The Parameterized SUI Protocol

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A SUI is not fully defined until its parameters are documented. The Parameterized SUI Protocol is a structured specification format that captures everything needed to (a) communicate the SUI unambiguously, (b) instruct a verification auditor, and (c) design a financial instrument around it.

The SUI Parameter Set

Every SUI must specify the following eight parameters:

#	Parameter	Description	Example (Becaps)
1	**SUI Name**	A plain-language name that identifies the unit	Chemical Displacement per Hectare
2	**Outcome Domain**	The system being changed (taxonomy-linked)	Climate — GHG Emissions Avoided (IRIS+ PI5765)
3	**Application Event**	The specific company action that triggers one SUI	Application of 1 kg Becaps biostimulant to 1 hectare of cultivated land
4	**Baseline Value**	Counterfactual outcome in the absence of the intervention	220 kg N/ha synthetic fertiliser application (regional average, DANE 2023)
5	**Observed Value**	Measured outcome with the intervention	85 kg N/ha (average across 120 trial plots, 2023–2024)
6	**SUI Magnitude**	Net impact = Baseline ? Observed, converted to outcome unit	135 kg N/ha displacement × 0.758 CO?e/kg N = 102.4 kg CO?e/ha
7	**Uncertainty Range**	95% confidence interval on the SUI magnitude	±12.3 kg CO?e/ha (±12%)
8	**Verification Protocol**	How, when, and by whom the SUI is verified	Annual third-party LCA audit by certified GHG verifier; SSOT ingest from production batch records + soil lab reports

The SUI Specification Document

A complete SUI specification document contains the parameter set above plus the following supporting sections:

Section A: Taxonomy Mapping

Map the SUI to every relevant standard:

- IRIS+ indicator code(s) and description
- SDG target(s) (e.g., SDG 2.4, SDG 13.1)
- EU Taxonomy objective and activity code (if applicable)
- TNFD indicator (if nature-related)
- AIMM sector and dimension (if MDB investment is planned)

Section B: Baseline Documentation

For every SUI, the baseline must be documented with:

- Source of baseline data (peer-reviewed study, government statistics, industry survey)
- Year of baseline data and update frequency
- Geographic scope and representativeness
- Baseline degradation plan (what happens if the baseline changes — e.g., if synthetic fertiliser use declines nationally)

Section C: SSOT Architecture Summary

A brief description of the Single Source of Truth system that will hold the underlying data:

- Data sources feeding the SSOT (ERP records, IoT sensors, lab reports, satellite data)
- Data governance: who can write, who can read, what is immutable
- Audit trail: how a verifier accesses historical records
- Verification interface: the data export format provided to third-party auditors

Section D: Aggregation Rules

How individual SUI events are summed to produce period totals:

- Temporal aggregation (annual, quarterly, rolling 12-month)
- Geographic aggregation (by country, region, or global)
- Double-counting prevention (if a product is applied and then re-applied to the same area in the same period)
- Boundary conditions (minimum threshold for counting one SUI event)

The SUI Specification Template

```
SUI SPECIFICATION DOCUMENT
Version: 1.0
Company: [Name]
Date: [YYYY-MM-DD]
```

```
Author: [Name, Role]
Verifier (pending): [Name of planned third-party auditor]

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PARAMETER SET
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1. SUI Name: _____
2. Outcome Domain: _____
   IRIS+ Code: _____
   SDG Target: _____
3. Application Event: _____
   Trigger condition: _____
   Unit of application: _____
4. Baseline Value: _____
   Baseline source: _____
   Baseline year: _____
5. Observed Value: _____
   Measurement method: _____
   Sample size / coverage: _____
6. SUI Magnitude: _____
   Calculation: (Baseline - Observed) × [conversion factor]
7. Uncertainty Range: _____
   Confidence level: _____
8. Verification Protocol: _____
   Verifier type: _____
   Verification frequency: _____
   SSOT access method: _____

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TAXONOMY MAPPING
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IRIS+:       [ ] PI5765  [ ] PI7685  [ ] Other: _____
EU Taxonomy: [ ] Mitigation  [ ] Adaptation  [ ] N/A
TNFD:        [ ] Yes (metric: _____)  [ ] N/A
AIMM:        [ ] Sector: _______  [ ] N/A

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VALIDATION SIGN-OFF
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Internal review by: _____
Date: _____
External verification by: _____
Date: _____
Verification standard used: _____
```

Living Document Protocol

The SUI specification is a *living document* that must be updated under the following conditions:

- When the product formulation or delivery mechanism changes materially
- When the baseline data source is updated (triggers recalculation of all prior SUI magnitudes, with appropriate notes)
- When the company expands to a new geography with a materially different baseline
- When the verification protocol changes (e.g., new verifier, new standard)
- At minimum annually, as part of the impact reporting cycle

Continue to Chapter 3: The SSOT Architecture — building the data infrastructure that makes SUI verification possible.

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