

ETHIOPIAN DEMOGRAPHY AND HEALTH

CHAPTER 8

MIGRATION, URBANIZATION AND HEALTH IN ETHIOPIA

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List of Acronyms and Abbreviations

Abbreviation	Full term
AFD	Agence Française de Développement (French Development Agency)
ANC	Antenatal care
CMR	Child mortality rate
DESA	United Nations Department of Economic and Social Affairs
DHS	Demographic and Health Survey
DTM	Displacement Tracking Matrix
ESS	Ethiopian Statistical Service
FAO	Food and Agriculture Organization of the United Nations
FX	Foreign exchange
GDP	Gross domestic product
GHS-BUILT-S	Global Human Settlement Layer built-up surface dataset
GHSL	Global Human Settlement Layer
GIS	Geographic information system(s)
GPS	Global Positioning System
HDX	Humanitarian Data Exchange
HIV	Human immunodeficiency virus
IDP	Internally displaced person
IGAD	Intergovernmental Authority on Development
IMR	Infant mortality rate
IOM	International Organization for Migration
JMP	WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene
MEI	Migration effectiveness index
NMR	Net migration rate
OMR	Out-migration rate
PNC	Postnatal care
TMI	Total migration intensity
UCL	University College London
UIIDP	Urban Institutional and Infrastructure Development Program
UN	United Nations
UN DESA	United Nations Department of Economic and Social Affairs
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
US	United States
WDI	World Development Indicators
WHO	World Health Organization

8.1 Introduction

Migration and urbanization are not merely changes in where Ethiopians live. They alter the populations that health systems must serve, the distances separating households from effective care, the environments in which disease and injury occur, and the distribution of the financial and professional resources available to respond. Population movement may improve livelihoods, proximity to hospitals, and access to information; it may also interrupt treatment, intensify environmental exposure, and concentrate unmet need in receiving communities. The public-health significance of migration therefore cannot be inferred from the number of migrants alone. It emerges from the interaction of mobility, place, social position, institutional capacity, and access to services (World Health Organization [WHO], 2022; International Organization for Migration [IOM], 2024a).

Ethiopia provides a compelling setting for this inquiry. The urban population estimates assembled for this chapter rise from approximately 6.09 million in 1990 to 32.65 million in 2025—a 5.36-fold increase, equivalent to approximately 436% growth. This is not a claim that the urban share itself increased by 436%; it is a statement about the estimated number of urban residents. Such an expansion changes the scale of demand for antenatal care, childbirth services, childhood immunization, tuberculosis diagnosis, emergency medicine, chronic-disease management, sanitation, safe water, and transport. Yet the growth of a service population is not synonymous with growth in service capacity. Whether urban concentration improves health depends on the pace and geographic distribution of infrastructure, staffing, financing, and environmental protection (United Nations Department of Economic and Social Affairs [UN DESA], 2019; WHO, 2022).

The distinction between geographic presence and clinical functionality is especially consequential. Ethiopia's recently assembled health-facility atlas maps 40,525 health-related institutions, encompassing core health-service facilities and other health-related establishments. That inventory is valuable for understanding the national geography of infrastructure, but its mapped points are not interchangeable units of clinical capacity. A health post, health center, and hospital offer different levels of care; their effective contribution also depends on personnel, essential medicines, diagnostic capability, opening hours, referral pathways, and physical accessibility. A countrywide count, however comprehensive, cannot establish whether a woman experiencing an obstetric emergency can reach surgery in time or whether a displaced patient can sustain uninterrupted treatment. The appropriate planning question is therefore not only how many facilities exist, but which services are available, to whom, where, and under what conditions (WHO & United Nations Children's Fund [UNICEF], 2020; WHO, 2022).

Mobility also changes the relationship between people and health-system jurisdictions. The 2021 Ethiopian Labour Force and Migration Survey reported that 17.1% of the population covered by the survey were internal migrants, with differences by sex; Tigray was excluded from its coverage (Ethiopian Statistical Service [ESS], 2021). The prevalence describes migration within a defined survey universe, not a national annual migration flow. Nonetheless, it points to the importance of anticipating changes in local catchment populations. When people relocate from rural to urban areas, move seasonally for work, or circulate between households and workplaces, service demand may change more rapidly than facility budgets, staffing allocations, or administrative population estimates. These processes can affect both sending areas—through changing household composition

and caregiving arrangements—and receiving areas, through growing demand for housing, sanitation, primary care, and referral services (ESS, 2021; WHO, 2022).

Forced displacement makes these relationships more urgent. Government of Ethiopia and UNHCR operational data report 1,023,565 refugees and asylum seekers hosted in Ethiopia on 31 August 2026, concentrated in particular regions rather than evenly distributed nationwide (United Nations High Commissioner for Refugees [UNHCR], 2026). Refugees may encounter barriers related to documentation, language, continuity of care, income, and trauma, while host communities may already face constrained services. The public-health challenge should not be framed as a zero-sum contest between refugees and Ethiopians. Inclusive financing, shared infrastructure, equitable service delivery, and protection-sensitive health information can improve access for both populations. WHO's global evidence emphasizes that refugee and migrant health is inseparable from the resilience and inclusiveness of the health systems serving them (WHO, 2022).

Internal displacement presents a different but overlapping set of demands. IOM's July–August 2024 assessment identified 1,919,993 internally displaced persons in 2,060 accessible sites and 2,813,489 returning internally displaced persons in 2,580 accessible villages. These figures refer to assessed populations in specific locations, not exhaustive national counts or annual flows; some regions were excluded from particular assessment components because of operational constraints (IOM, 2024b). For healthcare, displacement can simultaneously increase need and undermine delivery: facilities may be damaged or inaccessible, health workers displaced, vaccination schedules interrupted, and patients separated from medical records, medicines, and familiar referral networks. Return does not necessarily mean that functioning services, safe water, or secure livelihoods have been restored (IOM, 2024a, 2024b).

International migration and the Ethiopian diaspora introduce a further dimension: mobility can transfer resources and expertise as well as people. Remittances may help households pay for transport, food, medicines, and treatment, although their distribution and health effects depend on household circumstances and cannot be assumed to be uniformly beneficial. Diaspora clinicians—including visiting surgical teams, specialists, educators, and professional associations—may contribute clinical services, mentoring, equipment, training, and institutional partnerships. Their greatest potential lies not in the number of short-term missions performed but in whether partnerships are aligned with Ethiopian priorities and strengthen sustainable local capability. At the same time, outward migration of health professionals raises questions about workforce retention and the international distribution of scarce skills (WHO, 2010, 2022; World Bank, 2023).

Urban growth and migration also redistribute exposure to environmental and occupational risks. Expanding settlements may bring opportunities for piped water, sanitation, and emergency transport, but unplanned expansion can increase traffic injury, flooding, heat exposure, air pollution, unsafe housing, and infectious-disease vulnerability. Climate variability can in turn influence livelihoods, displacement, and the viability of rural and urban settlements. These connections require an integrated analytical framework: demographic counts indicate the scale of population change; geospatial data reveal where people and facilities are located; health-system measures assess actual service readiness and use; and outcome data establish whether the resulting transformation is equitable and beneficial (IOM, 2024a; WHO, 2022; UN DESA, 2019).

This chapter examines migration and urbanization in Ethiopia as interrelated demographic and geographic processes with direct implications for population health. It distinguishes migration stocks from flows, internal mobility from international migration, urban population growth from the urbanization rate, and the presence of healthcare infrastructure from effective access to quality services. It considers the health consequences of internal migration, refugee movements, displacement and return, diaspora engagement, urban expansion, and the governance of rapidly changing settlements. The objective is not to attribute every health outcome to migration or urbanization, but to identify the mechanisms through which population redistribution creates risks, opportunities, and planning obligations—and to establish what evidence is needed to evaluate them. The guiding proposition is that the success of Ethiopia’s demographic and urban transformation must ultimately be judged by whether it expands equitable access to opportunity, strengthens resilience, and improves population health.

Methodology

Study design and documentary foundation

This chapter employed a structured, secondary-data research design combining documentary review, targeted retrieval of published statistical and operational datasets, descriptive reconstruction, cross-source comparison, and thematic interpretation. The starting document was Aynalem Adugna’s original Chapter 8, Migration and Urbanization (October 2025). Its conceptual and thematic architecture guided the identification of research questions across internal and international migration, displacement, urban population change, infrastructure, governance, and health. The resulting analysis was organized around the 18 substantive sections of Chapter 8, with empirical exhibits prepared where source definitions and numerical observations permitted defensible reconstruction. The work did not involve primary interviews, household enumeration, or analysis of individual-level confidential records (Adugna, 2025; International Organization for Migration [IOM], 2019).

Source identification, retrieval, and selection

Sources were sought from institutions responsible for producing or publishing the relevant measures. The 2021 Ethiopian Labour Force and Migration Survey and a related UNFPA Ethiopia policy brief informed the discussion of internal migration; World Bank World Development Indicators provided nationally defined urban population shares, total population estimates, and personal remittances as a percentage of GDP; government–UNHCR operational reporting supplied the refugee and asylum-seeker population by country of origin; IOM Displacement Tracking Matrix (DTM) assessments supplied site-based IDP and village-based returning-IDP counts; and World Bank project documents and results reports supplied Urban Institutional and Infrastructure Development Program (UIIDP) indicators (Ethiopian Statistical Service [ESS], 2021; UNFPA Ethiopia, 2024; World Bank, 2026a, 2026b; United Nations High Commissioner for Refugees [UNHCR], 2026; IOM, 2024; World Bank, 2025a, 2025b). Sources were selected for relevance, definitional clarity, traceability to a producing institution, identifiable reference dates, and suitability for descriptive rather than causal inference. Where an indicator lacked a sufficiently clear universe or an independently defensible denominator,

the chapter retained the reported observation with its qualification or refrained from calculating an additional statistic.

Extraction, classification, and comparability

For each empirical item, extraction focused on the reported value, unit, geographic scope, population universe, reference date or interval, source agency, and important exclusions. Measures were classified before comparison: migrant prevalence versus migration-stream shares; resident stocks versus arrivals or return flows; national urban shares versus absolute urban populations; and project outputs versus population-level outcomes. The 2021 migration survey's exclusion of Tigray and certain non-household populations was retained when interpreting its 17.1% internal migrant prevalence (15.1% for males; 19.1% for females). The four migration-stream percentages reproduced in the UNFPA policy brief were not forced to sum to 100% because their tabulation universe could not be established as a complete, mutually exclusive partition (ESS, 2021; UNFPA Ethiopia, 2024). Geographic and temporal comparability were treated as substantive analytical requirements rather than assumed properties of published datasets.

Quantitative reconstruction and graphical analysis

The principal derived urban measure was estimated urban population, computed for each selected year as total population multiplied by the urban population percentage divided by 100. The reconstructed series covered 1990, 2000, and selected annual observations from 2016 through 2025. Using the chapter's rounded input series, estimated urban residents increased from approximately 6.09 million in 1990 to 32.65 million in 2025, a 5.36-fold level (an increase of about 436%). Tabulations and a dual-axis line figure were used to distinguish growth in the proportion urban from growth in the absolute number of urban residents. These estimates reflect the World Bank's population series and nationally defined urban classifications; they are not direct census counts or measurements of built-up land expansion (World Bank, 2026a, 2026b). Descriptive calculations also included within-source category sums, arithmetic differences, and percentage changes where both the baseline and endpoint were explicitly documented. For example, reported UIIDP municipal revenues of US\$68 million and US\$156 million imply a nominal increase of approximately 129.4%; this calculation was not interpreted as an inflation-adjusted, per-capita, or causally attributable effect (World Bank, 2026c).

Displacement, refugees, and administrative indicators

The UNHCR operational snapshot dated 31 August 2026 was treated as a point-in-time stock of 1,023,565 refugees and asylum seekers hosted in Ethiopia, with six origin categories checked against the published total. It was not used as a measure of Ethiopian emigration or of refugee arrivals during 2026 (UNHCR, 2026). IOM DTM National Displacement Report 20 supplied separate estimates of 1,919,993 IDPs in accessible sites and 2,813,489 returning IDPs in accessible villages during July–August 2024. Because the site and village assessments used different populations and had incomplete geographic access, these values were not summed, subtracted to obtain net displacement, or represented as exhaustive national censuses (IOM, 2024). The same principle was applied to UIIDP administrative data: counts of participating municipalities, roads, serviced land, employment

opportunities, and revenues were presented as program-reported outputs, without assuming unique beneficiaries, sustained health gains, or a counterfactual impact (World Bank, 2025a, 2025b).

Spatial and health-system interpretation

The interpretation incorporated Ethiopia's mapped inventory of health-related institutions as a contextual measure of service geography. The distinction between all mapped institutions and the subset of hospitals and health centers was maintained: a facility point does not by itself establish staffing, readiness, capacity, utilization, service quality, affordability, or travel-time accessibility. In considering migrant, displaced, refugee, and host populations, the analysis therefore emphasized changing catchment populations, continuity of care, referral pathways, workforce distribution, water and sanitation, environmental exposures, and the fiscal capacity of receiving localities. These relationships were treated as plausible mechanisms and planning implications rather than quantified effects demonstrated by the datasets assembled for this chapter (World Health Organization [WHO], 2022).

Synthesis, validation, and limits of inference

Tables, figures, and narrative statements were reconciled against their source definitions and reported totals, with numerical operations restricted to comparable measures. Figure annotations distinguished observed values from connecting lines or derived estimates; table notes identified coverage gaps and the status of administrative counts. Interpretation proceeded from documented demographic or program observations to explicitly qualified implications for health-system demand and equity. No pooled microdata analysis, causal model, city-level inequality estimation, or formal evaluation of health effects was undertaken. The available sources differ in survey coverage, administrative completeness, population definitions, geographic boundaries, and observation dates. Consequently, the chapter supports descriptive comparisons and policy-relevant hypotheses, not a single integrated estimate of migration flows, facility adequacy, or the causal effect of urbanization on health. These limitations define the appropriate scope of the findings and identify priorities for future linked demographic, spatial, facility-readiness, and health-outcome research (IOM, 2019, 2024; WHO, 2022).

8.1 Concepts and Definitions — Migration and Urbanization

Migration is a change in usual residence, rather than every movement across space. Internal migration changes residence within Ethiopia; international migration crosses a national border. Circular and seasonal mobility involves repeated or temporary movements that may not change usual residence. Commuting is a regular journey between residence and activity locations and should not automatically be counted as migration. These distinctions determine both the numerator and the population at risk in every empirical measure.

Table 8.1. Key migration and urbanization concepts: Operational definitions and measurement considerations

Concept	Operational meaning / measurement caution
Internal migration	Change of usual residence within a country; reference period and geographic boundary must be specified.
International migration	Cross-border change of usual residence; definitions of duration differ by source.
Stock vs flow	Stock is the number of migrants residing in a place at a date; flow is a count of moves or movers during a stated interval.
Urbanization	Change in the proportion of residents classified as urban.
Urban growth	Change in the absolute urban population; not synonymous with urbanization.
Peri-urbanization	Settlement transformation and expansion along metropolitan edges and corridors.
Circular/seasonal mobility	Recurrent movements for herding, work, or other livelihood activities; may be absent from residence-based migration statistics.
Functional urban area	Urban core and economically linked commuting zone; requires travel or commuting evidence.

Table 8.2. Core measures and formulas for migration analysis

Measure	Formula	Interpretation and qualification
Crude migration rate	$CMR = (M / P_{mid}) \times 1,000$	M must be defined: in-moves plus out-moves, unique movers, or a gross mobility count. These are not interchangeable.
In-migration rate	$IMR = (I / P_{mid}) \times 1,000$	I = arrivals during specified interval; denominator is population of destination, with consistent exposure.
Out-migration rate	$OMR = (O / P_{mid}) \times 1,000$	O = departures during specified interval; denominator convention must be declared.
Net migration rate	$NMR = ((I - O) / P_{mid}) \times 1,000$	Positive indicates net inflow; negative indicates net outflow.
Age-specific migration rate	$ASMR_x = (M_x / P_x) \times k$	M_x = age-specific moves or movers during interval; P_x = corresponding population at risk; k commonly 1,000.
Total migration intensity	$TMI = \sum x ASMR_x$ (or interval-weighted sum)	Summation must account for age-interval widths and the definition of the schedule.
Migration effectiveness index	$MEI = I - O / (I + O)$	Ranges 0–1 for positive gross flows; undefined when $I + O = 0$.
Change in urban share	$\Delta u = u_t - u_{t-1}$	Percentage-point change if shares are expressed as percentages; divide by elapsed years for annual average.
Urban population accounting	$\Delta P_{urban} = (B - D)_{urban} + \text{net migration} + \text{reclassification/boundary adjustment}$	Natural increase and net migration alone are insufficient when urban boundaries or classifications change.
Gravity model	$F_{ij} \propto (P_i^\alpha P_j^\beta) / D_{ij}^\gamma$	A model specification, not an empirical estimate; parameters require fitting to observed flows.

Urban concepts: administrative, built-up, and functional

Administrative cities follow legal boundaries; built-up areas describe contiguous or concentrated settlement footprints; functional urban areas incorporate commuting relationships. Satellite-derived built-up area is not, by itself, a count of migrants or a functional commuting region. Time-series analysis must hold classification rules consistent or explicitly measure changes in classification.

Illustrative calculation and theoretical models

A hypothetical city-population calculation can clarify the demographic accounting identity. The example is pedagogical and does not represent observed Ethiopian data.

8.2 Data Sources and Measurement — Migration and Urbanization

No single source observes all mobility. Population censuses can provide place of birth, residence at a prior date, and urban/rural classification; household surveys can describe selectivity, motivations, and socioeconomic characteristics; administrative systems capture specific legal or service populations; and remote sensing measures settlement form rather than residential moves. The analytical design must keep these universes distinct.

Table 8.3. Data sources for migration and urbanization analysis: Measures and limitations

Source family	Potential measures	Key limitation
Population census	Lifetime/recent residence changes; urban/rural status	Long intervals; residence recall; census comparability.
Labour force and household surveys	Recent moves, sex/age selectivity, reported reasons	Sampling error and excluded household types.
DHS and related surveys	Residence duration and linked household attributes when asked	Not a complete national migration-flow instrument.
IOM DTM	Displacement locations and movements	Crisis-focused and not general-population representative.
UNHCR registration	Refugees and other defined protection categories	Legal and operational coverage, not all migrants.
Remote sensing: built-up, night-time lights	Settlement expansion and change	No direct identification of migration flows.
Mobile phone / transport data	Movement proxies, potentially origin–destination patterns	Coverage, privacy, mode selection, and calibration.

Source-specific comparability and coverage

The Ethiopian Statistical Service (ESS) 2021 Labour Force and Migration Survey used a stratified two-stage cluster design and targeted sedentary and pastoralist areas, but excluded Tigray. The survey also omitted institutional populations, internally displaced people in excluded settings, people without housing, and other non-household populations. Accordingly, results should be described as estimates for the covered survey population, not as unrestricted all-Ethiopia mobility totals (ESS, 2022).

Table 8.4. Sources of measurement bias in migration statistics and analytical safeguards

Risk	Analytical safeguard
Recall and residence-duration errors	Use exact survey wording and bounded time windows; report recall period.
Sampling and exclusions	State survey universe, exclusions, weighted bases, and uncertainty.
Changing geographic units	Publish crosswalks and boundary-year rules; avoid unqualified region-to-region trend claims.
Stock/flow confusion	Label lifetime migrant stock, recent movers, and annual flows separately.
Urban-definition drift	Separate administrative, morphological, and functional urban series.
Spatial aggregation bias	Avoid inferring local migration patterns from regional net totals.
Displacement undercoverage	Triangulate household surveys with displacement-specific systems.

Sampling precision and effective sample size

For a simple random sample, the approximate standard error of a proportion is $\sqrt{[p(1 - p)/n]}$. Under complex sampling, precision also depends on the design effect and the effective sample size. The relationship is theoretical; actual survey confidence intervals must account for the sample design.

8.3 Ethiopia's Migration History and Contemporary Drivers

Ethiopian mobility has multiple mechanisms rather than a single rural-to-urban trajectory.

Educational access, labour-market opportunities, marriage and family formation, changing transport connections, drought and pastoral resource management, conflict and displacement, and policy changes may all influence residential decisions. Their relative contributions cannot be read from a generic driver index or assigned fixed percentages without an identified survey or administrative source.

Table 8.5. Drivers and mechanisms of migration in Ethiopia: Evidence requirements

Theme	Mechanism	Evidence requirement before quantitative claim
Education and employment	Moves to schools, towns, and labour markets	Observed reason-for-move survey distribution by period and population.
Pastoralist systems	Seasonal search for water and grazing	Seasonal observation, mobility tracking, or well-documented field study.
Climate variability	Environmental pressure interacting with household resources	Joint climate and movement observations, with alternative explanations considered.
Conflict and insecurity	Forced displacement and disrupted livelihoods	Displacement data with location, period, and affected population definition.
Urban and infrastructure policy	Changes in accessibility, land, and services	Dated administrative and spatial evidence.

Life-course selectivity

Age, sex, schooling, marital status, and livelihood can structure migration decisions. Age-specific migration rates require migrant counts and corresponding age-specific populations at risk; an age distribution of migrants alone does not measure the rate of migration.

8.4 Internal Migration — Rural–Urban, Urban–Urban, Rural–Rural

The four origin–destination settlement types—rural-to-urban, urban-to-urban, rural-to-rural, and urban-to-rural—are analytically distinct. Their prevalence is conditional on how origin and destination settlement status is coded, the definition of recent migration, and the population covered by the survey.

Observed migration-pattern comparison

The 2021 Labour Force and Migration Survey reports rural-to-urban moves accounting for 32.2% of recent internal migration and urban-to-rural moves accounting for 13.7% within its survey coverage. These proportions describe the composition of recent internal migration, not population-based migration rates.

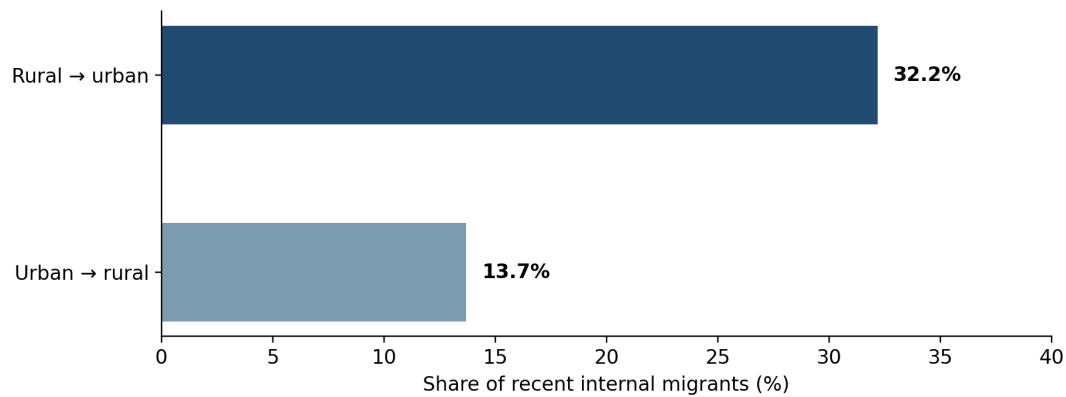


Figure 8.4-1. Selected forms of recent internal migration, Ethiopia, 2021. Source: Ethiopian Statistical Service, 2021 Labour Force and Migration Survey. The survey excluded Tigray.

Age-specific migration and origin–destination patterns

Reasons for moving

Policy implications

Urban service and housing plans should consider the characteristics of recent arrivals and their needs for jobs, transport, education, water, and health services. This is a planning inference, not evidence that any particular policy caused migration or improved welfare. The original policy-levers table is retained conceptually, without invented numerical effects.

8.5 Seasonal and Circular Mobility (Including Pastoralist Systems)

Seasonal and circular mobility is not necessarily captured by usual-residence migration questions. In pastoral and agro-pastoral settings, movements may follow pasture, water, cropping, or employment calendars. A mobility-sensitive public-health system therefore needs to distinguish the population currently present, the usual-resident population, and the population served across repeated seasonal visits.

Table 8.6. Seasonal, circular, and pastoralist mobility: Characteristics and service-planning implications

Mobility type	Characteristic pattern	Planning implication
Pastoral transhumance	Seasonal livestock and sometimes household movement	Mobile health and veterinary outreach; cross-boundary continuity.
Agro-pastoral movement	Seasonal shifts in livelihood and residence	Flexible clinic and school calendars.
Circular urban work	Temporary work with recurrent return	Portable documentation and continuity of care.
Daily or weekly commuting	Regular travel without usual-residence change	Transport access and functional catchment planning.

Table 8.7. Measurement toolkit and indicators for population mobility

Tool	Indicator / use	Documented application status
Short-recall survey modules	Moves in past 12 months; destinations and timing	Country-specific application not yet verified.
GPS or geofenced observation	Consented seasonal route and duration observations	Country-specific application not yet verified.
Market/water-point sentinel counts	Seasonal arrivals and service demand	Country-specific application not yet verified.
IOM displacement or mobility tracking	Site movements and crisis-linked displacement	IOM DTM is an operational system; specific Ethiopian application to be documented.
School attendance by month	Seasonal school participation changes	Country-specific application not yet verified.
Mobile health coverage	Immunization, ANC/PNC and service continuity	Country-specific application not yet verified.

Table 8.8. Policy and program checklist for mobility-sensitive planning

Priority	Proposed implementation	Empirical case-study requirement
Pastoralist-sensitive planning	Protect movement corridors and access to water	Named location, agency, dates, and source required.
Flexible service calendars	Align outreach to seasonal movements	Published implementation or evaluation required.
Cross-border coordination	Coordinate health, veterinary and mobility services	Documented bilateral or regional program required.
Portable records	Continuity of identification and health information	Verified deployment, not merely policy recommendation.
Gender and protection	Safe access and protection pathways	Documented service setting and safeguards required.
Data and accountability	Publish mobility-sensitive indicators and feedback	Verified dashboard, monitoring system, or program required.

8.6 International Migration & Diaspora

8.6.1 Definitions, legal categories and measurement

International migration entails a change in country of usual residence. An emigrant is defined relative to the country of origin; an immigrant relative to the destination. The same person may be an Ethiopian emigrant and a resident immigrant in a host country. Bilateral migrant-stock tables generally describe people residing outside their country of birth or citizenship at a reference date; the choice of definition matters, as do undercounts, irregular status, and registration practices. International migrant stocks should never be relabeled as annual departures.

A legal category is not a proxy for protection need. Regular migrants possess an applicable authorization; irregular status describes an administrative condition, not a loss of fundamental rights. Refugees and asylum seekers have distinct protection definitions and are discussed in Section 8.8. Temporary labor migrants, students, refugees, naturalized citizens and returnees should not be pooled without clear scope.

8.6.2 Drivers and pathways

Employment prospects, wage differentials, educational opportunities, family reunification, security concerns and social networks can influence decisions to move. Recruitment systems, border controls, documentation, costs and the availability of safe pathways mediate those decisions. The Ethiopian diaspora includes diverse migration histories and legal circumstances. Country-of-destination rankings and skill composition cannot be inferred from a general discussion of these mechanisms.

8.6.3 Diaspora links and return migration

Diaspora contributions may include financial transfers, entrepreneurship, skills exchange, investment, professional collaboration, philanthropy and advocacy. Return can be permanent, temporary, circular or compelled; successful reintegration depends on employment, housing, documentation and access to services. Indicators such as employment within 12 months of return require a defined cohort and follow-up period; the original illustrative figure is withheld.

Table 8.9. Instruments for measuring international migration and diaspora-related mobility

Instrument	What it can measure	Critical limitation
UN DESA bilateral migrant-stock matrix	Country of residence by origin, reference year	Stock, not departures during the year; bilateral cells not yet extracted
Household or labor-force migration survey	Migrant characteristics, reasons, recent moves	Sampling coverage and migration questions vary
Border/permit records	Documented admissions, exits or authorizations	Administrative events do not equal unique movers
Consular and returnee program records	Registrations and program participation	Selection and duplication may be substantial

8.7 Remittances & Development Linkages

8.7.1 Definitions and macroeconomic measurement

The World Bank's personal-remittances-received series combines personal transfers and compensation of employees under its balance-of-payments-based definition. It is not a direct census of money sent by Ethiopian citizens abroad, nor does it measure the number of recipient households. Formal reporting systems may not capture all informal channels; GDP revisions and methodological changes can also affect ratios.

In 2024, personal remittances received represented 4.8% of Ethiopia's GDP according to World Development Indicators (indicator BX.TRF.PWKR.DT.GD.ZS). The measure combines personal transfers and compensation of employees and does not capture every informal transfer.

Table 8.10. Personal remittances received in Ethiopia: Selected indicator and interpretation

Indicator	Ethiopia	Reference	Interpretation
Personal remittances received / GDP	4.8%	2024, World Bank WDI	Ratio of reported remittances to GDP; not a household prevalence

8.7.2 Household welfare, investment and financial inclusion

Remittances may help finance consumption smoothing, food, education, health care, housing, debt repayment and enterprise formation. Effects vary by income, local prices, labor markets and whether transfers are regular or episodic. They may reduce immediate hardship while also creating exposure to exchange-rate changes or shocks in destination economies. The original manuscript's household-use percentages are not reproduced because no authenticated Ethiopian survey denominator has been established.

8.7.3 Channels, costs and policy instruments

Formal banks, money-transfer operators and mobile-money services differ in accessibility, settlement time, documentation requirements, transparency and cost. Corridor-level transfer costs must specify origin, destination, transfer amount, payment method, disbursement method and observation date. A target cost is not an observed trend. Competition, interoperability, consumer disclosure, accessible identification and proportional compliance are policy levers, but their measured effectiveness must be evaluated rather than assumed.

Table 8.11. Remittance transfer channels and policy instruments: Applications and monitoring indicators

Policy lever	Operational application	Measurement indicator
Transparent pricing	Publish comparable total cost including FX margin	Total fee plus FX margin for specified \$200 transfer
Competition and interoperability	Permit accessible regulated transfer channels	Number of providers and corridor cost
Financial inclusion	Connect recipients to safe accounts and cash-out networks	Account access and receipt-channel distribution
Consumer protection	Dispute resolution and disclosure	Complaints resolved and transfer failures

8.8 Displacement & Returns (IDPs, Refugees, Returnees)

8.8.1 Population categories and denominators

Internally displaced persons (IDPs) are forced to leave their homes but remain within their country's internationally recognized borders. Refugees have crossed an international border and meet the applicable protection definition. Asylum seekers have requested international protection but their claims may still be pending. A returning IDP is a previously displaced person identified in an area of return; the count does not itself demonstrate a durable solution or a return during the survey period. Host-community populations should be distinguished from displaced populations in service indicators.

8.8.2 Refugees and asylum seekers hosted in Ethiopia

UNHCR and Ethiopian government operational data report 1,023,565 refugees and asylum seekers hosted in Ethiopia on 31 August 2026. The six origin categories sum exactly to the published total. South Sudan (469,858) and Somalia (362,151) jointly account for most of the registered population, followed by Eritrea (124,650) and Sudan (57,694). These are hosted populations in Ethiopia, not Ethiopian nationals abroad.

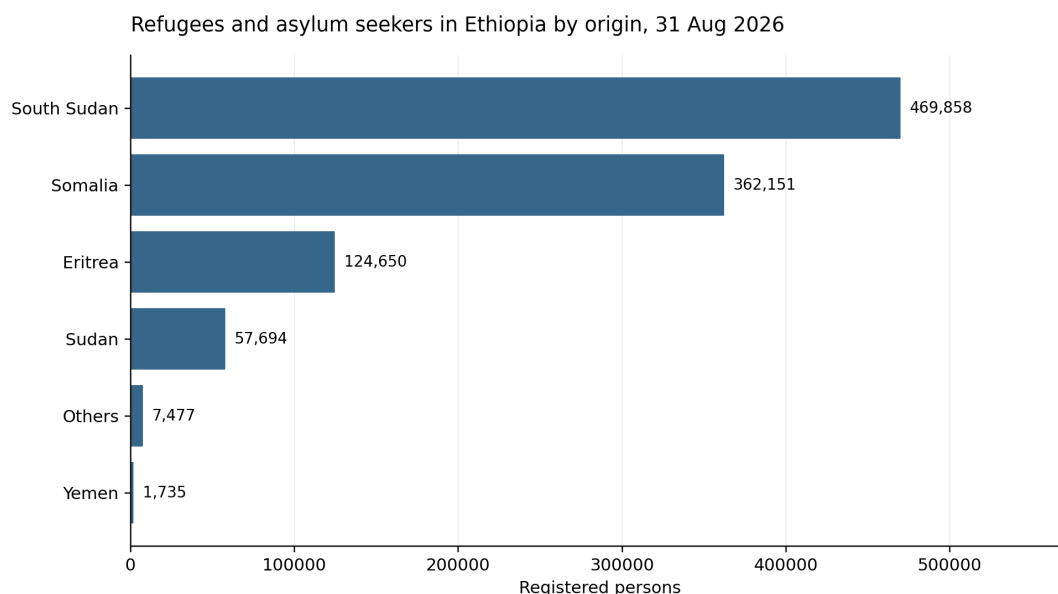


Figure 8.8-A. Refugees and asylum seekers in Ethiopia by country of origin, 31 August 2026

Note. Government of Ethiopia and UNHCR operational data. The six country-of-origin categories sum to 1,023,565 refugees and asylum seekers.

Table 8.12. Refugees and asylum seekers in Ethiopia by country of origin, 31 August 2026

Country of origin	persons	Share percent
South Sudan	469858	45.9
Somalia	362151	35.38
Eritrea	124650	12.18
Sudan	57694	5.64
Others	7477	0.73
Yemen	1735	0.17

8.8.3 Assessed internal displacement and return

IOM DTM National Displacement Report 20 identified 1,919,993 IDPs in 2,060 accessible sites in July–August 2024, alongside 2,813,489 returning IDPs in 2,580 accessible villages using a separate Village Assessment Survey. The assessments covered 10 regions and one contested area. They are not an exhaustive census of the national population. In particular, South Ethiopia, Somali and Benishangul-Gumuz were excluded from the Site Assessment, while South Ethiopia was excluded from the Village Assessment Survey due to operational constraints. The two totals must not be added or interpreted as a national net displacement balance.

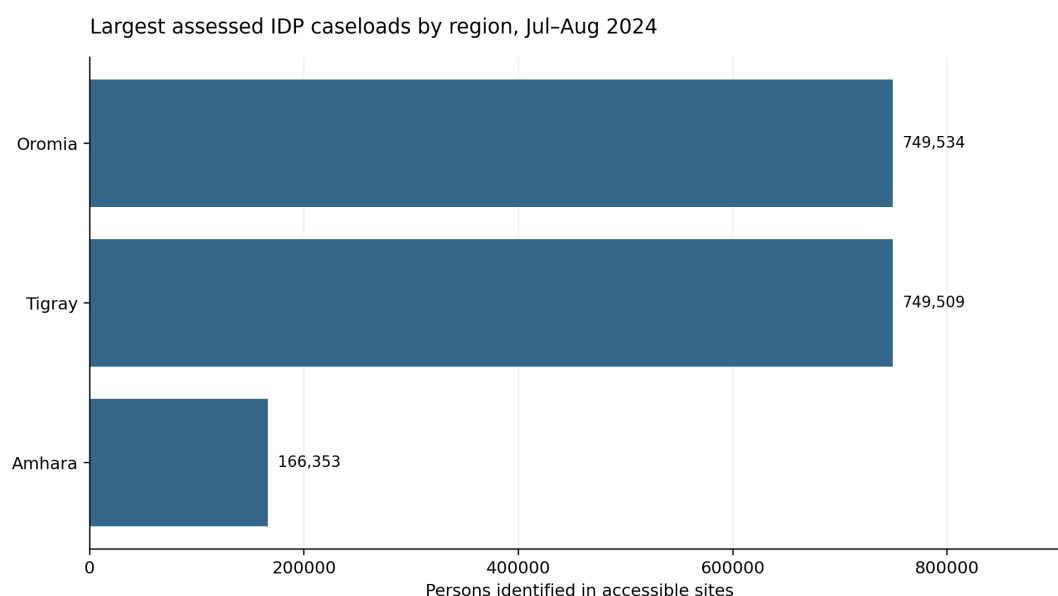


Figure 8.8-B. Selected assessed IDP populations by region, July–August 2024

Note. IOM DTM Site Assessment round 37. Only selected high-caseload regions are shown; missing coverage prevents a complete national regional ranking.

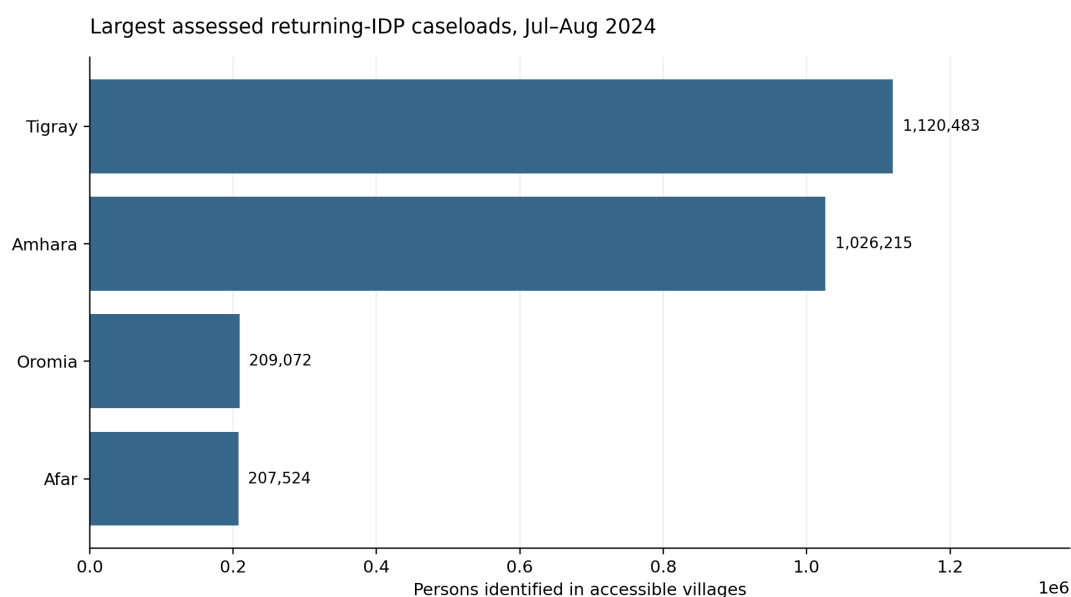


Figure 8.8-C. Selected assessed returning-IDP populations by region, July–August 2024

Note. IOM DTM Village Assessment Survey round 20. Counts represent people identified as returning IDPs in accessible villages, not new returns during July–August.

Table 8.13. Refugees, internally displaced persons, and returning internally displaced persons in Ethiopia: Selected operational population totals

Population / dataset	Observed total	Unit and scope	Caution
Refugees and asylum seekers	1,023,565	Hosted in Ethiopia; UNHCR, 31 Aug 2026	Different date and protection category
IDPs	1,919,993	IOM assessed accessible sites; Jul–Aug 2024	Incomplete geographical coverage
Returning IDPs	2,813,489	IOM assessed accessible villages; Jul–Aug 2024	Not an annual return flow

8.8.4 Drivers, services and durable solutions

In assessed IDP sites, conflict was the principal reported reason for displacement (82.1%), followed by social tension (8.6%) and drought (4.3%). These percentages describe the assessed caseload and should not be generalized to inaccessible areas. Somali region, which had substantial drought-related displacement in an earlier assessment, was omitted from the relevant Site Assessment round; the composition of causes is therefore coverage-sensitive.

Displacement can disrupt health care, education, water and sanitation, livelihoods, legal identity, housing and social support. Durable solutions require more than physical return: safety, voluntary choice, adequate living conditions, access to rights and services, and sustainable livelihoods matter. Integration at the current location and settlement elsewhere are also recognized pathways. Site-level service coverage, protection incidents and durable-solution scores cannot be inferred from population totals alone.

Table 8.14. Program and monitoring priorities for displacement-affected populations

Program principle	Practical application	Suggested verified indicator
Area-based services	Serve displaced and host communities together	Service coverage by population group and location
Protection-sensitive monitoring	Safe referrals, privacy and incident protocols	Verified referral completion; avoid publishing identifying data
Voluntary durable solutions	Track conditions and preferences, not return counts alone	Safety, tenure, access and livelihood outcomes
Access-aware statistics	Publish assessed locations and omissions	Sites/villages assessed; geographic exclusions

8.9 Urbanization Trends and Patterns

Measuring the level and pace of urbanization

Urbanization describes an increase in the proportion of a population residing in places classified as urban. It must be distinguished from urban population growth: the urban share can rise slowly even while the absolute number of urban residents increases rapidly. A second distinction separates administrative or nationally defined urban places from geospatially classified settlements. The former is suited to consistent national reporting; the latter can improve international comparability, but the two measures are not interchangeable.

Urban change in Ethiopia, 1990–2025

The World Development Indicators series places Ethiopia’s urban population share at 12.8% in 1990, 14.9% in 2000 and 24.1% in 2025. The increase from 2000 to 2025 is 9.2 percentage points. Relative to the 2000 share, the increase is approximately 61.7%; this proportional comparison must not be described as a 61.7-percentage-point change. The observations document a substantial long-run shift, but they do not independently identify how much change resulted from migration, natural increase, or reclassification.

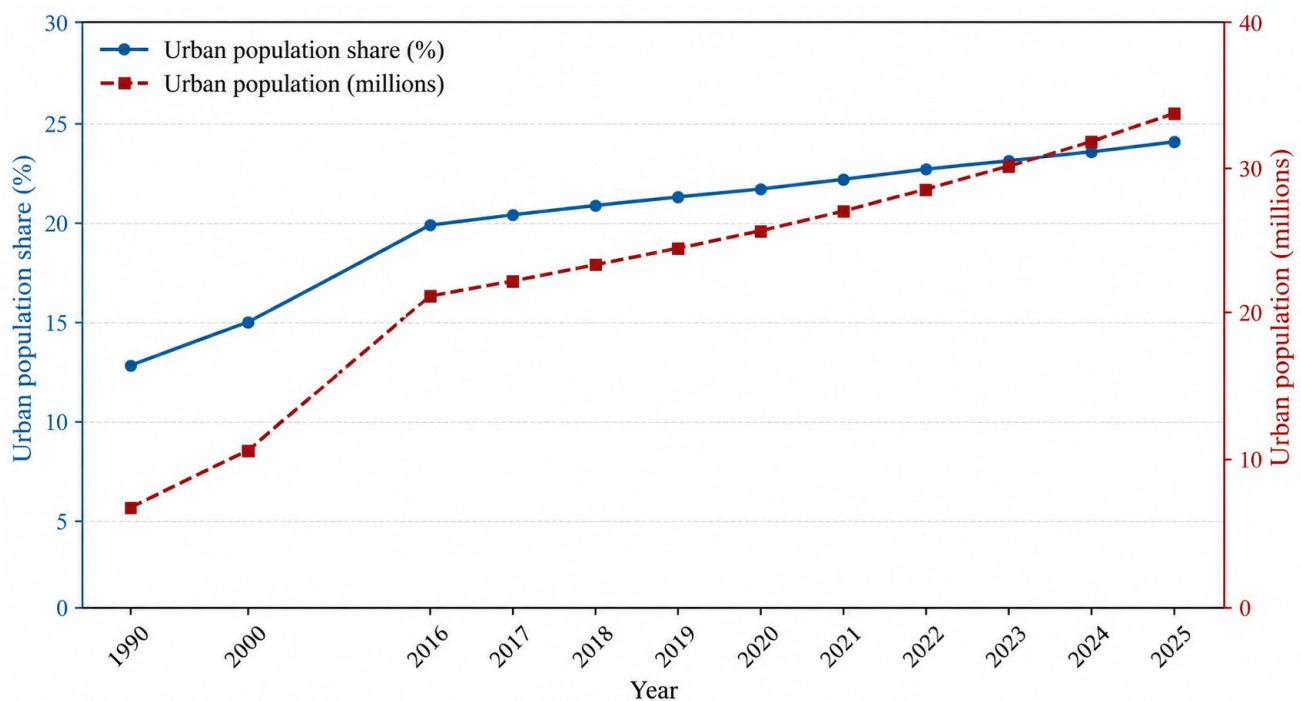
City-size distribution, primacy and secondary cities

Rank–size distributions, urban primacy and the emergence of secondary cities provide useful frameworks for examining concentration in Addis Ababa and the relative position of other Ethiopian cities. Comparisons require consistent city boundaries and reference years.

Urban expansion and density

Demographic urbanization and physical urban expansion may diverge. Built-up area can grow faster than population, implying falling gross density, or population may grow faster than the built-up footprint. A comparable analysis requires consistent settlement boundaries, remote-sensing definitions, reference years and treatment of peri-urban expansion. GHSL is an appropriate candidate, but Ethiopia-specific built-up-area totals have not yet been calculated and no spatial growth percentages are asserted.

Figure 8.9-1. Ethiopia: estimated urban population as a percentage and total, selected years, 1990–2025.



Note. The solid line (left vertical axis) represents the percentage of Ethiopia’s total population residing in urban areas, while the dashed line (right vertical axis) represents the estimated number of urban residents in millions. Urban population was calculated by multiplying the annual urban population share by the corresponding total population estimate. Urban classifications follow national statistical definitions. Estimates are based on World Bank population series rather than direct census enumerations. The figure illustrates both the increasing proportion of Ethiopians living in urban areas and the substantially faster growth in their absolute numbers, from approximately 6.1 million in 1990 to 32.7 million in 2025.

Source: World Bank, World Development Indicators: Urban population (% of total population) (SP.URB.TOTL.IN.ZS) and Population, total (SP.POP.TOTL).

Source: World Bank, World Development Indicators, SP.URB.TOTL.IN.ZS. Urban is defined according to national classifications; selected years only. Lines connecting observations are graphical aids, not certified annual values for missing years.

Table 8.15. Urban population share and estimated urban population in Ethiopia, selected years, 1990–2025

Year	Urban population share (%)	Estimated urban population (millions)
1990	12.8	6.09
2000	14.9	10.04
2016	19.9	21.24
2017	20.3	22.26
2018	20.8	23.43
2019	21.2	24.54
2020	21.6	25.69
2021	22.1	26.99
2022	22.7	28.46
2023	23.1	29.73
2024	23.6	31.17
2025	24.1	32.65

Source. World Bank, World Development Indicators: Urban population (% of total population), SP.URB.TOTL.IN.ZS; Population, total, SP.POP.TOTL. Urban-share percentages and total-population estimates are the supplied values.

Note. Estimated urban population (millions) = urban population share (%) × total population (millions) / 100. Values are rounded to two decimal places after multiplication of the supplied figures. Urban population follows national statistical definitions; these are derived estimates rather than census enumerations. The 2025 implied urban population is approximately 32.65 million.

8.10 Housing, Slums and Urban Services

Housing adequacy and informality

Urban housing conditions encompass structural durability, overcrowding, tenure security, affordability, water, sanitation and energy access. Informality is multidimensional: a dwelling may be physically durable but lack secure tenure, or be formally occupied while facing severe service deficits. Measures should therefore be reported separately before a composite index is considered.

Housing tenure and affordability

Owner occupation, rental, cooperative and other tenure arrangements should be interpreted in their city-specific legal and institutional context. A rent-to-income or housing-cost burden measure requires both a clearly defined housing expenditure and an income denominator over matching periods. The original manuscript's city-level tenure and affordability figures were illustrative and are withheld until representative household survey or municipal tabulations are extracted.

Water, sanitation and basic services

Access to improved water sources is not synonymous with safely managed drinking water; likewise, improved sanitation does not by itself demonstrate safe management of waste. Service comparisons must identify the specific indicator, survey year, urban sampling frame and classification standard. WHO/UNICEF Joint Monitoring Programme and Ethiopian household surveys are candidate sources, but this manuscript does not supply unverified urban access percentages.

Policy implications

Upgrading strategies can combine tenure-sensitive settlement planning, drainage, sanitation, road access, electricity and community engagement. Policy prioritization should be based on observed neighbourhood needs and distributional impacts rather than assuming that all informal settlements face identical deficits.

8.11 Urban Form, Land Use and Transport

Urban morphology and access

Urban form is the spatial organization of residences, jobs, services, roads and open space. Density, land-use mix, block size, intersection connectivity and the location of public facilities jointly influence travel distances and transport choices. A compact settlement is not necessarily accessible if transport links are poor or essential services are unevenly distributed.

Transport mode share and travel time

Mode share is the percentage of trips or travellers using a given transport mode under a stated survey definition; it must not be conflated with vehicle ownership. Commute time distributions should distinguish mean from median and account for whether the survey covers employed persons, all residents or all trips. The original city comparisons cannot be retained as empirical without survey documentation.

Addis Ababa and secondary-city comparison

Comparative analysis should use common geographic definitions, survey periods and trip purposes. Density gradients and cross-city transport-mode shares should be interpreted only where consistent observational data are available.

Land-use and mobility policy

Coordinated land-use and transport planning can protect rights-of-way, encourage connected street networks, support walking and public transport, and reduce the cost of extending basic infrastructure. Evaluation should measure accessibility and service outcomes rather than simply the number of kilometres of road built.

8.12 Governance, Finance and Planning for Cities

Institutional roles and accountability

Urban governance distributes responsibilities among national, regional and municipal authorities, public utilities and community institutions. Accountability requires clear mandates, transparent budgeting, procurement controls, maintenance obligations and mechanisms for residents to scrutinize decisions.

Municipal revenue and expenditure

City revenue composition may include own-source taxes and fees, intergovernmental transfers, grants and borrowing where permitted. Per-capita municipal expenditure must use the same geographic and time reference as its population denominator. Fiscal gaps require explicit accounting definitions; the original manuscript's revenue and expenditure charts are not certified and have been withheld.

Infrastructure investment and program evidence

Documented infrastructure programs can illustrate mechanisms for strengthening municipal capacity, but project achievements should not be generalized into national municipal averages. Comparable city-year budget series, audit documents and project completion records are needed to reconstruct the original fiscal and investment charts.

Planning and performance measurement

Useful monitoring indicators include execution rates, maintenance spending, own-source revenue collection, infrastructure coverage, service quality and distributional equity. Financial inputs and physical outputs should be reported separately from actual resident outcomes.

8.13 Climate Resilience and Green Urban Transitions

Urban climate risks

Flooding, heat and drought interact with settlement patterns, drainage, housing quality and access to services. Risk depends not only on a physical hazard but also on exposure, vulnerability and coping capacity. A city with greater exposure is not necessarily the city with the largest expected losses.

Measuring flood and heat exposure

Flood-exposure comparisons require a consistent flood scenario, event probability, population layer and spatial boundary. Heat-exposure comparisons require a specified temperature metric and period. Without these choices, cross-city rankings are not reproducible. The source manuscript repeats figure numbers for flood and heat exposure; final numbering must assign separate identifiers.

Urban emissions and mitigation

A municipal greenhouse-gas inventory requires explicit treatment of energy, transport, waste, industrial processes and geographic versus consumption-based accounting. Mitigation potential is scenario-dependent and must specify baseline, intervention, time horizon and assumptions. The original emissions and mitigation charts remain conceptual candidates, not empirical results.

Resilience and green development

A practical resilience strategy links land-use regulation, watershed and drainage management, heat-sensitive design, emergency preparedness and protection of vulnerable populations. Green transition policies should be evaluated for affordability, health co-benefits and whether burdens fall disproportionately on low-income households.

8.14 Integrated Urban Risk, Environmental Health, and Climate Response

8.14.1 An integrated risk framework

Urban health risks arise where hazards intersect with exposed populations and vulnerability. Flooding, heat, poor air quality, unsafe water, inadequate sanitation and traffic injuries can coincide within the same neighborhood, yet the affected population and causal pathways differ. A useful analytical framework distinguishes (a) hazard intensity and frequency, (b) population and infrastructure exposure, (c) social and biological vulnerability, and (d) institutional capacity to prevent, respond and recover. Such a framework is preferable to treating the presence of a hazard as an observed health outcome.

For flood analysis, for example, a map of flood-prone built-up land indicates potential exposure, not the number of people injured or displaced. To estimate population exposure, spatially harmonized hazard footprints must be intersected with settlement and population surfaces at compatible dates and resolutions. Health effects require separate epidemiological evidence, ideally with temporal information and controls for confounding. Similarly, urban heat exposure should distinguish land-surface temperature, ambient air temperature and individual heat stress.

8.14.2 Spatial equity and public-health services

Risk mapping should be stratified by settlement form, deprivation, access to drainage and water services, age structure and access to care. The practical unit for intervention may be a neighborhood, catchment, corridor or flood basin rather than a municipal average. GIS can identify overlapping disadvantages and guide investments in drainage, safe routes to clinics, early warning and green

infrastructure. Interpretation must explicitly recognize ecological inference limits and uncertainty in geocoded population and facility data.

Table 8.16. Indicators for assessing urban environmental risk, spatial equity, and public-health services

Indicator	Preferred numerator / measure	Denominator or interpretation
Population exposed to flood hazard	Residents within modeled flood footprint	Residents in defined urban study area; scenario-specific
Basic drinking-water service	Urban residents meeting JMP service definition	Urban population with compatible survey year
Heat-related morbidity	Clinically defined events in specified interval	Population at risk; standardized for age where appropriate
Response preparedness	Local governments with verified emergency plan and exercise	All eligible local governments in reporting frame

Table 8.14-A. Proposed indicators for monitoring urban environmental and health risks

8.15 Secondary Cities and Regional Balance

8.15.1 Why secondary cities matter

A national urbanization rate obscures differences between a primate city, regional capitals, corridor towns and smaller urban centers. Secondary cities can potentially reduce pressure on the largest metropolitan area while improving access to jobs, education, referral care, markets and public services closer to rural populations. Those benefits are conditional: poorly serviced expansion can reproduce congestion, land insecurity and environmental risk at smaller scales.

Urban primacy may be expressed as the population of the largest city divided by the population of all urban settlements, or as the largest city divided by the combined population of a defined set of next-ranked cities. These are different indicators; the selected definition and urban settlement boundaries must be reported. An apparent change in rank or size may result from reclassification, annexation or differing census/remote-sensing definitions rather than migration alone.

8.15.2 Ethiopian secondary-city investment experience

The Agence Française de Développement (AFD) describes its support for the UIIDP as a contribution to balanced, sustainable urbanization through performance-linked municipal grants and capacity development. The program covers 117 urban local governments, while a technical-assistance component examines investment opportunities in selected secondary cities. These figures document program reach, not the number or population of all secondary cities in Ethiopia (AFD, n.d.; World Bank, 2025).

A proper empirical city-system analysis would require a harmonized city inventory with comparable boundaries and population estimates at multiple dates. Until the relevant UN World Urbanization Prospects city records and Ethiopian statistical tables are extracted and reconciled, city-size rankings, primacy indices and secondary-city growth rates remain unreported.

8.15.3 Regional balance and access

Regional balance should be assessed jointly through population distribution, service catchments, travel times, local fiscal capacity and labor-market connections. An urban center's importance to public health may extend beyond its municipal boundary through referral hospitals, wholesale markets, transport terminals and education institutions. Functional urban areas and commuting catchments can therefore complement administrative urban classifications. Without reliable commuting origin–destination data, such catchments should be described as analytically proposed rather than empirically measured.

8.16 Governance and Implementation Across Scales

8.16.1 The implementation chain

Urban investments depend on coordination across national policy, regional administration and urban local governments. Municipal capacity encompasses planning, procurement, land management, budgeting, asset maintenance, financial reporting and public accountability. The UIIDP provides an instructive implementation case because its stated purpose was to strengthen local-government institutions alongside urban infrastructure and local economic development (World Bank, 2025).

8.16.2 What program reporting establishes

World Bank reporting identifies 117 participating urban local governments. For 2018–2024 it reports construction or rehabilitation of more than 2,700 km of roads and development of approximately 2,700 hectares of serviced urban land. These are rounded program outputs, not a national road inventory, and different road subcategories must not be added to the rounded overall figure (World Bank, 2025).

Table 8.17. Ethiopia Urban Institutional and Infrastructure Development Program: Selected reported outputs, 2018–2024

UIIDP indicator	Reported value	Interpretation / limitation
Participating urban local governments	117	Program participants, not national municipal count
Roads constructed or rehabilitated	More than 2,700 km	Rounded cumulative program output, 2018–2024
Serviced land developed	Approximately 2,700 hectares	Program-reported development output
Temporary employment opportunities	915,285	Program-reported jobs; not necessarily unique persons
Permanent employment opportunities	237,035	Program-reported jobs; not necessarily unique persons
Total of two employment categories	1,152,320	Calculated sum; category comparability assumed as reported

Table 8.16-A. Selected UIIDP institutional, infrastructure and employment outputs. Sources: World Bank (2025a, 2025b). Employment counts are reported program outputs; they do not establish net additional jobs.

8.16.3 Municipal revenue and fiscal interpretation

A World Bank results account reports that participating municipalities' revenues increased from US\$68 million in FY2020 to US\$156 million in FY2023. The arithmetic difference is US\$88 million and the proportional change is $(156 - 68) / 68 \times 100 = 129.4\%$. The comparison is nominal and denominated in reported US dollars. It is not a real-terms increase, a per-capita change, a balanced-panel causal estimate or a finding about every Ethiopian municipality (World Bank, 2026). The implementation completion report gives more precise underlying figures in Ethiopian birr; its exchange-rate and fiscal-year conventions should be consulted before any detailed fiscal decomposition.

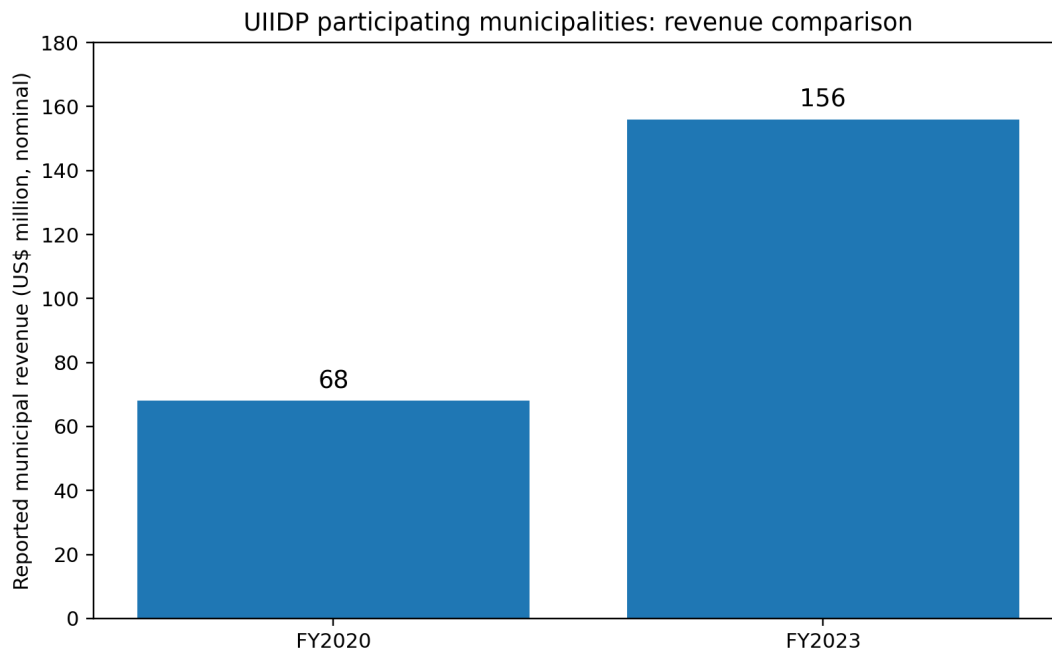


Figure 8.16-A. Reported municipal revenue in participating UIIDP municipalities, FY2020 and FY2023. Nominal US\$ millions. Source: World Bank (2026).

The program evidence is useful for illustrating institutional capacity and resource mobilization. It does not, without a counterfactual and adequate controls, establish how much revenue growth was caused by the intervention rather than economic conditions, policy changes, exchange-rate movements or changes in the reporting cohort.

8.17 Policy Levers and Program Options for Ethiopia

8.17.1 Linking spatial investment with economic opportunity

Urban policy should treat infrastructure, employment and health as interacting but distinct objectives. Road improvements may enhance access to work and health services; serviced land may support enterprise location; drainage and solid-waste systems may reduce environmental exposures. Each pathway requires its own outcome indicators. An investment output is not itself evidence of improved health or poverty reduction.

The World Bank reports 915,285 temporary and 237,035 permanent employment opportunities under the UIIDP, totaling 1,152,320 across these categories. The 2025 public summary rounds these to about 915,000 temporary and 237,000 permanent jobs. It also reports women accounting for 49% of employment opportunities. These are administrative program indicators; a job count should not be treated automatically as a count of distinct individuals or sustained net employment (World Bank, 2025a, 2025b).

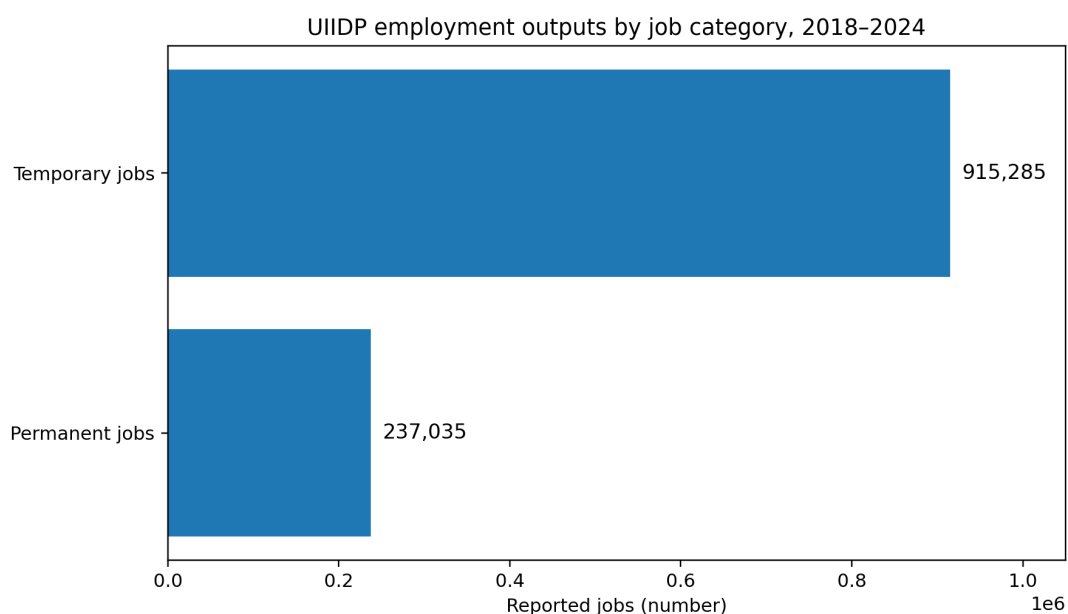


Figure 8.17-A. UIIDP-reported employment opportunities by category, 2018–2024. Source: World Bank (2025b). Categories do not necessarily represent unique individuals or comparable job duration.

Table 8.18. Urban policy levers, implementation prerequisites, and proposed outcome measures

Policy lever	Operational prerequisite	Proposed outcome test
Secondary-city infrastructure	Coordinated land-use plan and maintenance budget	Travel time to services; reliable infrastructure access
Performance-linked municipal grants	Transparent eligibility, auditing and public reporting	Service performance with verified independent checks
Labor-intensive public works	Clear definitions of job episode and duration	Person-days, unique workers and post-program employment
Climate-resilient service delivery	Hazard maps and inclusive consultation	Service continuity and measured exposure reduction
Gender-responsive participation	Accessible public consultations and sex-disaggregated data	Participation quality and distribution of benefits

Table 8.17-A. Urban policy options and evidence requirements

The principal lesson is to connect program financing to clearly defined outputs and outcomes, with explicit attention to equity. Public works may provide temporary income and infrastructure simultaneously, but neither outcome should be assumed to persist after implementation. Program design should specify maintenance responsibilities, service affordability, accessibility for people with disabilities and the needs of informal settlements.

8.18 Monitoring, Evaluation, and Learning

8.18.1 From reported outputs to measurable outcomes

An integrated urban monitoring system should distinguish inputs, activities, outputs, intermediate outcomes and long-run impacts. Counts of roads, hectares, consultations and employment opportunities are useful for implementation oversight. They cannot substitute for measures of road usability, household service access, sustainable livelihoods, fiscal resilience or health improvement.

8.18.2 Denominators, comparability and uncertainty

For each indicator, reporting must specify the geographic universe, reference period, population or administrative denominator, data-collection method and uncertainty. Survey indicators should report sampling design and precision. Administrative indicators should document verification rules and duplicate handling. GIS indicators should report spatial resolution, boundary versions, temporal alignment and classification sensitivity. Regional comparisons must not combine differently defined historical regions or city boundaries without an explicit harmonization crosswalk.

Table 8.18-A. Urban monitoring framework and measurement safeguards

8.18.3 Learning agenda

A comprehensive urban monitoring system should prioritize harmonized city-population series, spatially validated settlement expansion, representative measures of service deprivation, comparable municipal financial accounts, and consistent measures of climate and environmental-health exposure.

8.9 Urbanization Trends and Patterns

Measuring the level and pace of urbanization

Urbanization describes an increase in the proportion of a population residing in places classified as urban. It must be distinguished from urban population growth: the urban share can rise slowly even while the absolute number of urban residents increases rapidly. A second distinction separates administrative or nationally defined urban places from geospatially classified settlements. The former is suited to consistent national reporting; the latter can improve international comparability, but the two measures are not interchangeable.

Urban change in Ethiopia, 1990–2025

The World Development Indicators series places Ethiopia's urban population share at 12.8% in 1990, 14.9% in 2000 and 24.1% in 2025. The increase from 2000 to 2025 is 9.2 percentage points. Relative to the 2000 share, the increase is approximately 61.7%; this proportional comparison must not be described as a 61.7-percentage-point change. The observations document a substantial long-run shift, but they do not independently identify how much change resulted from migration, natural increase, or reclassification.

City-size distribution, primacy and secondary cities

Rank–size distributions, urban primacy and the emergence of secondary cities provide useful frameworks for examining concentration in Addis Ababa and the relative position of other Ethiopian cities. Comparisons require consistent city boundaries and reference years.

Urban expansion and density

Demographic urbanization and physical urban expansion may diverge. Built-up area can grow faster than population, implying falling gross density, or population may grow faster than the built-up footprint. A comparable analysis requires consistent settlement boundaries, remote-sensing definitions, reference years and treatment of peri-urban expansion. GHSL is an appropriate candidate, but Ethiopia-specific built-up-area totals have not yet been calculated and no spatial growth percentages are asserted.

8.10 Housing, Slums and Urban Services

Housing adequacy and informality

Urban housing conditions encompass structural durability, overcrowding, tenure security, affordability, water, sanitation and energy access. Informality is multidimensional: a dwelling may be physically durable but lack secure tenure, or be formally occupied while facing severe service deficits. Measures should therefore be reported separately before a composite index is considered.

Housing tenure and affordability

Owner occupation, rental, cooperative and other tenure arrangements should be interpreted in their city-specific legal and institutional context. A rent-to-income or housing-cost burden measure requires both a clearly defined housing expenditure and an income denominator over matching periods. The original manuscript's city-level tenure and affordability figures were illustrative and are withheld until representative household survey or municipal tabulations are extracted.

Water, sanitation and basic services

Access to improved water sources is not synonymous with safely managed drinking water; likewise, improved sanitation does not by itself demonstrate safe management of waste. Service comparisons must identify the specific indicator, survey year, urban sampling frame and classification standard. WHO/UNICEF Joint Monitoring Programme and Ethiopian household surveys are candidate sources, but this manuscript does not supply unverified urban access percentages.

Policy implications

Upgrading strategies can combine tenure-sensitive settlement planning, drainage, sanitation, road access, electricity and community engagement. Policy prioritization should be based on observed neighbourhood needs and distributional impacts rather than assuming that all informal settlements face identical deficits.

8.11 Urban Form, Land Use and Transport

Urban morphology and access

Urban form is the spatial organization of residences, jobs, services, roads and open space. Density, land-use mix, block size, intersection connectivity and the location of public facilities jointly influence travel distances and transport choices. A compact settlement is not necessarily accessible if transport links are poor or essential services are unevenly distributed.

Transport mode share and travel time

Mode share is the percentage of trips or travellers using a given transport mode under a stated survey definition; it must not be conflated with vehicle ownership. Commute time distributions should distinguish mean from median and account for whether the survey covers employed persons, all residents or all trips. The original city comparisons cannot be retained as empirical without survey documentation.

Addis Ababa and secondary-city comparison

Comparative analysis should use common geographic definitions, survey periods and trip purposes. Density gradients and cross-city transport-mode shares should be interpreted only where consistent observational data are available.

Land-use and mobility policy

Coordinated land-use and transport planning can protect rights-of-way, encourage connected street networks, support walking and public transport, and reduce the cost of extending basic infrastructure. Evaluation should measure accessibility and service outcomes rather than simply the number of kilometres of road built.

8.12 Governance, Finance and Planning for Cities

Institutional roles and accountability

Urban governance distributes responsibilities among national, regional and municipal authorities, public utilities and community institutions. Accountability requires clear mandates, transparent budgeting, procurement controls, maintenance obligations and mechanisms for residents to scrutinize decisions.

Municipal revenue and expenditure

City revenue composition may include own-source taxes and fees, intergovernmental transfers, grants and borrowing where permitted. Per-capita municipal expenditure must use the same geographic and time reference as its population denominator. Fiscal gaps require explicit accounting definitions; the original manuscript's revenue and expenditure charts are not certified and have been withheld.

Infrastructure investment and program evidence

Documented infrastructure programs can illustrate mechanisms for strengthening municipal capacity, but project achievements should not be generalized into national municipal averages. Comparable

city-year budget series, audit documents and project completion records are needed to reconstruct the original fiscal and investment charts.

Planning and performance measurement

Useful monitoring indicators include execution rates, maintenance spending, own-source revenue collection, infrastructure coverage, service quality and distributional equity. Financial inputs and physical outputs should be reported separately from actual resident outcomes.

8.13 Climate Resilience and Green Urban Transitions

Urban climate risks

Flooding, heat and drought interact with settlement patterns, drainage, housing quality and access to services. Risk depends not only on a physical hazard but also on exposure, vulnerability and coping capacity. A city with greater exposure is not necessarily the city with the largest expected losses.

Measuring flood and heat exposure

Flood-exposure comparisons require a consistent flood scenario, event probability, population layer and spatial boundary. Heat-exposure comparisons require a specified temperature metric and period. Without these choices, cross-city rankings are not reproducible. The source manuscript repeats figure numbers for flood and heat exposure; final numbering must assign separate identifiers.

Urban emissions and mitigation

A municipal greenhouse-gas inventory requires explicit treatment of energy, transport, waste, industrial processes and geographic versus consumption-based accounting. Mitigation potential is scenario-dependent and must specify baseline, intervention, time horizon and assumptions. The original emissions and mitigation charts remain conceptual candidates, not empirical results.

Resilience and green development

A practical resilience strategy links land-use regulation, watershed and drainage management, heat-sensitive design, emergency preparedness and protection of vulnerable populations. Green transition policies should be evaluated for affordability, health co-benefits and whether burdens fall disproportionately on low-income households.

8.14 Integrated Urban Risk, Environmental Health, and Climate Response

8.14.1 An integrated risk framework

Urban health risks arise where hazards intersect with exposed populations and vulnerability. Flooding, heat, poor air quality, unsafe water, inadequate sanitation and traffic injuries can coincide within the same neighborhood, yet the affected population and causal pathways differ. A useful analytical framework distinguishes (a) hazard intensity and frequency, (b) population and

infrastructure exposure, (c) social and biological vulnerability, and (d) institutional capacity to prevent, respond and recover. Such a framework is preferable to treating the presence of a hazard as an observed health outcome.

For flood analysis, for example, a map of flood-prone built-up land indicates potential exposure, not the number of people injured or displaced. To estimate population exposure, spatially harmonized hazard footprints must be intersected with settlement and population surfaces at compatible dates and resolutions. Health effects require separate epidemiological evidence, ideally with temporal information and controls for confounding. Similarly, urban heat exposure should distinguish land-surface temperature, ambient air temperature and individual heat stress.

8.14.2 Spatial equity and public-health services

Risk mapping should be stratified by settlement form, deprivation, access to drainage and water services, age structure and access to care. The practical unit for intervention may be a neighborhood, catchment, corridor or flood basin rather than a municipal average. GIS can identify overlapping disadvantages and guide investments in drainage, safe routes to clinics, early warning and green infrastructure. Interpretation must explicitly recognize ecological inference limits and uncertainty in geocoded population and facility data.

Indicator	Preferred numerator / measure	Denominator or interpretation
Population exposed to flood hazard	Residents within modeled flood footprint	Residents in defined urban study area; scenario-specific
Basic drinking-water service	Urban residents meeting JMP service definition	Urban population with compatible survey year
Heat-related morbidity	Clinically defined events in specified interval	Population at risk; standardized for age where appropriate
Response preparedness	Local governments with verified emergency plan and exercise	All eligible local governments in reporting frame

Table 8.14-A. Proposed indicators for monitoring urban environmental and health risks

8.15 Secondary Cities and Regional Balance

8.15.1 Why secondary cities matter

A national urbanization rate obscures differences between a primate city, regional capitals, corridor towns and smaller urban centers. Secondary cities can potentially reduce pressure on the largest metropolitan area while improving access to jobs, education, referral care, markets and public services closer to rural populations. Those benefits are conditional: poorly serviced expansion can reproduce congestion, land insecurity and environmental risk at smaller scales.

Urban primacy may be expressed as the population of the largest city divided by the population of all urban settlements, or as the largest city divided by the combined population of a defined set of next-

ranked cities. These are different indicators; the selected definition and urban settlement boundaries must be reported. An apparent change in rank or size may result from reclassification, annexation or differing census/remote-sensing definitions rather than migration alone.

8.15.2 Ethiopian secondary-city investment experience

The Agence Française de Développement (AFD) describes its support for the UIIDP as a contribution to balanced, sustainable urbanization through performance-linked municipal grants and capacity development. The program covers 117 urban local governments, while a technical-assistance component examines investment opportunities in selected secondary cities. These figures document program reach, not the number or population of all secondary cities in Ethiopia (AFD, n.d.; World Bank, 2025).

A proper empirical city-system analysis would require a harmonized city inventory with comparable boundaries and population estimates at multiple dates. Until the relevant UN World Urbanization Prospects city records and Ethiopian statistical tables are extracted and reconciled, city-size rankings, primacy indices and secondary-city growth rates remain unreported.

8.15.3 Regional balance and access

Regional balance should be assessed jointly through population distribution, service catchments, travel times, local fiscal capacity and labor-market connections. An urban center's importance to public health may extend beyond its municipal boundary through referral hospitals, wholesale markets, transport terminals and education institutions. Functional urban areas and commuting catchments can therefore complement administrative urban classifications. Without reliable commuting origin–destination data, such catchments should be described as analytically proposed rather than empirically measured.

8.16 Governance and Implementation Across Scales

8.16.1 The implementation chain

Urban investments depend on coordination across national policy, regional administration and urban local governments. Municipal capacity encompasses planning, procurement, land management, budgeting, asset maintenance, financial reporting and public accountability. The UIIDP provides an instructive implementation case because its stated purpose was to strengthen local-government institutions alongside urban infrastructure and local economic development (World Bank, 2025).

8.16.2 What program reporting establishes

World Bank reporting identifies 117 participating urban local governments. For 2018–2024 it reports construction or rehabilitation of more than 2,700 km of roads and development of approximately 2,700 hectares of serviced urban land. These are rounded program outputs, not a national road inventory, and different road subcategories must not be added to the rounded overall figure (World Bank, 2025).

UIIDP indicator	Reported value	Interpretation / limitation
Participating urban local governments	117	Program participants, not national municipal count
Roads constructed or rehabilitated	More than 2,700 km	Rounded cumulative program output, 2018–2024
Serviced land developed	Approximately 2,700 hectares	Program-reported development output
Temporary employment opportunities	915,285	Program-reported jobs; not necessarily unique persons
Permanent employment opportunities	237,035	Program-reported jobs; not necessarily unique persons
Total of two employment categories	1,152,320	Calculated sum; category comparability assumed as reported

Table 8.16-A. Selected UIIDP institutional, infrastructure and employment outputs. Sources: World Bank (2025a, 2025b). Employment counts are reported program outputs; they do not establish net additional jobs.

8.16.3 Municipal revenue and fiscal interpretation

A World Bank results account reports that participating municipalities' revenues increased from US\$68 million in FY2020 to US\$156 million in FY2023. The arithmetic difference is US\$88 million and the proportional change is $(156 - 68) / 68 \times 100 = 129.4\%$. The comparison is nominal and denominated in reported US dollars. It is not a real-terms increase, a per-capita change, a balanced-panel causal estimate or a finding about every Ethiopian municipality (World Bank, 2026). The implementation completion report gives more precise underlying figures in Ethiopian birr; its exchange-rate and fiscal-year conventions should be consulted before any detailed fiscal decomposition.

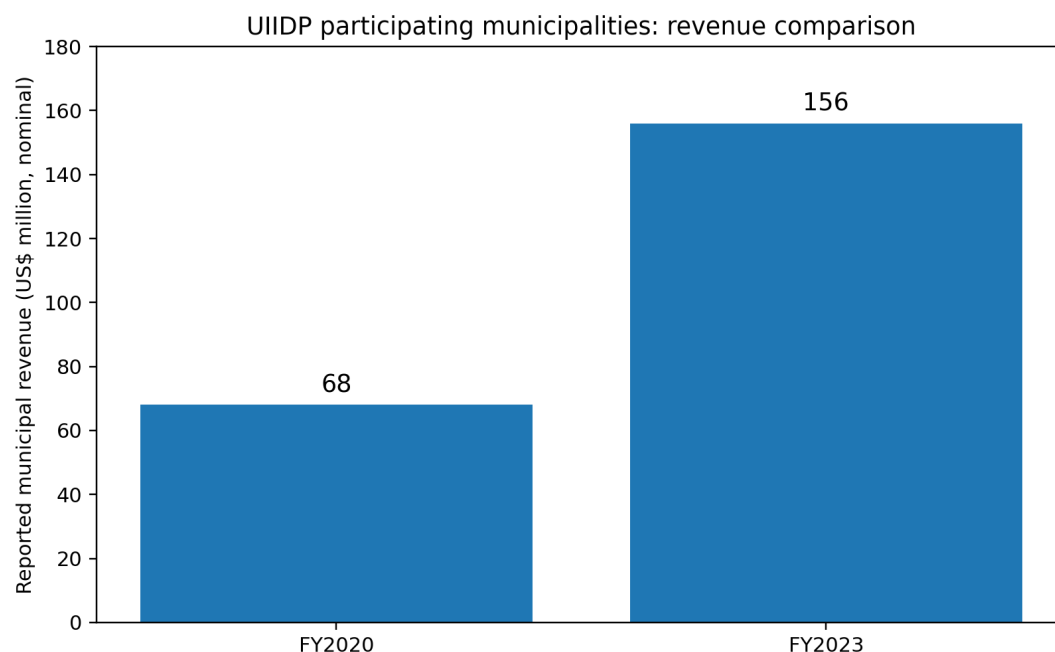


Figure 8.16-A. Reported municipal revenue in participating UIIDP municipalities, FY2020 and FY2023. Nominal US\$ millions. Source: World Bank (2026).

The program evidence is useful for illustrating institutional capacity and resource mobilization. It does not, without a counterfactual and adequate controls, establish how much revenue growth was caused by the intervention rather than economic conditions, policy changes, exchange-rate movements or changes in the reporting cohort.

8.17 Policy Levers and Program Options for Ethiopia

8.17.1 Linking spatial investment with economic opportunity

Urban policy should treat infrastructure, employment and health as interacting but distinct objectives. Road improvements may enhance access to work and health services; serviced land may support enterprise location; drainage and solid-waste systems may reduce environmental exposures. Each pathway requires its own outcome indicators. An investment output is not itself evidence of improved health or poverty reduction.

The World Bank reports 915,285 temporary and 237,035 permanent employment opportunities under the UIIDP, totaling 1,152,320 across these categories. The 2025 public summary rounds these to about 915,000 temporary and 237,000 permanent jobs. It also reports women accounting for 49% of employment opportunities. These are administrative program indicators; a job count should not be treated automatically as a count of distinct individuals or sustained net employment (World Bank, 2025a, 2025b).

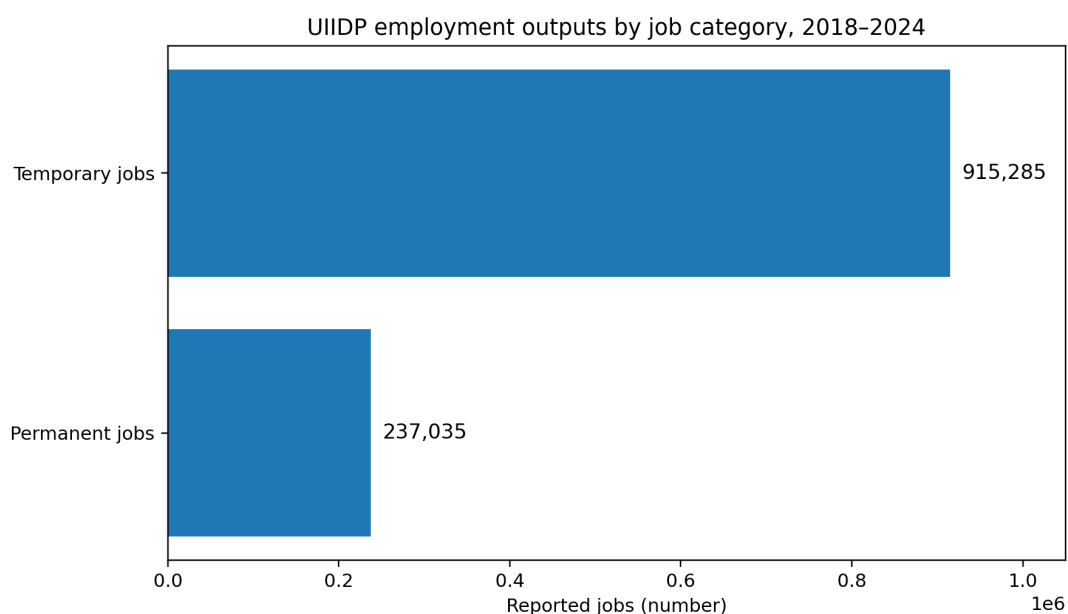


Figure 8.17-A. UIIDP-reported employment opportunities by category, 2018–2024. Source: World Bank (2025b). Categories do not necessarily represent unique individuals or comparable job duration.

8.17.2 Policy menu and implementation prerequisites

Policy lever	Operational prerequisite	Proposed outcome test
Secondary-city infrastructure	Coordinated land-use plan and maintenance budget	Travel time to services; reliable infrastructure access
Performance-linked municipal grants	Transparent eligibility, auditing and public reporting	Service performance with verified independent checks
Labor-intensive public works	Clear definitions of job episode and duration	Person-days, unique workers and post-program employment
Climate-resilient service delivery	Hazard maps and inclusive consultation	Service continuity and measured exposure reduction
Gender-responsive participation	Accessible public consultations and sex-disaggregated data	Participation quality and distribution of benefits

Table 8.17-A. Urban policy options and evidence requirements

The principal lesson is to connect program financing to clearly defined outputs and outcomes, with explicit attention to equity. Public works may provide temporary income and infrastructure simultaneously, but neither outcome should be assumed to persist after implementation. Program design should specify maintenance responsibilities, service affordability, accessibility for people with disabilities and the needs of informal settlements.

8.18 Monitoring, Evaluation, and Learning

8.18.1 From reported outputs to measurable outcomes

An integrated urban monitoring system should distinguish inputs, activities, outputs, intermediate outcomes and long-run impacts. Counts of roads, hectares, consultations and employment opportunities are useful for implementation oversight. They cannot substitute for measures of road usability, household service access, sustainable livelihoods, fiscal resilience or health improvement.

8.18.2 Denominators, comparability and uncertainty

For each indicator, reporting must specify the geographic universe, reference period, population or administrative denominator, data-collection method and uncertainty. Survey indicators should report sampling design and precision. Administrative indicators should document verification rules and duplicate handling. GIS indicators should report spatial resolution, boundary versions, temporal alignment and classification sensitivity. Regional comparisons must not combine differently defined historical regions or city boundaries without an explicit harmonization crosswalk.

Table 8.18-A. Urban monitoring framework and measurement safeguards

8.18.3 Learning agenda

A comprehensive urban monitoring system should prioritize harmonized city-population series, spatially validated settlement expansion, representative measures of service deprivation, comparable municipal financial accounts, and consistent measures of climate and environmental-health exposure.

Integrated Synthesis and Methodological Considerations

Migration and urbanization are interconnected dimensions of Ethiopia's demographic, socioeconomic, and spatial transformation. Their interpretation requires careful distinctions between changes in residence and temporary circulation, population stocks and migration flows, gross and net migration, the age composition of migrants and age-specific migration rates, and absolute urban population growth and urbanization. These distinctions are fundamental to integrating household surveys, administrative records, international migration statistics, and geospatial information without conflating measures that describe different populations, processes, or periods.

The 2021 Ethiopian Labour Force and Migration Survey provides important evidence on internal migration, reporting an internal migrant prevalence of 17.1% within its covered population, with higher prevalence among females (19.1%) than males (15.1%). These estimates must be interpreted in light of the survey's exclusion of Tigray and certain non-household populations. Similarly, published migration-stream distributions require consistent definitions of origin, destination, timing, and the population at risk. Migration-flow shares reported in a subsequent UNFPA Ethiopia policy brief do not sum to 100%, underscoring the importance of verifying classification systems and tabulation universes before treating published categories as an exhaustive distribution.

International migration, remittances, and forced displacement introduce additional measurement challenges. Ethiopia's documented remittance-to-GDP ratio in 2024, its registered refugee and asylum-seeker population in August 2026, and IOM-assessed internally displaced and returning populations in July–August 2024 represent distinct phenomena, measured using different reference

periods, population universes, and data-collection systems. None provides a direct estimate of Ethiopia's total emigration flow. Differences between successive displacement assessments likewise cannot be interpreted as genuine population increases or decreases without accounting for changes in geographic coverage, accessibility, and assessment procedures. These considerations are particularly important in conflict-affected settings, where the populations most difficult to enumerate may also experience the greatest vulnerability.

Ethiopia's rising urban population share provides a demographic foundation for understanding the growing importance of housing, infrastructure, transportation, employment, environmental conditions, and municipal governance. Yet urbanization cannot be understood through population shares alone. Growth in the absolute number of urban residents may generate substantial additional demand for services even when the percentage urban increases gradually. Moreover, national urbanization estimates do not independently establish the distribution of growth among cities, the geographic extent of built-up expansion, or inequalities in access to essential services. Urbanization is simultaneously a demographic, spatial, institutional, and environmental process, and each dimension requires indicators appropriate to its geographic scale, population definition, and underlying mechanism.

The public-health consequences of urban growth are neither inherently beneficial nor inherently harmful. Urban concentration can improve proximity to healthcare, education, employment, and infrastructure while simultaneously intensifying exposure to overcrowding, inadequate sanitation, air pollution, traffic injuries, flooding, extreme heat, and other environmental hazards. The balance between these opportunities and risks depends on the spatial distribution of infrastructure and economic opportunity, the vulnerability of different population groups, the fiscal and technical capacities of local governments, and the accountability of public investment. Ethiopia's Urban Institutional and Infrastructure Development Program (UIIDP) illustrates the potential of institutional strengthening and urban infrastructure investment, but program-reported outputs should not be equated with demonstrated improvements in population health or long-term welfare. Establishing such outcomes requires appropriate longitudinal monitoring and evaluation.

Taken together, the evidence points to the importance of an integrated approach to migration, urbanization, and public health. Migration redistributes people, labor, skills, and vulnerability across places; urbanization reshapes the geography of opportunity, service demand, and environmental exposure; and institutions mediate whether these transformations produce greater inclusion or deepen existing inequalities. Effective policy therefore requires comparable demographic indicators, geographically disaggregated information, attention to displaced and otherwise underserved populations, and monitoring systems that distinguish investments and service outputs from measurable changes in health and well-being.

Ultimately, Ethiopia's demographic and urban transformation should be assessed not simply by how many people move or how rapidly cities grow, but by whether these changes expand equitable access to opportunity, strengthen resilience, and improve population health.

What Demographic Transformation Means for Population Health

Chapter 8 | Integrated public-health implications

A demographic transformation becomes a health-system transformation

Ethiopia's urban population increased from approximately 6.09 million in 1990 to 32.65 million in 2025, based on the urban-share and total-population series assembled for this chapter. The latter figure is 5.36 times the former: a 436% increase, rather than an increase of more than 500%. Over the same period, the nationally defined urban share rose from 12.8% to 24.1%. Thus, even a seemingly gradual rise in the percentage urban corresponds to roughly 26.6 million additional urban residents. The estimates are not direct census enumerations and reflect national definitions of urban residence (World Bank, n.d.-a, n.d.-b).

The immediate public-health consequence is a change in the denominator against which services must be planned. If clinic staffing, laboratory capacity, maternity beds, water supply, waste management, ambulances, and referral networks do not expand with the number and distribution of residents, nominal service availability may coexist with worsening congestion and delayed care. More facilities do not necessarily mean better population coverage when their locations, functionality, catchment populations, staffing, opening hours, and transport connections differ. This distinction follows the broader health-equity principle that conditions of residence and access to resources shape outcomes, not merely the presence of a service on a map (World Health Organization [WHO], 2025).

Urban growth can also yield major health gains: concentrated populations make vaccination outreach, emergency transport, skilled delivery, diagnostics, and specialist referral potentially more economical. Whether these gains materialize depends on land use, equitable public investment, affordable housing, and the spatial coordination of health services with water, sanitation, transport, and employment. WHO and UN-Habitat (2020) explicitly treat health as a central consideration in urban and territorial planning. The crucial question is therefore not whether urbanization is healthy or unhealthy, but which groups benefit, which neighborhoods are left behind, and which institutions are equipped to respond.

Forty thousand mapped institutions do not constitute forty thousand interchangeable points of care

The Ethiopia health-facility atlas developed alongside this chapter contains 40,525 mapped health-related institutions, with a distinction between core healthcare facilities and other mapped institutions. This is an inventory of locations and categories, not a verified count of functioning, adequately staffed clinical facilities. Its public-health value lies in showing the geography of supply and revealing where the nearest mapped service may still be distant or inappropriate for the clinical need. The underlying Ministry of Health-attributed inventory is hosted on the Humanitarian Data Exchange (Humanitarian Data Exchange, 2025).

A health post cannot substitute for a hospital providing emergency obstetric surgery; a health center cannot be assumed to have blood transfusion, anesthesia, intensive care, or round-the-clock operating capacity. Even two facilities with the same designation may differ in medicines, equipment, workforce, reliability of electricity and water, and referral arrangements. Consequently, a defensible measure of effective access requires population-adjusted capacity, travel time, service readiness, and clinical pathways, not raw facility counts alone. The spatial analysis of health-center-to-hospital distances is especially relevant to maternal emergencies, trauma, severe childhood illness, and displaced populations who may be far from established referral networks (WHO & UN-Habitat, 2020; WHO, 2025).

Planning should distinguish at least three geographies: where people live, where they seek care, and where definitive care can actually be delivered. Urban catchment populations expand through natural increase and migration; peri-urban settlements may expand beyond administrative boundaries; and mobile pastoralist or displaced populations may not appear in the denominator used to allocate recurrent budgets. An atlas becomes a health-planning instrument when facility locations are linked to credible population estimates, roads, clinical capability, and observed utilization—not when mapped dots are treated as sufficient evidence of coverage.

Refugees: a shared system, a shared obligation, and a shared opportunity

Government of Ethiopia and UNHCR operational data record 1,023,565 refugees and asylum seekers in Ethiopia on 31 August 2026. The concentration is geographically uneven: approximately 441,416 in Gambela and 361,366 in Somali region, together accounting for roughly four-fifths of the reported national total. These are populations requiring continuity of primary care, immunization, antenatal and delivery services, treatment of chronic disease, mental-health support, and protection-sensitive referral; they are not a count of new arrivals during the year (Government of Ethiopia & UNHCR, 2026).

For refugees, the determinants of health may include interrupted treatment, loss of medical records, malnutrition, psychosocial trauma, unfamiliarity with service entitlements, language barriers, financial hardship, and insecurity. Refugee status itself should not be treated as a disease risk or a proxy for infection. WHO (2022) emphasizes that health disadvantages arise substantially from conditions before, during, and after migration and from barriers to care. The UCL–Lancet Commission likewise cautions against portraying migrants as a public-health threat and instead examines how policy and social conditions structure health (Abubakar et al., 2018).

For Ethiopian host communities, the central issue is whether financing and service expansion follow the additional demand. In an under-resourced district, a health center serving both established residents and new arrivals may face longer queues, medicine stockouts, heavier maternity caseloads, and referral bottlenecks. These are capacity and financing challenges, not grounds for blaming refugees. Investments in shared clinics, water systems, laboratories, surveillance, and ambulance services can benefit both populations, reduce competition for scarce services, and support social cohesion. The WHO global action plan calls for inclusive, migrant-sensitive systems rather than parallel services that fragment care (WHO, 2024a).

The most defensible approach is area-based planning: estimate the combined catchment population; allocate funds according to need, vulnerability, and actual utilization; maintain vaccination and outbreak detection without discrimination; and monitor service quality separately for refugees and hosts to identify inequity. Because the refugee figures are a dated stock, they should not be conflated with the IOM displacement estimates from 2024 (Government of Ethiopia & UNHCR, 2026; International Organization for Migration [IOM], 2024).

Internal displacement: simultaneous destruction of supply and redistribution of need

IOM's July–August 2024 assessments identified an estimated 1,919,993 internally displaced persons in 2,060 accessible sites and 2,813,489 returning IDPs in 2,580 accessible villages. These are distinct assessed populations, not an annual displacement or return flow; some regions and inaccessible locations were excluded. Conflict was the leading reported cause among assessed IDPs, and shifts between assessment rounds cannot be read as true demographic changes without verifying coverage (IOM, 2024).

Displacement challenges healthcare in two directions at once. In places of origin, conflict and insecurity can damage infrastructure, displace health workers, interrupt supply chains, and erode routine vaccination and maternal-care continuity. In receiving areas, displaced households increase the number of people requiring consultations, obstetric services, nutrition screening, essential medicines, sanitation, and protection. Returning households may arrive in communities where facilities, roads, water systems, and livelihoods remain impaired. WHO's Ethiopia emergency appeal explicitly identifies the combined effects of conflict, drought, disrupted public services, outbreaks, and displacement (WHO, 2024b).

The health implications are life-course wide. Pregnant women need referral continuity and emergency obstetric care; infants need uninterrupted immunization; people with diabetes, hypertension, HIV, or tuberculosis require medicines and follow-up; survivors of violence require confidential clinical and psychosocial services; and older people and people with disabilities need accessible, sustained care. Displacement also creates indirect risks through food insecurity, poor shelter, inadequate water and sanitation, and missed preventive services. Ethiopia's health response must therefore integrate emergency delivery with reconstruction of routine primary healthcare rather than treating humanitarian care as a substitute for the permanent system (WHO, 2022; WHO, 2024b).

A practical test of recovery is not merely the number of returnees recorded, but whether functioning services, health workers, drug supply, safe transport, and referral arrangements have been restored in places of return. The IOM assessment's geographic exclusions make local verification indispensable (IOM, 2024).

The diaspora as a health-financing and knowledge-transfer institution

Ethiopia's diaspora affects health through several channels that should be distinguished analytically. Household remittances can help finance food, transport to clinics, medications, diagnostic tests, health insurance contributions, and emergency treatment; they may also support education and housing, indirectly shaping health. But remittances are private household resources, unevenly

distributed, and cannot replace pooled public financing or equitable national risk protection. A national remittance-to-GDP ratio, moreover, says nothing by itself about the fraction spent on health or the households reached (WHO, 2025; Abubakar et al., 2018).

A second channel is clinical service and specialist volunteering. The Ethiopian Diaspora Surgery Network describes an organized effort linking surgeons, anesthesiologists, perioperative nurses, and other surgical professionals with service, teaching, and equipment needs in Ethiopia. People to People, headquartered in the United States with an Ethiopian presence and international chapters, describes partnerships with Ethiopian hospitals and universities and efforts to mobilize diaspora expertise. These organizational accounts document missions and objectives; they should not be interpreted as independent evaluations of patient outcomes (Ethiopian Diaspora Surgery Network, n.d.; People to People, n.d.).

The Nordic dimension is equally important. The Ethio-Nordic Healthcare Professionals Association describes professional networking, health promotion, research partnerships, and short- or long-term service links between Nordic-based professionals and Ethiopia. A US-based Ethiopian diaspora nurses' association similarly describes nursing education, supply support, and opportunities for volunteer engagement. Together, these initiatives illustrate a broader continuum—from a visiting surgical team to sustained mentoring, faculty exchanges, nursing education, teleconsultation, research collaboration, and equipment maintenance (Ethio-Nordic Healthcare Professionals Association, n.d.; Ethiopian Diaspora Nurses and Other Healthcare Professionals Association, n.d.).

The distinction between a successful mission and sustainable system strengthening is decisive. A visiting surgical team may complete valuable operations, but enduring benefit depends on local case selection, anesthesia and blood-bank readiness, infection prevention, postoperative follow-up, clinical documentation, biomedical maintenance, and transfer of skills to Ethiopian teams. A stronger evaluation would count not only procedures performed but also complications, follow-up completion, local clinicians trained, competencies retained, and service availability after visitors depart. Diaspora participation is most powerful when embedded in Ethiopian institutional priorities and mutually accountable partnerships (WHO, 2022; People to People, n.d.).

A third channel is professional circulation rather than one-way “brain drain.” Ethiopian clinicians and scientists abroad can contribute to curriculum development, laboratory quality systems, epidemiological analysis, geographic information systems, health-information platforms, research ethics, grant writing, and specialist networks without permanent return. Conversely, overseas recruitment can aggravate domestic workforce shortages if training and retention policies do not respond. The goal is a two-way circulation of expertise that builds Ethiopian capacity, not a reliance on episodic charity (Abubakar et al., 2018; Ethiopian Diaspora Surgery Network, n.d.).

Urban environmental risk, mobility, and the epidemiological transition

As urban populations grow, health determinants increasingly operate outside clinic walls. Unplanned settlement expansion can increase exposure to unsafe water, poor sanitation, solid-waste accumulation, crowding, heat, flooding, and polluted air. Transport networks affect both exposure to injury and the ability to reach emergency care. The spatial concentration of employment and housing may lengthen commuting times, reduce opportunities for physical activity, and deepen unequal

access to services. WHO and UN-Habitat (2020) frame these as health considerations that should be embedded in land-use and transport decisions rather than addressed only after illness occurs.

Urbanization also changes the service mix. Maternal and child health remain priorities, but a growing urban population requires systems that can manage chronic noncommunicable diseases, mental-health needs, injuries, and occupational risks alongside communicable diseases. Crowding does not automatically produce outbreaks; the relevant mechanisms are inadequate water, sanitation, vaccination, ventilation, surveillance, and timely treatment. WHO's Ethiopia emergency reporting links disruptions in essential services and water insecurity to heightened outbreak and malnutrition risks (WHO, 2024b).

The World Bank reports that Ethiopia's Urban Institutional and Infrastructure Development Program worked with 117 urban local governments and supported infrastructure and municipal institutional capacity. Such investments may improve the physical and administrative conditions for health, but kilometers of roads, serviced land, and reported employment are outputs—not proof of reductions in maternal deaths, traffic injuries, infectious disease, or health inequity. Demonstrating those benefits requires explicit health indicators and credible evaluation designs (World Bank, 2025; WHO & UN-Habitat, 2020).

A practical public-health agenda: count people, measure access, finance shared services

First, demographic planning should integrate annual population estimates with internal migration, refugee and IDP assessments, and credible urban-boundary information. Denominators must be documented, and coverage exclusions should accompany every estimate. A district's registered resident population may underestimate actual service demand where refugees, displaced people, seasonal workers, students, or peri-urban commuters seek care (IOM, 2024; Government of Ethiopia & UNHCR, 2026).

Second, the facility atlas should be used to measure effective service access: functioning facilities by level; clinical workforce and readiness; travel time to first-contact and referral care; availability of emergency obstetric and surgical services; stockout frequency; and population-adjusted service capacity. Geographic proximity alone should never be equated with care quality or the probability that a service is available on arrival (Humanitarian Data Exchange, 2025; WHO & UN-Habitat, 2020).

Third, host-community and displacement responses should be funded as shared health-system investments, with transparent allocation to catchment populations and safeguards for the most vulnerable. Fourth, diaspora partnerships should move from counting visits and donations to measuring continuity, skill transfer, safety, and institutional sustainability. Fifth, municipal investments should be evaluated against health-relevant outcomes, including access to clean water, safe transport, emergency referral time, maternal-care continuity, and environmental exposure (WHO, 2024; World Bank, 2025; Ethio-Nordic Healthcare Professionals Association, n.d.).

The unifying conclusion is that mobility redistributes both opportunity and risk, while urbanization changes the scale and geography of service demand. Ethiopia's challenge is not simply to

accommodate more people in cities or at points of displacement; it is to build a health system that follows people across borders, regions, neighborhoods, and stages of life. The ultimate test of demographic transformation is whether it expands equitable access to timely, effective care and improves health for migrants, refugees, displaced people, host communities, and long-established urban and rural residents alike (WHO, 2025; Abubakar et al., 2018).

8. Discussion

The central finding of this chapter is that migration and urbanization alter the geography of health needs faster than conventional administrative measures can necessarily detect. A growing urban population, mobile workers, refugees, internally displaced people, returning households, and an increasingly connected diaspora each affect who requires care, where care must be delivered, and how health systems should be financed and governed. These are not independent pressures: they intersect in towns, border districts, peri-urban settlements, referral hospitals, and communities recovering from conflict. The appropriate unit of interpretation is therefore not migration or urban growth alone, but the changing relationship between population distribution, exposure, service capacity, and equity (Abubakar et al., 2018; World Health Organization [WHO], 2022).

Urban growth and the changing denominator of healthcare demand

Ethiopia's estimated urban population increased from approximately 6.09 million in 1990 to 32.65 million in 2025, a 5.36-fold increase, or about 436% growth. The urban share also rose, from approximately 12.8% to 24.1%. These measures describe related but different processes: the first captures the absolute expansion of the urban population requiring services; the second captures a change in the national settlement distribution. A percentage-point change in urbanization is not an adequate proxy for additional consultations, births, vaccinations, emergency visits, or chronic-disease follow-up (World Bank, n.d.-a, n.d.-b).

The implications are both quantitative and qualitative. More urban residents require greater service throughput, but demand also shifts toward the health conditions and exposures characteristic of dense and heterogeneous settlements: communicable disease transmission in crowded housing, road traffic injury, occupational hazards, air pollution, heat exposure, and increasing need for long-term management of noncommunicable disease. At the same time, urban proximity can improve access to specialist care and diagnostics. Whether urban concentration yields a health dividend depends on infrastructure, affordability, referral coordination, and the distribution of services within cities—not merely on residence in an area classified as urban (WHO & UN-Habitat, 2020; WHO, 2025).

Planning based on static administrative population denominators risks systematic under-provision in rapidly expanding peri-urban districts. Service catchments should therefore be updated with settlement change, population projections, and locally validated spatial evidence. The aim is to anticipate where additional population growth creates demand before it manifests as queues, delayed referrals, and avoidable morbidity.

Mapped facilities, functional capacity, and the geography of access

The national mapped inventory of 40,525 health-related institutions is a valuable geographic foundation, but it is not a count of 40,525 interchangeable clinical facilities. The inventory includes

distinct institutional categories, including hospitals, health centers, health posts, and other health-related locations. In the companion geographic analysis, hospitals and health centers are treated as the core facilities for selected accessibility comparisons; other mapped points cannot automatically be assumed to provide equivalent clinical services. Counts alone do not establish staffing, medicines, operating hours, emergency obstetric capacity, laboratory readiness, or quality of care (Humanitarian Data Exchange, 2025).

This distinction becomes especially consequential under migration and displacement. Two districts with similar numbers of mapped sites may have profoundly different effective access if one has long travel times, damaged roads, understaffed facilities, or large newly arrived populations. A facility-based denominator must be complemented by population-adjusted rates, travel-time or distance measures, service-readiness indicators, and referral performance. The geography of access should also be interpreted dynamically: the destination of displaced people today may not correspond to the population distribution assumed when facilities were originally located (WHO, 2022; WHO & UN-Habitat, 2020).

Refugees and host communities: shared needs rather than competing entitlements

Government of Ethiopia and UNHCR operational figures report 1,023,565 refugees and asylum seekers in Ethiopia on 31 August 2026. This is a dated population stock, not an annual inflow. It identifies an important additional population with health needs that vary by age, sex, disability, pregnancy status, trauma exposure, chronic disease, and living conditions. Refugee health cannot be reduced to communicable-disease surveillance: continuity of maternal and newborn care, childhood immunization, mental-health support, rehabilitation, and access to medicines are equally consequential (Government of Ethiopia & UNHCR, 2026; WHO, 2022).

The presence of refugees can increase demand on clinics and hospitals used by nearby Ethiopian communities, particularly where existing resources are limited. Yet the implication is not that refugee care necessarily diminishes host-community health. That outcome depends on whether financing, staff, supplies, and infrastructure expand with the population served. Investments in shared water, sanitation, primary care, referral networks, and health information systems can benefit both refugees and hosts. Inclusive service planning, with transparent population denominators and equitable resource allocation, is more defensible than treating these groups as competing claimants to a fixed supply of care (WHO, 2022, 2024a).

Internal displacement and the double shock to the health system

Internal displacement differs from international refugee movement because displaced households remain within Ethiopia's national service system while often moving away from their usual providers. IOM's July–August 2024 assessment identified approximately 1.92 million internally displaced persons in accessible assessed sites and 2.81 million returning IDPs in accessible assessed villages. These populations and assessment universes are distinct; they should not be added indiscriminately or treated as a national census of all affected people. Changes across assessment rounds require particular caution when site coverage and access change (International Organization for Migration [IOM], 2024).

Displacement can create a double shock: it increases demand in receiving areas while simultaneously disrupting supply in areas of origin through damaged infrastructure, interrupted staffing, lost records, supply-chain failures, and insecurity. Return does not automatically restore service access. A returning family may reach a community where the nearest facility exists on a map but cannot deliver essential services. Public-health recovery thus requires assessment of both people and functionality: outreach and vaccination, maternal and emergency referral pathways, mental-health and psychosocial support, disease surveillance, and restoration of routine care (IOM, 2024; WHO, 2024b).

Diaspora resources: from episodic contribution to sustained capacity

Diaspora engagement offers several pathways to better health. Household remittances may help pay for food, transport, medication, and out-of-pocket care, although they are privately allocated transfers and cannot be presumed to translate directly into equitable system-wide improvement. Professional networks can contribute specialist visits, surgical services, clinical mentoring, equipment, training, teleconsultation, and institutional partnerships. Examples of organized engagement include the Ethiopian Diaspora Surgery Network, People to People, Ethiopian diaspora nursing and healthcare professional associations, and Ethio-Nordic professional networks (Ethiopian Diaspora Surgery Network, n.d.; Ethiopian Diaspora Nurses and Other Healthcare Professionals Association, n.d.; Ethio-Nordic Healthcare Professionals Association, n.d.; People to People, n.d.).

The critical question is how these contributions are structured. Short missions can address urgent unmet needs, but their lasting value is greater when they strengthen Ethiopian-led teams, support continuity of postoperative care, improve referral and maintenance systems, and transfer practical skills through sustained collaboration. Similarly, diaspora-financed equipment is only as useful as the local workforce, consumables, repair capacity, and financing that keep it operational. The appropriate metric is therefore not the number of visiting professionals or donated devices alone, but durable improvements in local service capability, patient outcomes, and equitable access (Abubakar et al., 2018; WHO, 2025).

Mobility, environment, and the distribution of health risk

Migration and urban growth also redistribute exposure. Expansion into flood-prone or heat-exposed land, overcrowded rental housing, inadequate drainage, poor air quality, unsafe roads, and long commutes can concentrate risks among households with the fewest resources to adapt. Rural–urban migrants may enter informal employment without stable access to occupational protections or social support. Conversely, improved transport, employment, sanitation, and proximity to services can reduce risk. Urban health policy must therefore consider how land use, mobility, housing, and environmental management shape the social determinants of health (WHO & UN-Habitat, 2020; WHO, 2025).

An integrated analytical approach should distinguish demographic pressure from measured health effects. The present chapter documents population redistribution, facility locations, displacement caseloads, and institutional responses; these observations support plausible mechanisms but do not establish that migration itself caused particular disease trends or service outcomes. Stronger causal inference would require longitudinal or quasi-experimental designs, health-facility utilization data,

consistent geographic denominators, and explicit assessment of confounding, selection, and changes in coverage (Abubakar et al., 2018; World Bank, 2023).

Implications for planning, governance, and research

The policy response should begin with a common population-and-service geography. National and regional planners need periodically updated denominators that account for urban expansion and displacement; geocoded facilities classified by actual service capability; travel-time and referral-network measures; and indicators of staffing, commodity availability, service utilization, and quality. These should be stratified, where feasible, by age, sex, disability, residence, displacement status, and host-community context. Investments should be evaluated for sustained coverage and health outcomes rather than construction or expenditure alone (WHO, 2022, 2024a; World Bank, 2025).

Ethiopia's Urban Institutional and Infrastructure Development Program demonstrates that urban investment and institutional activity can be documented at scale. However, program outputs do not, by themselves, establish causal improvements in health. The next research frontier is to connect urban infrastructure, migration patterns, facility functionality, and individual health outcomes through spatially explicit and longitudinal analysis. This would allow the country to identify where growth creates a health dividend, where displacement overwhelms existing capacity, and where targeted investments could reduce inequity most effectively (World Bank, 2025; WHO & UN-Habitat, 2020).

Ultimately, the health significance of Ethiopia's migration and urbanization is not captured by movement totals, urban percentages, or facility counts considered separately. It lies in whether health systems can follow changing populations, maintain continuity through displacement, protect both newcomers and host communities, and convert diaspora engagement and urban investment into durable capacity. Migration and urbanization become public-health opportunities when population change is matched by accessible, adequately resourced, accountable, and equitable care.

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