

WHEN COMMUNITY AIR BECOMES EVIDENCE

Tamale, Northern Ghana

From Household Exposure to Defensible Environmental Evidence and Authorized Public-Health Action

TECHNICAL GOVERNANCE REFERENCE | VERSION 2.3 | 11 OCTOBER 2026

INDEPENDENT EDUCATIONAL PRE-EXAMINATION / BASELINE NOT FROZEN / NO FORMAL DISPOSITION

Prepared as an unsolicited technical exploration inspired by the public discussion of Kombian James Libaarbor and the Quali-Breeze Tamale community clean-air initiative. No affiliation, participation, permission, review, endorsement, or operational integration by Kombian James Libaarbor, Quali-Breeze, Paul Nwachukwu, Air Aware Labs, Ghana Health Service, or any other party is implied. All scenarios and data examples are hypothetical.

01 Purpose and boundaries

Community air monitoring can reveal patterns that deserve attention. It does not, by itself, prove personal exposure, health outcomes, or permission to intervene. This reference defines a bounded examination of the passage from observations to defensible records, locally authorized action, and verified environmental outcomes.

No actual Tamale measurements, household records, instrument specifications, consent documents, or program outcomes were provided for this examination. This document is not a field study, a clinical assessment, a regulatory opinion, a completed audit, or an accepted partnership proposal.

The governing question

Does this proposed consequence have sufficient Admissible Evidence, Applicable Authority, and Established Standing to become reality NOW?

The invariant TA14 chain

01 REALITY	02 RECORD	03 CONTINUITY	04 ADMISSIBILITY
Physical conditions	Original observations	Preserved provenance	Fit-for-claim evidence

05 BINDING	06 COMMIT	07 EXECUTION	08 OUTCOME
Link decision to authority	Record bounded decision	Locally authorized action	Verify actual result

A decision may be ALLOW, HOLD, DENY, or ESCALATE only within an actual examination scope. No such formal disposition is issued here. A demonstration does not grant execution authority.

Claims must remain separate

Claim level	What may support it
Observation	A device recorded a value at a time and location, with known limitations.
Environmental change	Comparable measurements support a change in conditions.
Individual exposure	Requires defensible exposure-pathway and activity evidence beyond a stationary reading.
Health benefit	Requires appropriately designed health evidence; air-quality change alone is insufficient.

02 Eight-chapter examination

01 | Community reality

Characterize household cooking smoke, outdoor burning, seasonal Harmattan dust, occupancy and possible exposure pathways. Record what is directly observed and what remains uncertain.

02 | Environmental observation

Specify pollutant and units (for example PM2.5), instrument position, sampling duration, averaging period, humidity, weather and likely sources. Treat low-cost readings as candidate observations.

03 | Atmospheric Integrity Record

Retain raw values, device identifier, timestamp and time zone, location precision, firmware, quality flags, calibration or co-location history, access history and corrections. Minimize identifiable household data.

04 | Community intervention record

Record proposed activity, who requested and approved it, consent where relevant, responsible persons, materials, timing, deviations and completion evidence. Distinguish advice from behavior change and engineered controls.

05 | Evidence admissibility

Evaluate suitability for the precise claim, drift, missing data, humidity interference, baseline comparability and uncertainty. Do not elevate inference into permission.

06 | Local execution authority

Identify the relevant household, health-service, organizational and regulatory permissions. TA14 can examine a decision boundary; it cannot confer authority in Ghana.

07 | Outcome verification

Compare matched pre/post conditions while examining weather, seasonal dust, occupancy, activity and instrument changes. State limitations and avoid unsupported causal health claims.

08 | Accountable scale-up

Preserve bounded findings, failures and unresolved uncertainty. Seek independent review and a repeatable protocol before broader household recruitment or public claims.

03 Minimum evidence package

The following is a proposed examination checklist, not a statement that the Tamale initiative currently captures these fields.

Record	Minimum contents
Observation	Original values; units; instrument ID; sampling interval; time zone; quality flags; raw export.
Context	Placement; household activity; occupancy where appropriate; weather; dust and smoke sources; sampling duration.
Instrument assurance	Manufacturer/model; maintenance; calibration or co-location checks; drift; known interference and uncertainty.
Intervention	Proposed action; purpose; consent as applicable; authorizing actor; implementer; date; deviations.
Continuity	Original file integrity; revision history; custody; access restrictions; retention and deletion rules.
Outcome	Predefined comparison; matched windows; confounders; uncertainty; limitations; independent review status.

Data protection and community trust

Prefer anonymized household identifiers over precise public coordinates. Separate any identifiable household information from analytical records. Establish locally appropriate consent, access, retention and sharing rules before gathering or publishing records. Do not disclose sensitive household-level exposure information merely to demonstrate an architecture.

Record integrity rule

Preserve the raw observation as primary. Store corrections, adjusted values, normalization methods and uncertainty separately. Never silently overwrite the source record. An admissible input does not automatically create an admissible output.

04 Practical pressure test

Hypothetical household scenario

A volunteer observes elevated particulate readings during charcoal cooking and proposes immediately replacing a household cooking practice. Instrument checks are incomplete. Household consent and organizational authorization for that intervention are not documented.

Preliminary teaching outcome: HOLD

Within this illustrative TA14 decision exercise, the proposed intervention cannot be represented as TA14-authorized execution. The appropriate next steps are to preserve the observation, verify instrument suitability, identify the decision-maker, establish consent and applicable local authorization, and define the intervention scope.

This illustrative HOLD does not prohibit independently authorized routine public-health education or urgent protective measures under applicable local procedures. It is not a formal disposition on an actual case.

Decision logic

Question	If unresolved
Is the reading sufficiently characterized for the claim?	HOLD the evidence-based claim; retain observation.
Is the action specifically defined and proportionate?	HOLD pending scope clarification.
Are local authority, standing and consent established?	HOLD or ESCALATE to the competent local actor.
Is there an immediate safety concern?	Follow applicable local emergency/public-health procedures; do not await TA14.
Can the outcome be verified without overclaiming?	Limit the conclusion to what the evidence supports.

Observed is not inferred. Inferred is not authorized. Capability is not authority. Commissioned once does not mean authorized forever.

05 Pre-freeze examination protocol

01. Choose one household or anonymized hypothetical scenario, one pollutant, one proposed action and one precise claim.
02. Identify who owns and controls the data, who may authorize intervention, and what consent or approvals are required.
03. Define instrument assurance, quality flags, time windows, meteorology and context logs before interpretation.
04. Freeze the baseline protocol and retain original records separately from derived or adjusted data.
05. Predefine comparison criteria, relevant confounders, uncertainty treatment and stopping conditions.
06. Review the complete authority chain and document any missing standing or permissions.
07. Record a bounded finding with evidence references, reasons, unresolved gaps and reviewer identity; do not imply certification.

Questions for Kombian and the Tamale team

Which monitors and pollutants are used? How are devices checked? Which household activities and environmental conditions are logged? How are observations preserved? Who approves changes to household practices? How is consent recorded? What does the before/after comparison actually establish? Which safeguards protect households and volunteers?

What a first demonstration could deliver

Output	Boundary
Anonymized evidence map	Shows required records and missing fields, not a finding about actual exposure.
Authority decision worksheet	Documents decision-makers and permissions, not permission granted by TA14.
Pre/post comparison specification	Defines what could be tested, not proof of a health benefit.
Gap register and next-step plan	Identifies unresolved questions before any formal examination.

06 Invitation for technical criticism

This reference invites written technical review from community health practitioners, air-monitoring specialists, local program leadership and public-health authorities. The purpose is to find weak assumptions before any claim of operational applicability.

Suggested first exchange

Share a non-sensitive description of the monitoring equipment, sampling workflow, data fields, intervention records and decision responsibilities. No household identities or unpublished sensitive measurements are required for the initial discussion.

What remains unestablished

There is no verified field dataset, frozen baseline, documented instrument-assurance package, agreed examination scope, established local execution authority, registered requester standing for a formal TA14 examination, or independent outcome verification in the materials reviewed.

Institutional separation

TA14 Authority Governance Institution offers an independent educational governance architecture. The public discussion provided context only. Neither Kombian James Libaarbor nor Quali-Breeze, Paul Nwachukwu, Air Aware Labs, Ghana Health Service, or other named parties are represented as participating in or approving this work.

NO ADMISSIBLE EVIDENCE. NO ADMISSIBLE EXECUTION.

Technical reference v2.3 | Independent educational pre-examination | 11 October 2026