Event definitions and summary statistics in published Northern Corridor transit time reports

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Preprint | Version v2 | October 20, 2026

Abstract

Comparisons of corridor transit times are meaningful only when reports measure the same interval and use the same summary statistic. This documentary audit reviews four Northern Corridor Transit and Transport Coordination Authority reports covering January 2025 through June 2026. All four cite RECTS, yet describe four different event boundaries. The January to June 2025 report gives medians, while the other three report averages. Taken together, the reports do not establish a harmonized time series. Differences across these tables should not be read as operational change without confirmation of a common definition and aggregation method. This review examines published descriptions, not underlying trip records. The reports provide no route level counts or uncertainty intervals alongside the selected values.

Keywords: corridor performance; transit time; freight transport; measurement; Northern Corridor; RECTS

Introduction

Transport corridor reports are used to describe route performance and compare results across reporting periods. Such comparisons require clarity about the events that start and stop the clock and about whether a published value is a mean, median, or another summary. A shared route label and a shared tracking system do not, by themselves, establish that two published values measure the same interval or use the same aggregation rule.

Earlier corridor measurement work stresses the need for consistent indicators and careful interpretation of summary measures (Kunaka & Carruthers, 2014; Raballand et al., 2008). This review applies those principles to the published descriptions. Differences in wording alone do not prove a change in the underlying system.

This short communication compares measurement descriptions in four Northern Corridor Transit and Transport Coordination Authority (NCTTCA) reports covering periods from January 2025 through June 2026. It asks whether the reports provide enough common metadata to interpret the Mombasa to Malaba and Mombasa to Busia figures as one comparable time series. The audit is documentary. It does not evaluate the Regional Electronic Cargo Tracking System (RECTS), verify underlying trip records, or attribute changes to operational causes.

Methods

Four reports listed in the NCTTCA Transport Observatory repository were selected because they report transit times for Mombasa to Malaba and Mombasa to Busia: the January to June 2025 biannual report, the July to September 2025 quarterly report, the January to March 2026 quarterly report, and the January to June 2026 biannual report (NCTTCA, 2025a, 2025b, 2026a, 2026b). The relevant Kenya transit section and route table in each report were reviewed.

For each report, the audit recorded the named data source, reporting period, statistic label, route values, and prose description of the interval start and end events. Values and labels were checked against the cited report pages. No trip level data, route sample counts, confidence intervals, or unpublished definitions were available. This was a focused single reviewer document audit; it did not use a preregistered protocol or a second independent coder.

Results

All four reports identify RECTS as the source of the relevant route data. Their event descriptions differ. The January to June 2025 report describes movement from the port gates to lodging customs clearance documents at the border (NCTTCA, 2025a). The July to September 2025 report describes cargo departure from the Port of Mombasa by road through issuance of an export certificate at Malaba or Busia (NCTTCA, 2025b). The January to March 2026 report defines its RECTS indicator as seal arming at origin through seal disarmament at destination (NCTTCA, 2026a). The January to June 2026 report describes road transit from origin or entry point to cargo arrival at destination or exit point (NCTTCA, 2026b).

The summary statistic also differs. Table 4 in the January to June 2025 report is headed median hours; the relevant quarterly and January to June 2026 tables report averages (NCTTCA, 2025a, 2025b, 2026a, 2026b). The displayed values and labels are summarized in Table 1.

Table 1. Measurement descriptions and selected published route values

Report period	Statistic and selected values	Stated start event	Stated end event
January to June 2025, Table 4	Median; Busia 63 h; Malaba 70 h	Cargo enters or exits port gates	Truck lodges customs clearance documents at the entry or exit border
July to September 2025, Table 3	Average; 2024 to 2025: Busia 79 to 59 h; Malaba 77 to 85 h	Cargo departs Port of Mombasa by road	Export certificate is issued at Malaba or Busia
January to March 2026, Table 4	Average; 2025 to 2026: Busia 90 to 67 h; Malaba 102 to 68 h	RECTS seal is armed at origin	RECTS seal is disarmed at destination
January to June 2026, Table 4	Average; Busia 92 h; Malaba 75 h	Origin or entry point	Cargo arrives at destination or exit point

Note. All four reports cite RECTS (NCTTCA, 2025a, 2025b, 2026a, 2026b). Values are transcribed as reported and are not calculated across periods. The January to June 2025 report labels its statistic as a median; the other values are reported as averages.

The route summary tables do not report route level trip counts or uncertainty intervals alongside these values. Denominators and precision therefore cannot be assessed from the tables examined (NCTTCA, 2025a, 2025b, 2026a, 2026b).

Discussion

The documentary record is insufficient to treat the four reports as a harmonized time series. Corridor measurement guidance calls for clear, consistent parameters, and averages and medians can convey different information (Kunaka & Carruthers, 2014; Raballand et al., 2008). The strongest evidence is the explicit difference between the median label in the January to June 2025 table and the average labels in the other reports, together with the distinct event descriptions. For example, the January to June values of 63 hours for Busia in 2025 and 92 hours in 2026 cannot be read as a 29 hour increase in the same outcome: the first is a median and the second an average, and the reports describe different interval boundaries (NCTTCA, 2025a, 2026b). The same caution applies to Malaba. The quarterly reports also publish year comparisons within each report using averages, but their event definitions differ from one another and from the half year reports (NCTTCA, 2025b, 2026a).

This audit does not show that RECTS operations or the underlying data processing rules actually changed. Report prose may abbreviate a stable operational definition, and the different event descriptions may overlap in practice. Only a versioned data dictionary or written clarification from NCTTCA can establish whether the same event pair, route inclusion rules, and aggregation procedure were used in each report. The evidence supports a documentation gap, not a conclusion that the authority made an error.

A compact indicator specification for each published table would improve reproducibility. It should identify the start and end event codes, route direction, observation window, statistic, eligible trip count, exclusions, treatment of incomplete tracking records, and any revisions. A short definition beside each table would help readers distinguish targets from observed transit times and avoid treating unlike values as a continuous series.

Limitations

This audit covers four reports selected for their inclusion of the two main Kenyan border routes; it is not an exhaustive review of every NCTTCA report. It relies on published text and tables and cannot inspect trip level RECTS records, operational manuals, or internal quality control procedures. The comparison identifies differences in what the reports state, not necessarily in the underlying measurement process. The reports do not show route level sample counts or uncertainty intervals in the tables examined. The audit was conducted by one reviewer and was not independently coded.

Conclusion

Four official reports covering periods from 2025 to 2026 all cite RECTS but do not consistently state the same event interval or summary statistic for Mombasa to Malaba and Mombasa to Busia transit time. Until the authority confirms that these definitions and aggregation rules are comparable, numerical differences across reports should not be interpreted as a harmonized change in route performance.

Declarations

AI assistance. OpenAI Codex assisted with locating public reports, checking selected table transcriptions, and editing the manuscript.

Funding. No external funding was received for this work.

Competing interests. Not reported by the author.

Ethics approval. Not applicable. This documentary audit uses publicly available aggregate transport reports and includes no human participants or nonpublic operational records.

Data availability. The four source reports are publicly available through the NCTTCA Transport Observatory and are listed below. The supplementary CSV provides extracted table values, event descriptions, page locations, and direct report URLs. No trip level or personal data were accessed.

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