.

Scoring Logic

The assessment considers whether the project has disclosed implementation and operational costs.

Project costs are considered alongside any secondary commercial revenue generated by the project activities. Where there are clear costs, and no secondary commercial revenues for the proponent, the project scores higher. Where activities accrue minimal costs for the proponent, and/or the project generates secondary revenues or to cover its costs, this is deemed less additional.

Data Inputs

Input name	Description
Project costs	Assessment of project implementation and operational costs, as disclosed in project documentation.
Secondary revenue	Disclosed secondary revenue streams available to the proponent.

Alternative Funding

ADDITIONALITY – FINANCIAL ADDITIONALITY - PROPONENT FINANCIAL ADDITIONALITY

Description

Examines whether the project has access to alternative sources of funding, such as grants or subsidies, that could reduce or eliminate its dependence on carbon finance.

Scoring Logic

The assessment considers if the project has disclosed any alternative funding sources in the project documentation as well as a desk based assessment of potential alternative funding sources.

Access to significant alternative funding suggests the activities could be conducted without carbon revenue, and are not additional. When assessing the impact of alternative funding sources, the scale and nature of funding is considered. For example, projects may used blended finance, but carbon revenue is still important in this mix to ensure financial viability and incentive to carry out project activities. Alternative funding may also provide bridge funding to cover upfront cost but the project requires carbon finance to for ongoing operational costs. Only where alternative funding clearly covers project costs is a project deemed not to be reliant on carbon finance.

Data Inputs

Input name	Description
Disclosed alternative funding	Disclosed alternative funding accessible to the project (e.g., grants, tax incentives, subsidies, etc)
Potential alternative funding	Undisclosed alternative funding accessible to the project identified through desk-based research.

Farmer-Level Financial Incentives

Description

Assesses whether farmers have financial incentives to independently adopt AWD activities in absence of the project and carbon markets.

Scoring Logic

The Farmer-Level Financial Incentives score reflects the strength of **non-carbon financial incentives** to adopt AWD activities. The score combines the **Farmer Water Incentives** and **Farmer Electricity Incentive**s components that assess whether AWD adoption would significantly reduce rice cultivation input costs for farmers. Where farmers save substantially on water or energy, AWD adoption is attractive and may be less additional as it is more likely to be independently adopted. Where savings are minimal, AWD is less more likely to be additional

Data Inputs

Input name	Description
Irrigation system type	Whether irrigation is gravity-fed (water and electricity effectively free) or pump-fed (farmers bear pumping costs), which determines the non-carbon incentive to save water.
Water & electricity pricing	Whether farmers pay for irrigation water and pumping electricity, or these are subsidised — weak farmer incentives strengthen additionality.

Farmer Water Incentives

ADDITIONALITY – FINANCIAL ADDITIONALITY – FARMER LEVEL FINANCIAL INCENTIVES

Description

Assesses whether water savings from AWD offer financial incentives to farmers and evaluates the potential impact on spontaneous adoption of AWD among enrolled farmers.

Scoring Logic

The **Farmer Water Incentives** score assesses whether there is a financial benefit to farmers to adopt AWD without project implementation, considering two factors: whether the water payment model rewards reduced water usage, and if water is subsidised for farmers in the region.

Flat fee payment systems or heavily subsidised prices for agricultural water usage provide little incentive for farmers to spontaneously reduce water usage and lower risk that the project activities are not additional.

Volumetric payment systems without subsidy increases the incentive for farmers to adopt AWD activities to reduce water input costs, and can indicate a risk that activities are less additional.

Data Inputs

Input name	Description
Regional water payment system	How farmers in the region pay for water for agricultural use (e.g., flat fee, volumetric)
Water pricing and subsidy	Whether irrigation water is subsidised and the scale of subsidies

Farmer Electricity Incentives

ADDITIONALITY – FINANCIAL ADDITIONALITY – FARMER LEVEL FINANCIAL INCENTIVES

Description

Assesses AWD offers energy input savings for farmers that reduce electricity costs, creating financial incentives for farmers to spontaneously adopt AWD .

Scoring Logic

The **Farmer Electricity Incentives** score assesses whether there is a financial benefit to farmers to adopt AWD without project implementation, considering three factors: if irrigation requires energy inputs (e.g., if irrigation is pump fed vs gravity fed), whether the water payment model rewards reduced electricity usage, and if electricity is subsidized for farmers in the region.

If irrigation is gravity-fed, there is no incentive for framers to adopt AWD to reduce the energy costs. In pump-fed systems, if electricity is paid on a flat fee basis or is heavily subsidised for agricultural use, this reduces farmer incentives to spontaneously adopt AWD and lower additionality risks. Conversely, volumetric electricity payments, without subsidy, increases incentives for farmers to adopt AWD activities to reduce input costs, and can indicate a risk that activities are less additional.

Data Inputs

Input name	Description
Regional electricity payment system	How farmers in the region pay for electricity for agricultural use (e.g., flat fee, volumetric)
Electricity pricing and subsidy	Whether electricity for agricultural use is subsidised and the scale of subsidies
Irrigation system	The system used to manage irrigation water (e.g., pump-fed, gravity fed)

Permanence

Description

Permanence assesses whether the climate benefit delivered by a project are permanent for an atmospherically-significant period of time by evaluating the risk that emission reductions, or removals are later reversed.

Scoring Logic

AWD results in the avoidance of methane emissions: once methane is prevented from being released, it cannot return to the atmosphere. As there is no carbon stock to be re-released, AWD reductions are not exposed to reversal.

As AWD reductions are **avoidance, not storage**, there is no permanence risk. Every project receives a **fixed Permanence score reflecting very low reversal risk, indicating that permanence is not a risk factor within the Rating**. Unlike sequestration-based project types — where carbon held in soils or biomass can be lost to fire, disease or land-use change — there is no stored carbon to lose.

Safeguarding and Co-Benefits

Description

Ensuring necessary community and environmental safeguards are in place for a project, where relevant, is critical to ensure the project's successful on-going operations (captured within the Permanence Score), as well as reputation, and ensuring the *No Net Harm* principle is met. The extent to which the project goes above and beyond carbon impact to contribute to the local community and biodiversity is measured as "Co-benefits" considering the type of project activities and benefit-sharing mechanisms as place, which can be used as a quality differentiator dependent on the user's priorities.

Scoring Logic

The **Safeguarding and Co-Benefits** score provides a blended view of a project's overall beyond-carbon impact, combining Safeguarding and Co-benefits to evaluate the likelihood and extent that a project delivers a net benefit for communities and biodiversity by confirming if the requirement of No Net Harm is met, and quantifying Sustainable Development Goal (SDG) contributions. The score assumes that significant risk of net harm to the community or biodiversity prevents any net positive co-benefits.

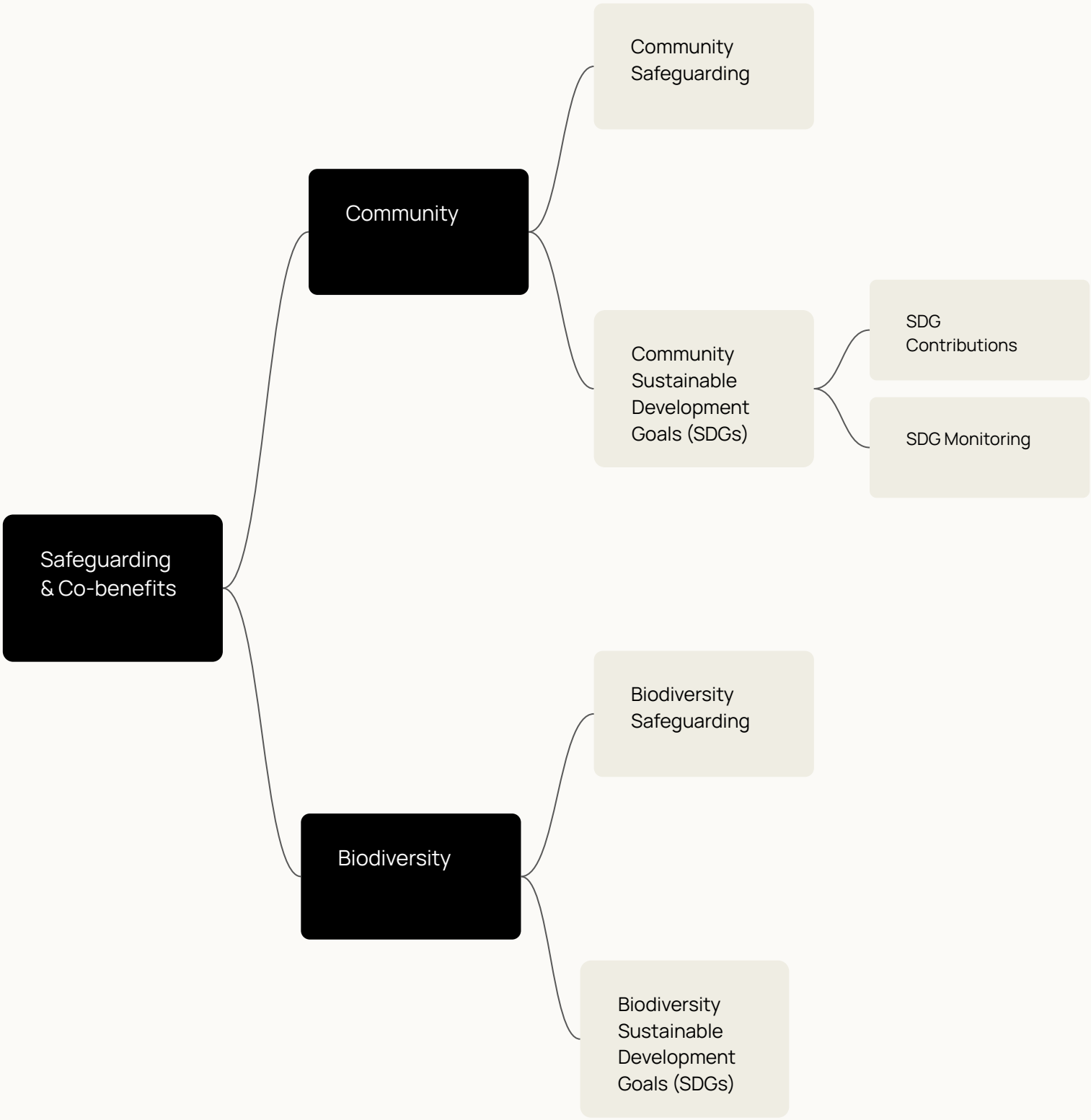
If significant safeguarding risks are present:

- The score is the minimum of the **Biodiversity** and **Community** scores.
- This ensures positive outcomes in one sub-component cannot override evidence of severe harm in the other — a net benefit in both **Biodiversity** and **Community** are required for a positive score.

If significant safeguarding risks are not present:

- The score takes the average of the **Biodiversity** and **Community** scores.

Safeguarding and Co-Benefits



Community

SAFEGUARDING AND CO-BENEFITS

Description

A holistic view of the likelihood that project activities produce a net benefit to local communities. Considering whether the project meets the principle of Not Net harm, and the scale of positive impacts above this minimum requirement. The potential impact of project activities on relevant community stakeholders, both positive and negative, is assessed to evaluate whether safeguards are in place to mitigate any potential harm, and if project activities deliver additional community focussed co-benefits aligned with SDGs.

Scoring Logic

The **Community** score combines the **Community Safeguarding** and **Community Sustainable Development Goals (SDGs)** components. Where **Community Safeguarding** indicates severe risk of net harm, this acts as a score cap to indicate the overall impact is negative. Otherwise, the two component scores are averaged.

Community Safeguarding

Pt.1

SAFEGUARDING AND CO-BENEFITS - Community

Description

A gated assessment of the of potential impact of project activities on local communities. Community stakeholders (e.g., land-ownership, employment, livelihoods, etc) are first identified, and the project's activities.are assessed for their potential to cause harm to community stakeholders within the local context. Where stakeholders may be impacted, disclosures of relevant procedures within the documentation assessed to ensure community rights protection to ensure appropriate safeguards are in place to mitigate any negative impact to meet the principle of *No Net Harm*.

Scoring Logic

The **Community Safeguarding** score considers **eight** safeguarding themes:

1. **Community Engagement, Participation and Transparency**
   Assesses the level of evidence of appropriate prior community engagement and that stakeholders are informed of project activities, where relevant.

2. **Access to Grievance Redress**
   Checks if a transparent, fair, and free-to-access grievance redress mechanism is in place, and the redress process is described.

3. **Human Rights, Indigenous Peoples and Local Communities**
   Checks if IPLCs with land rights have given Free, Prior, and Informed Consent (FPIC), and flags any other reported rights abuses. AWD project activities generally carry minimal risks to IPLC rights and the score defaults to "Very Low Risk" unless there are any reported rights abuses.

4. **Equity and Benefit Sharing**
   Checks if community stakeholders have a right to equity in the project or if there that project activities will displace existing livelihoods or resource access that compensation through benefit-sharing is in place. As AWD project activities do not displace existing livelihoods that would require compensation though benefit sharing, the score defaults to "Very Low Risk"

Community Safeguarding

Scoring Logic

5. **Land Rights, Resource Access and Involuntary Resettlement**
   Assesses the existing land tenure context to check of community stakeholders have land/resource/access rights, and/or if there was a transfer of land rights/ownership before the project started. In these contexts, the disclosure of relevant land agreements is checked within the project documentation. AWD project activities are not land-based, so are not expected to result in rights violations. The score defaults to "Very Low Risk" unless there are any reported land rights or resource disputes.

6. **Labour Rights and Working Conditions**
   Identifies if the project employs local community members in project planting activities and whether project documentation discloses information on fair wages, alignment with employment law, and fair working policies.

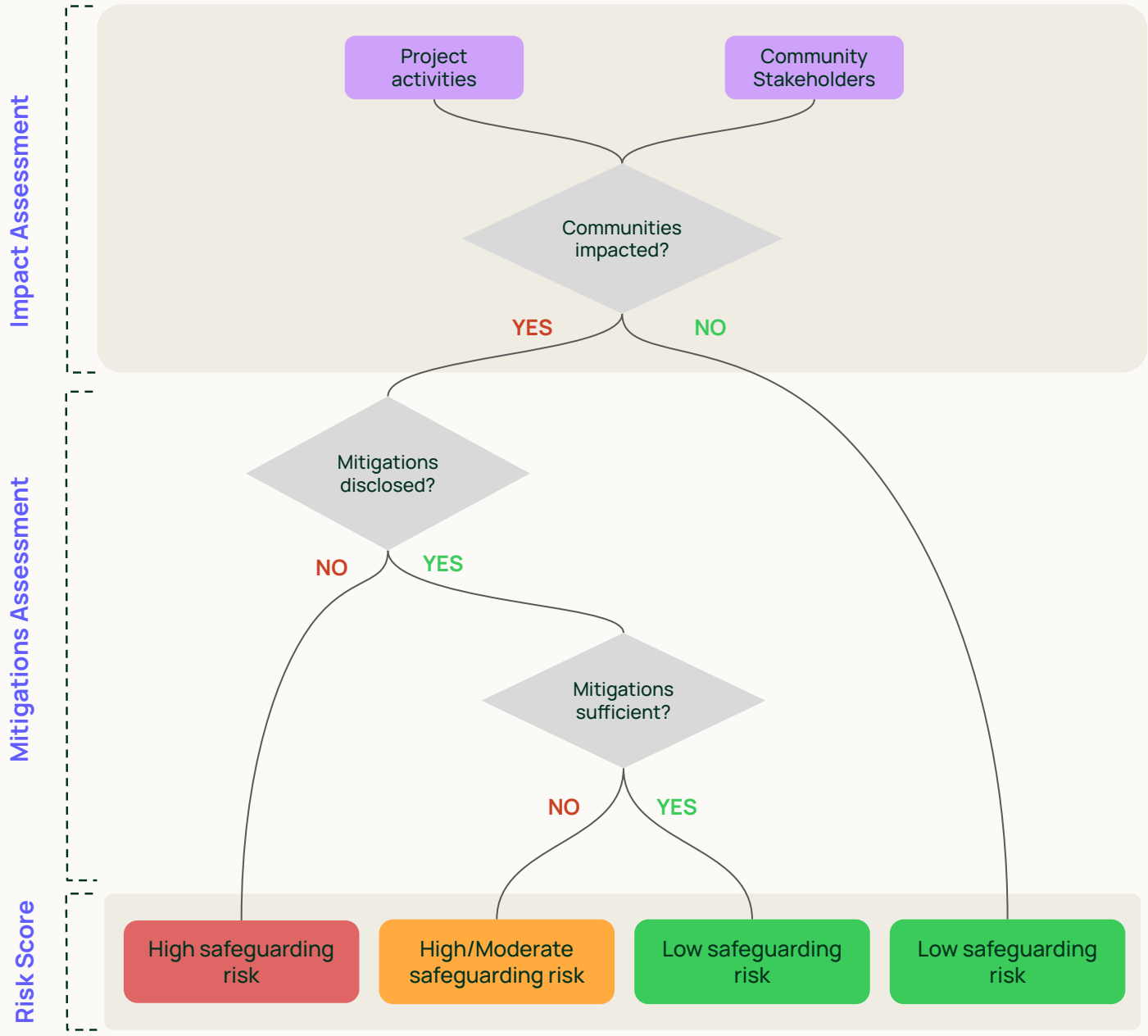
7. **Gender Equality**
   Assesses whether the project has measures in place to avoid gender based discrimination and harassment of employees or other community stakeholders, where relevant.

The final score follows a set of rules-based scenarios, potential for severe harm, or reports of materialized harms in any of the themes can cap the overall score. Otherwise, an average of scores are taken, with weightings applied depending on the severity of impact across themes.

Community Safeguarding

SAFEGUARDING AND CO-BENEFITS - COMMUNITY

Scoring Logic - illustrative example



Community Sustainable Development Goals (SDGs)

Description

Considers community co-benefits through the lens of UN SDGs. Project activities or additional community-focussed initiatives implemented by the project that align with SDG targets and indicators are considered to asses the scale of positive community impact.

Scoring Logic

The **Community Sustainable Development Goals (SDGs)** score considers the number of SDGs that the project activities and initiatives target (**SDG Contributions)**, alongside the evidence of tangible impact towards targeted SDGs (**SDG Monitoring**).

SDG Contributions

Pt.1

Description

Considers the project activities and community initiatives alignment with the 17 UN SDG targets and indicators to assess the potential for meaningful and tangible contributions to community-focussed SDGs.

Scoring Logic

The SDG Contributions score maps project activities and community initiatives against SDG targets, providing a count of SDGs meaningfully addressed. Contributions are only rewarded where they are clearly aligned with specific SDG targets and supported by evidence.

AWD projects most often contribute to **SDG 6** (Clean Water & Sanitation) through reduced irrigation water use, **SDG 2** (Zero Hunger) through maintained yields and resilience, **SDG 1** (No Poverty) through input-cost and water savings for farmers, and **SDG 13** (Climate Action) through methane reduction. Some also support **SDG 5** (Gender Equality) where women farmers participate in and benefit from the activity.

A weighted score is calculated for each targeted SDG, based on the strength and evidence of the contribution and the country's progress on that SDG, to identify high-impact co-benefits. Projects contributing to a range of SDGs aligned with national development aims receive higher scores.

SDG Contributions

Data Inputs

Input name	Description
Community contributions	List of community initiates/activities implemented by the project as reported in project documentation
SDG targets	SDG targets and indicators as described by the United Nations
Country	The project country, used to assess SDG relevance and baseline progress
SDG country progress	Country progress towards SDGs (SDG Report 2025, United Nations).

SDG Monitoring

Description

Monitoring plans to track contributions towards SDGs ensures a project can evidence and demonstrate that co-benefits activities have been implemented and their impacts can be reliably monitored and quantified to demonstrate tangible community co-benefits.

Scoring Logic

The **SDG Monitoring** score identifies whether project has a mechanism in place to monitor the implementation and impact of co-benefits activities. Monitoring plans with clear, quantitative metrics that are aligned with SDG targets and indicators are considered best-practice to demonstrate tangible and relevant contributions to community sustainable development. The absence of a monitoring plan, vague metrics, or misalignment with SDG targets lowers the confidence that the project delivered verifiable and material co-benefits.

Data Inputs

Input name	Description
SDG monitoring plan	Whether the project documentation contains a monitoring plan to track co-benefits and SDG contributions. The relevance and quality of metrics used is assessed against relevant SDG targets.

Biodiversity

SAFEGUARDING AND CO-BENEFITS

Description

A holistic view of the likelihood that project activities produce a net benefit to biodiversity and the environment. Considering whether the project meets the principle of Not Net harm , and the scale of positive impacts above this minimum requirement. The potential impact of project activity implementation, both positive and negative are assessed compared to the baseline situation to assess whether safeguards are in place to mitigate any potential ecological harm, and if project activities deliver additional biodiversity focussed co-benefits align with Sustainable Development Goals (SDGs). For rice systems, the most material risks relate to water management and agro-chemical use.

Scoring Logic

The Biodiversity score combines **Biodiversity Safeguarding** (avoiding harm — notably pollution from herbicides, pesticides and fertilizers, and impacts on water-dependent habitats) and **Biodiversity Sustainable Development Goals** scores(positive contributions such as improved water use and habitat, captured through SDG 15).

Where **Biodiversity Safeguarding** indicates severe risk of net harm, this acts as a score cap to indicate the overall impact is negative. Otherwise, the two component scores are averaged.

Biodiversity Safeguarding

Description

An evaluation of the risk of the potential ecological impact of the project's activities. Activities are assessed for their potential to cause harm to local ecosystems and any mitigations to avoid such risks. In AWD rice systems this centres on water-management effects on paddy and wetland habitats and on pollution from agro-chemical inputs.

Scoring Logic

The **Biodiversity Safeguarding** score considers **two** safeguarding themes:

1. **Environmental Damage and Pollution Prevention**

   Assesses whether the project activities have any risk of adverse environmental or ecological damage compared to a baseline scenario.

   AWD project activities are generally not expected to cause significant adverse impacts to the environment compared to a BAU scenario as they represent a continuation agricultural land use. However, evidence of proper management of agro-chemical inputs to expected to reduce any pollution damage in paddies and wetlands.

2. **Biodiversity Conservation and Sustainable Management**

   Assesses whether project activities put pressure on natural ecosystems for resource extraction, or increase unsustainable resource management. As stated above, AWD activities are not expected to adversely impact conservation and sustainable resource management compared to a BAU scenario. The score usually defaults to "Very Low Risk". In the event of observed biodiversity damage, such as clearance of native ecosystems to establish paddies, this would result in a "High Risk" score.

The score combines the two themes with equal weightings.

Biodiversity Sustainable Development Goals (SDGs)

Description

Considers co-benefits through the project's contribution to biodiversity-related Sustainable Development Goals — principally SDG 15 (Life on Land)..

Scoring Logic

The **Biodiversity Sustainable Development Goals (SDGs)** score identifies how well aligned the project activities are with UN SDG 15.

This subcomponent evaluates the project's positive contributions to ecosystem health and biodiversity beyond basic safeguards. SDG 15 contributions related to aWD activities may include such as healthier soils, reduced agro-chemical loading, and improved water-dependent habitats.

However, for AWD projects the **Biodiversity Sustainable Development Goals (SDGs)** usually lies close to a neutral score as, even though it may be offering benefits compared to previous agricultural practices, AWD is still a continuation of agricultural practices rather than active support to conserve or restore natural terrestrial ecosystems, environmental improvements do not directly align with SDG 15 targets and indicators.

Data Inputs

Input name	Description
SDG 15 contributions	Evidenced, monitored contributions to Life on Land (SDG 15).

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