

Calculation formulas

Constants used in the interactive:

- `CLIMATE_FACTOR = 0.422590339` — uniform scaler from gross locatable budgets to an illustrative climate-relevant proxy (preserves rankings; not a substitute for project-level climate coefficients).
- `MEAN_CVI = 0.47716` — population-weighted national mean LoGIC CVI.

Fairness index (district d)

```
need_d = population_d × cvi_d
need_share_d = need_d / Σ need_j

money_share_d = visible_gross_cr_d / Σ visible_gross_cr_j

fairness_d = money_share_d / need_share_d
```

A score of 1 is proportional to population × CVI need. Below 1 = smaller visible share; above 1 = larger.

Spreadsheet form (Google Sheets / Excel)

Assume columns: A population, B cvi, C visible_gross_cr.

```
D2 = A2*B2 // need
E2 = D2/SUM($D$2:$D$65) // need share
F2 = C2/SUM($C$2:$C$65) // money share
G2 = IF(E2=0,0,F2/E2) // fairness
```

Poverty-adjusted sensitivity

```
need_d = population_d × cvi_d × (1 + poverty_pct_d/100)
```

Then recompute shares and fairness as above. Implemented in `app/lib/fairness.ts` (`needMode: "poverty"`).

Climate proxy money

```
proxy_gross_d = visible_gross_cr_d × CLIMATE_FACTOR
```

Multi-district equal split (project p with districts $D_1...D_n$)

```
gross_per_district = gross_budget_cr_p / n
scaled_per_district = gross_per_district × CLIMATE_FACTOR
```

Spearman ρ (CVI vs fairness)

Reported in the story as **$\rho = 0.26$** ($\rho \approx 0.04$) on the 64-district Static Edition table. Note: because CVI enters the fairness denominator, this correlation is **not** a clean causal test of whether vulnerability drives funding — see editorial methods caveats.

Reproduce with scripts

```
# Recompute fairness from district-fairness.csv and print summary  
node scripts/open-data/recompute-fairness.mjs
```

```
# Re-extract Annexure 2 from a local PDF copy of the Finance Division report  
python3 scripts/open-data/extract-annex2.py /path/to/budget-report.pdf
```