From Indicators to Decisions

Benchmark gaps in post-disaster housing recovery research

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Take-home message The literature gives practitioners many ways to measure housing recovery, but far fewer reference points for deciding whether recovery is adequate, equitable, or ready for action.

Indicators are abundant. Decision-ready benchmarks are uneven, mostly empirical, and rarely prescriptive.

58	16	291	336	203	0
studies reviewed	country contexts	unique indicators	study-indicator entries	entries with benchmarks	prescriptive benchmarks

Why benchmarks matter

Recovery indicators such as rebuilding rates, return rates, repair costs, tenure stability, service access, and neighborhood return describe what is happening after a disaster.

Benchmarks are the reference points that turn those measurements into judgments. They make it possible to say whether recovery is adequate, delayed, inequitable, or ready for a policy response.

Definition used here
A benchmark is any interpretable reference point attached to an indicator, including a baseline, comparator, threshold, target, expected trajectory, or model-derived value.

Indicator measured > **Benchmark** meaning > **Decision** action

"60% rebuilt" "target: 75%" "add resources"

Benchmark types in plain language

- **T0** 133 **Measurement only** — Measurement without a reference point.
- **T1** 0 **Prescriptive benchmark** — Normative target; none in the sample.
- **T2** 128 **Empirical pattern** — Observed pattern, model estimate, or comparison.
- **T3** 61 **Assessment threshold** — Threshold or category used to judge recovery.
- **T4** 14 **Planning target** — Estimate used to size resources or scenarios.

Decision risk when context is missing

- Same measurement, different meaning: 60% rebuilt can be fast progress, expected delay, or unacceptable shortfall.
- Equity can disappear when benchmark records omit subgroup, scale, hazard, and time horizon.
- Tools that import benchmarks without confidence or context may treat research findings as universal thresholds.

What we reviewed

Review boundary

- Academic studies from 2007-2025 with post-disaster housing recovery indicators.
- Analysis sample: 58 studies, 16 country contexts, and 336 study-indicator entries.
- Benchmarks require an interpretable baseline, comparator, threshold, timeline, target, or model expectation.

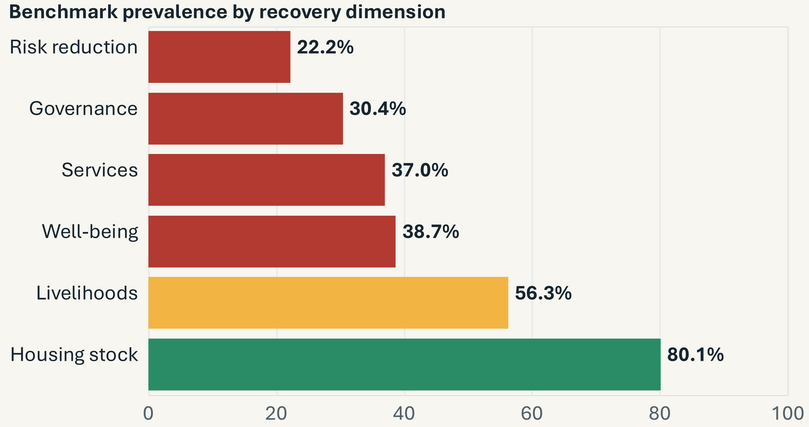
Unit: study-indicator entry; context governs interpretation.

What we found

Type 2 Empirical pattern 63.1% | **Type 3 Assessment threshold 30.0%** | **T4**

Type 1 prescriptive benchmarks: 0 in the academic analysis sample

Benchmark prevalence by recovery dimension



Pattern to remember

1. Benchmarks appear in 203 of 336 entries (60.4%), but they concentrate in housing stock and shelter conditions.
2. Most benchmarked entries are Type 2 empirical patterns (128 entries; 63.1%), which support comparison but do not set policy goals.
3. Prescriptive benchmarks are absent in the academic analysis sample, so policy tools need an explicit normative layer.
4. Lower coverage for governance, services, well-being, and risk reduction can narrow what recovery tools see.

Applications

1. Require every recovery indicator to carry an interpretable reference point.
2. Treat academic benchmarks as context-specific evidence, not ready-made policy targets.
3. Store benchmark type, confidence, hazard, time horizon, scale, and subgroup specificity before using benchmarks in assessment tools.

Applications make each benchmark traceable, contestable, and portable across tools.

Design guidance for assessment tools

- Indicator selection is not enough; benchmark selection is a separate design task.
- Academic evidence can flag expected trajectories, but operational decisions still need a normative layer.
- Grey literature, agency guidance, humanitarian standards, and community processes should fill gaps left by journals.

Use academic evidence as one layer in a benchmark record, then add policy standards, agency guidance, local priorities, and community-defined goals.

Poster takeaway

The field has built a substantial indicator vocabulary. The next step is benchmark governance: documenting where reference points come from, what they assume, who they represent, and when they should trigger action.

Better benchmark records make recovery assessments more transparent and easier to adapt locally.

Read the manuscript HTML
jrandre2.github.io/2A-Measuring-Housing-Recovery/Benchmarks_Post-Disaster_Housing_Recovery.html

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Source: CECREH Housing Benchmarks project analysis outputs, current manuscript analysis sample.
Counts shown are for the filtered academic analysis sample, not the raw workbook inventory.