



CATASTROPHISM RESEARCH ASSOCIATION

THE METHODOLOGY OF THE ASSOCIATION

Operating Procedures (SOP-1 through SOP-6)

VERSION 1.1 · ADOPTED 2026-07-21

Purpose: the working procedures behind the Methodology Standards. The Standards say what the Association's rules are; these procedures say who does what, in what order, on what timeline, and what record results.

Applies to: contributors and reviewers carrying a work from draft to publication. A reader who wants the rules themselves should read the Methodology Standards; this document is the operational machinery underneath them.

SOP-1 · Publication of Association research

Purpose. Carry an Association work from draft to the public or member archive in conformance with the Methodology Standards.

Roles. Author (any founding contributor or research partner); Standards Reviewer (Managing Partner or designee, never the author); Publisher (Managing Partner or designee).

Procedure.

- Draft registration.** The author registers the draft: working title, intended access tier (public, member, founding), datasets used with versions, any models used with maturity grades, and any forward claims it will contain.
- Self-audit.** The author applies the audits (labels, falsification, sources, figures, and where applicable models and framework names) and attaches the claims summary table.
- Standards review.** The Standards Reviewer performs the same audits independently. Outcomes: pass; revise (specific defects listed); or escalate (a standards-interpretation question for the Managing Partner). Target: five business days.
- Forward-claim registration.** Any forward claims are entered in the register (SOP-4) before release; model-derived claims confirm grade M2 or higher (SOP-5).

5. **Release.** The Publisher assigns the archive identifier, publishes to the correct access tier, and records the standard version, review sign-off, and release date.
6. **Post-release.** Errata and reclassifications append to the work per Standards Section 12.4; the archive entry is versioned, never overwritten.

Records. Draft registration entry; signed review checklist; claims summary; archive entry with version history.

SOP-2 · Member submission review

Purpose. Give member-submitted papers, datasets, models, and analytical notes a rigorous, predictable path into the archive.

Roles. Submitter (member with submission privilege); Screener (Managing Partner or designee); two Reviewers (one founding contributor or research partner, plus one advisory counsel member where scope fits); Publisher.

Procedure.

1. **Intake.** Submission through the structured portal: metadata, abstract, methodology declaration, datasets and versions, model cards where applicable, the machine-assistance disclosure, and the submitter's own claims summary. Incomplete submissions are returned with the checklist, not rejected.
2. **Initial screen.** The Screener checks scope fit and facial conformance with the Standards, including the framework-name check of Standards Section 10. Target: ten business days. Failing submissions receive structured feedback identifying each defect; one resubmission of the same work is allowed per cycle.
3. **Peer review.** Passing submissions go to two Reviewers, who apply the audits and assess substance. Model-bearing submissions are routed through SOP-5 in parallel. Reviewers with a material conflict recuse. Target: thirty days.
4. **Resolution.** One of three outcomes, each with written rationale: **Accept** (publish with full attribution); **Revise and resubmit** (specific feedback, one further round); **Decline** (structured rationale; the work is not disparaged, and declining implies no judgment beyond the standard).
5. **Publication.** Accepted work enters the archive under the submitter's name with the standard version noted. Acceptance asserts conformance with the standard, not Association endorsement of every conclusion.

Records. Intake record; screen decision; review reports; resolution letter; archive entry.

SOP-3 · Source intake and grading

Purpose. Maintain the graded source registry the Standards depend on.

Roles. Any researcher may propose a source; the Managing Partner or designee grades it; grades are periodically re-reviewed.

Procedure.

1. **Intake.** New sources enter the registry with: identity, producer, access route, provenance notes, and proposed tier (S1 to S4) with justification.
2. **Grading.** The grader confirms or adjusts the tier under Standards Section 4. Disagreements escalate to the Managing Partner; the registry records the final grade and rationale.
3. **Independence mapping.** Sources sharing derivation are linked in the registry so corroboration counts are computed over independent lines only.
4. **Currency review.** Instrumental series record their release cadence; the registry flags stale versions. A publication citing a flagged source must re-base or state the limitation.
5. **Re-grading.** Any researcher may move to re-grade a source on new evidence (retraction, replication failure, provenance problems). Re-grades propagate: the claims register flags every published claim resting on a downgraded source for review.

Records. Source registry entries with grade history; independence links; currency flags; propagation reviews.

SOP-4 · Forward claims and calibration

Purpose. Ensure every forward-looking statement is registered, resolved, and scored, so the Association's predictive record is a matter of record rather than memory.

Roles. Claimant (author); Registrar (Managing Partner or designee); Resolver (Registrar plus one other researcher at resolution).

Procedure.

1. **Registration.** Before publication, each forward claim is entered: statement, observable and dataset, threshold or signature, resolution date or trigger, registration date, the publication it will appear in, and, for model-derived claims, the model card and grade (M2 minimum per Standards Section 8.3).
2. **Publication linkage.** The published work carries the claim exactly as registered. Editorial tightening of language after registration requires re-registration.
3. **Monitoring.** The register is reviewed monthly; approaching resolutions are flagged.
4. **Resolution.** At the date or trigger, the Resolver scores the claim against the observable: confirmed, refuted, or indeterminate (with the reason indeterminacy arose). Refuted claims trigger the falsification obligations of Standards Section 3.3 and are entered in the model's card where

model-derived.

5. **Extension.** A claim may be extended once, before its resolution date, by a documented revision stating why; silent extension is a standards violation.
6. **Calibration reporting.** The cumulative record (registered, resolved, hit rate, pending) is compiled quarterly for members and periodically for the public. No selective presentation.

Records. Forward-claim register with full lifecycle; resolution scorecards; quarterly calibration compilations.

SOP-5 · Model intake and validation review

Purpose. Give every model whose outputs enter Association work a documented card, an assigned maturity grade, and a reproducible validation record, per Standards Section 8.

Roles. Modeler (author of the model); Model Reviewer (a founding contributor, research partner, or advisory counsel member competent in the method, never the Modeler); Registrar (Managing Partner or designee, keeper of the model register).

Procedure.

1. **Card intake.** The Modeler files the model card: name and version, authors and declared relevant track record, system and question, assumptions register, input datasets with versions, parameters and calibration method, code availability, machine-assistance disclosure, requested grade, and change log.
2. **Verification review (M1).** The Model Reviewer confirms the implementation reproduces its stated test cases and sanity checks, from code where available or from specification otherwise. Failures are itemized back to the Modeler.
3. **Hindcast review (M2).** The Reviewer confirms: the holdout interval was declared before testing; no tuning against the holdout occurred (calibration history is part of the card); skill is quantified against the stated baseline or null; and the hindcast reproduces from the card's data and method. Irreproducible hindcasts do not confer M2, whatever their reported skill.
4. **Framework-name check.** If the model claims to implement a named third-party framework, the Registrar routes the fidelity review of Standards Section 10 to the originator with a stated response window, and records consent, confirmation, or the rename decision.
5. **Grade assignment.** The Registrar enters the model in the register with its grade, the review record, and the reviewer sign-off. The grade prints on the card and accompanies every published output of the model.
6. **Live scoring (M3).** Registered forward claims from the model resolve under SOP-4; the cumulative score accrues to the card. M3 is reached at the first resolved claim and thereafter always cites the full record.
7. **Re-grading.** Material version changes return the model to review at step 2. Evidence of leakage, holdout tuning, or irreproducibility withdraws the grade pending re-review; published outputs of a

downgraded model are flagged in the claims register.

Records. Model register entries with card, grade history, review sign-offs, fidelity-review correspondence, and live-scoring record.

SOP-6 · Collection curation

Purpose. Operate the Collection shelf of Standards Section 11: external material curated by link and attribution, graded, clearly separated from Association claims, and removable at the owner's request.

Roles. Proposer (any founding contributor, research partner, or member); Curator (Managing Partner or designee); the owner of the material (the external author).

Procedure.

1. **Proposal.** An entry is proposed with: link to the material on the owner's own platform, author attribution, platform and date, topic fields, a one-line relevance note, and any provenance observations.
2. **Grading.** The Curator grades the entry under Standards Section 4 (typically S3 or S4; primary data or peer-reviewed material grade higher) and records the grade in the entry's metadata.
3. **Rights check.** The entry links outward and quotes at most brief excerpt within fair use; no reproduction of the owner's work is hosted. Where the owner has stated distribution preferences, they are honored at intake.
4. **Entry.** The Curator publishes the entry to the Collection with the standard metadata block and the shelf label distinguishing it from Archive work. Curation asserts relevance and stated provenance, not review or endorsement.
5. **Owner contact and removal.** On first curation of an owner's material, the Association notifies the owner where a contact route exists. An owner may direct removal or amendment of their entries at any time; removals execute within five business days and are logged.
6. **Promotion.** A Collection entry that merits Archive standing proceeds only by commissioning or submission under SOP-2, with full review. The entry itself remains in the Collection under its grade.
7. **Compensation.** Commissioned work is compensated under the Research Partnership Standards schedule. The finder's honorarium of Standards Section 11.4 (\$100 to \$250, Managing Partner's discretion) is recorded against the originating entry.

Records. Collection register with metadata, grades, owner correspondence, removal log, and promotion and honorarium records.

Change control

These procedures version with the Methodology Standards and amend under the same founder change control. Procedure-level tuning that does not alter the Standards (timelines, role designations) may be adjusted by the Managing Partner with notice to the other founder; anything touching the meaning of the Standards requires consensus.

Document record

Field	Entry
Document code	CRA-SOP-1..6-1.1
Version	1.1
Adopted	2026-07-21, under Managing Partner sign-off
Ratification	Co-founder ratification recorded per change control
Impression	Second impression, 2026-08-03. Front matter re-set for readers; no normative text altered.
Companion documents	Methodology Standards v1.1 (governing); Contributor Field Guide
Published	Openly at catastrophism.org/methodology
Change control	Procedure-level tuning that does not alter the Standards may be adjusted by the Managing Partner with notice; anything touching the meaning of the Standards requires consensus.

Amendment log.

Version	Date	Change
1.0	2026-07-20	Initial draft: SOP-1 through SOP-4.
1.1	2026-07-21	Added SOP-5 (model intake and validation review) and SOP-6 (Collection curation); updated cross-references to Standards v1.1 numbering. Adopted under Managing Partner sign-off; co-founder ratification to be recorded on receipt of written approval.

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