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NAIROBI CITY TWIN / ENVIRONMENT & CLIMATE

Environment & Climate

Domain Guide

Review the available environmental and historical climate references, separating published context from proposed risk datasets.

City	Nairobi
Coverage	Partial published scope
List price	Access and scope to be agreed
Guide edition	Striped Donkey V5.89 - 7 September 2026

Use this guide

Read the documented coverage and limitations alongside the published sample and release evidence. Model counts and sample distributions describe their stated source and period. The final accepted order specifies licensed scope, usage rights, duration and delivery.

Useful questions

- Inspect historical climate evidence
- Review area-level environmental scope
- Identify proposed models and disclosed gaps

Scope and limitations

Flood risk uses area-level evidence and calibrated risk bands rather than a full hydraulic model of elevation, drainage and rainfall dynamics. Exact probability distributions, weights and assignment logic are controlled.

Environmental rows and historical events can share time and geography, but the public release does not claim that every environment record is directly generated from a historical event.

Multiple domains carry historical or climate context, but the public site does not publish the internal dependency graph or claim internal consumption everywhere.

Selected scenario and analytical workflows can propagate historical shock context. Automatic invocation, schedule, weights and execution paths are intentionally not published.

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01 How Environment & Climate fits the City Twin.

Historical events can be analyzed across connected city systems, but the public site intentionally stops at the semantic relationship: exact sensitivity coefficients, modifier weights, propagation sequence and generation model design are controlled.

This page shows what the Environment domain represents, how it connects analytically to the wider City Twin™, and where the evidence boundary sits.

Nairobi City Twin™ · 1940-2026

02 Known and possible relationships.

Connections follow the published domain scope. Optional, contextual and planned relationships retain their stated limits below.

Domain or context	Relationship and published scope
Demographics and Economy	Published historical events and monthly climate reference values provide city and time context for outcome analysis.
Geography	Environmental observations can be scoped by city or area when compatible geography is supplied.
Land, Construction and Infrastructure	Flood-risk-to-capital-project connections are proposed in the cited guide. Its environmental entity model is not deployed; these are not available project joins.

Supporting links

Water

Land

Energy

Demographics

Economy

Construction

Infrastructure

03 Ward-level environmental snapshots, taxonomies and historical climate context.

FCTE's environment concept spans a deployed reference layer plus a designed-but-not-yet-generated entity model. internal build ordering and dependencies are intentionally not published.

A shared, platform-wide historical-event reference - 40 documented events from 1902 to 2025 across policy, social, economic, climate and pandemic categories, each with a domain-sensitivity mapping (111 rows). Climate-category events like the 2009 East Africa drought and 2018 Nairobi flooding are real rows in this table, not Environment-specific data.

A static per-city reference table of min/average/max temperature by calendar month - a lookup, not a generated, growing dataset.

These five entities represent the designed target model - area-level flood assessments, sector emissions, ward canopy tracking, granular climate indicators and green-space inventory. None has a deployed table today; this is scope, not a release claim.

Disclosed gap: only the historical-event and monthly-climate reference layers are real today. The five entity-level tables described above are the intended next build, not currently generated data - naming them here is scope-setting, not an design announcement.

Historical climate context is modeled separately from environment entities and connected at the analytical level.

□□ semantic relationship · □□ separate platform context . Climate connects these concepts analytically without publishing the design layers underneath.

• Risk, emissions, canopy, climate and green-space context

• Physical dependency graph: controlled

• Documented historical events are city-scoped and time-aware

• Internal storage, consumer graph and propagation mechanics are controlled

04 The Historical Event Explorer - choose a documented event and inspect its public impact context.

Historical event context is represented through documented categories, timing and qualitative impact direction. Exact modifier formulas, propagation weights, execution paths and domain-consumption logic are intentionally withheld.

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The Environment domain publishes qualitative sensitivity categories for how climate shocks may relate to other city systems. Exact coefficients, propagation weights and modifier method are controlled.

Each row summarizes release-backed climate evidence at a qualitative public level. Exact configured coefficients and internal rationale metadata are controlled.

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Affected city system	Sensitivity	Direction	What the Environment model says
Water	High	Mixed	Drought increases demand; flooding disrupts supply
Insurance	High	Increase	Claims spike for property damage, crop loss
Housing	High	Decrease	Flooding destroys units; displacement
Employment	High	Decrease	Agriculture-sector and informal outdoor labour disrupted
Labor	High	Decrease	Agriculture impact; informal labor disrupted
Health	Medium	Spike	Waterborne disease, malnutrition, respiratory illness

Affected city system	Sensitivity	Direction	What the Environment model says
Social Protection	Medium	Increase	Disaster relief, food assistance programs
Economy	Medium	Decrease	Supply chain disruption; agricultural output loss
Demographics	Medium	Decrease	Drought/flooding disrupts registration and increases mortality/displacement
Education	Medium	Decrease	School closures during floods/droughts
Tourism	Low	Decrease	Drought and flooding reduce nature-based visitor comfort
Culture	Low	Decrease	Outdoor events affected; indoor venues largely resilient

05 Historical shocks can be studied across connected city systems.

FCTE can represent a documented environmental shock and examine how related city systems change through time. The public site shows the conceptual pathway and evidence category, not the internal propagation recipe.

Environmental risk can be analyzed alongside disease burden, healthcare utilization and insurance context. This demonstrates cross-domain analytical value without exposing the modifier chain or internal intermediates.

06 Nairobi: inland flood exposure, area-level environmental context and mitigation planning.

Nairobi's real, deployed environment layer today is the historical-event and monthly-climate reference data above - ward-level flood, canopy and emissions context is designed scope, not generated data.

07 City-calibrated environmental generation with disclosed evidence boundaries.

The public Environment domain exposes environmental entity families, historical context and representative analytics. Exact target volumes, randomization, trend coefficients, modifier formulas, starting configurations and orchestration are intentionally withheld.

FCTE represents dated environmental shocks and climate context without publishing the modifier coefficients, propagation weights or execution sequence.

Geography, urbanisation and local evidence shape the release. Exact probability bands, trend coefficients and row-scale parameters remain controlled.

Public entity family	Represents	Disclosure boundary
Emissions context	Area, sector and time emissions context	Trend category public; exact coefficients controlled
Flood risk	Area-level categorical exposure and assessment context	Not a hydraulic simulation; probability parameters controlled
Tree canopy & green space	Urban environmental condition through time	Trend behavior public; exact parameters controlled
Climate indicators	Area/time climate context	Historical categories public; generation mechanics controlled

08 Certification scope is explicit; internal metadata stays controlled.

A certification check requires a deployed dataset to check against; naming a domain in a catalog isn't that.

Exact modifier formulas, dampening and orchestration are controlled.

The public site distinguishes historical context from confirmed analytical relationships.

09 Environment & Climate model boundaries are disclosed.

Flood risk uses area-level evidence and calibrated risk bands rather than a full hydraulic model of elevation, drainage and rainfall dynamics. Exact probability distributions, weights and assignment logic are controlled.

Environmental rows and historical events can share time and geography, but the public release does not claim that every environment record is directly generated from a historical event.

Multiple domains carry historical or climate context, but the public site does not publish the internal dependency graph or claim internal consumption everywhere.

Selected scenario and analytical workflows can propagate historical shock context. Automatic invocation, schedule, weights and execution paths are intentionally not published.

The public catalog documents model scope, evidence and certification maturity. Internal generation sequencing, target volumes, modifier parameters and orchestration are not published.

10 From ward flood-risk assessment to mitigation planning - the intended shape, not a deployed one.

An area-level assessment would capture flood-risk category and assessment period so exposure could be compared consistently across Nairobi - no FloodRisk table exists yet.

Once built, environmental risk could be analyzed alongside city investment intended to reduce that exposure - no such link exists today.

ClimateIndicator, TreeCanopy, CarbonEmission and GreenSpace are proposed, not deployed. What's real today is the 40-event historical reference and the monthly climate lookup used elsewhere on this page.

This is the intended shape of the workflow once Environment's entity model is built - not a description of what the domain does today.

Available as Standalone Domain · Multi-Domain Bundle · Full City Twin™

Supporting links

See Water →

See Social Protection →

Review licensing & delivery details →

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Browse Environment & Climate Data →