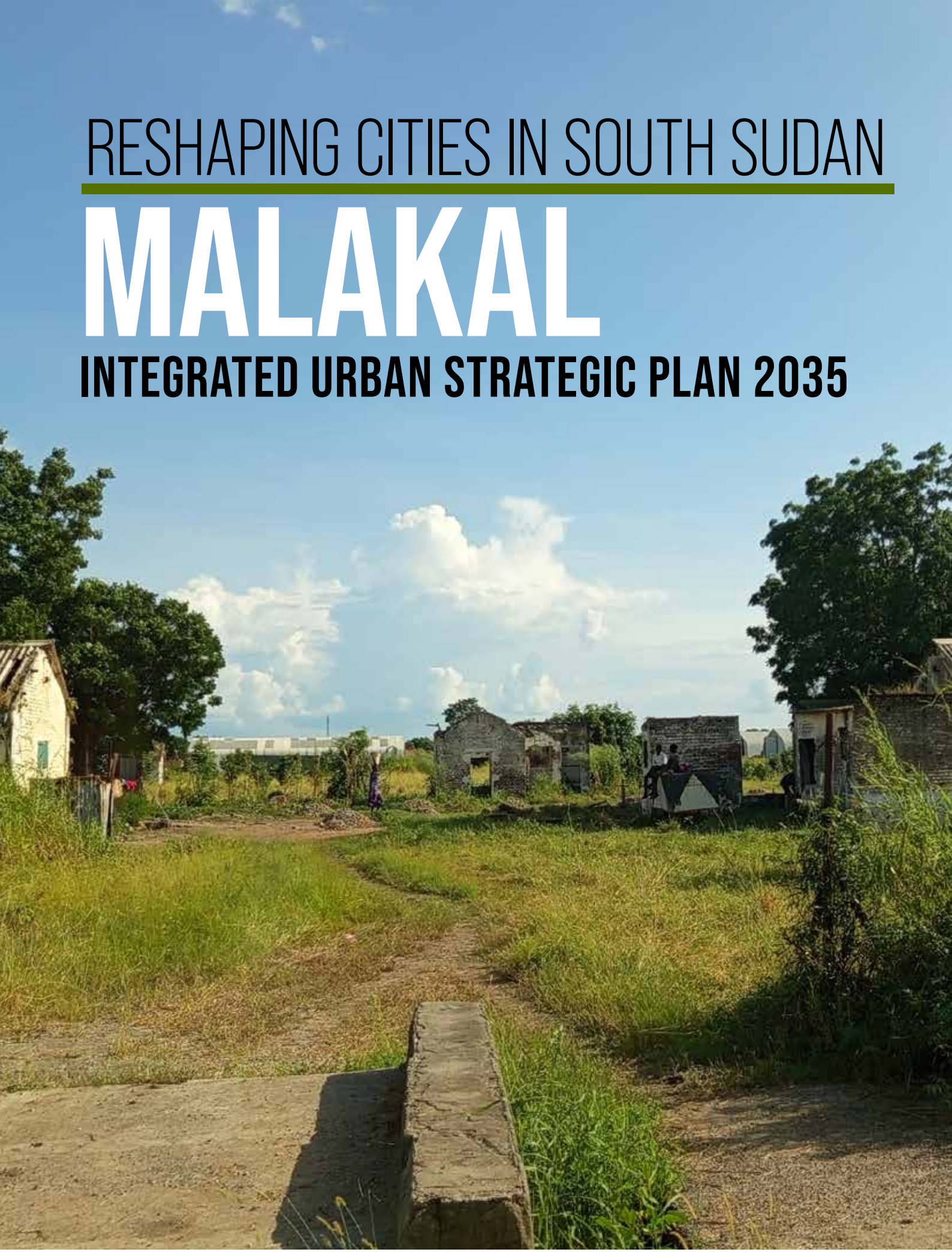
RESHAPING CITIES IN SOUTH SUDAN

MALAKAL

INTEGRATED URBAN STRATEGIC PLAN 2035



Funded by the European Union

UNHCR

UN-HABITAT

This project is funded by:
European Union INTPA

Under the project: Strengthening Community Adaptability and Resilience for Displaced and Host Populations in South Sudan" supporting the response to the Sudan Crisis.
The spatial analysis has been developed by UN-Habitat's Regional Office for Africa (ROAF), East and Horn of Africa Sub Region, in collaboration with the UNHCR offices in South Sudan (Juba and Malakal) and the Ministry of Housing, Land and Public Utilities (MHLPU), Malakal, Upper Nile State.

National Ministry of Housing,Land and Urban Development (MHLUD), Juba, South Sudan
State Ministry of Housing, Land and Public Utilities (MHLPU), Malakal, Upper Nile State

UN-Habitat, Regional Office for Africa (ROAF) Team
Head of the East and Horn of Africa Sub-Region | Ishaku Maitumbi
Project Manager | Sophos Sophianos, Head of Somalia Programme
Project Coordinator and Author | Princesse Samba Makondele
Technical Team | Blaise Moussatangar, Manuel Zeller, Mona Mohamed Roble

UNHCR South Sudan Country Office, Juba
Senior Development Officer and SCAR-SS Project Coordinator | Pierre Fichter

UNHCR South Sudan Country Office, Malakal
UNHCR Malakal HoFO/Area-Based Coordinator for Upper Nile State | Dmytro Charskykh
UNHCR Malakal SCAR-SS Project Manager Focal Point | Charles Chop Wapuoy

Cover Photo: Damaged housing in Malakal, South Sudan
Source: @UN-Habitat 2025

Disclaimer
The designations employed and the presentation of material in this report do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or regarding its economic system or degree of development. The analysis conclusions and recommendations of this publication do not necessarily reflect the views of the United Nations Human Settlements Programme or its Governing Council or its member states.
Reference of this publication of any specific commercial products, brand names, processes, or services, or the use of any trade, firm, or corporation name does not constitute endorsement, recommendation, or favouring by UN-Habitat or its officers, nor does such a reference constitute an endorsement of UN-Habitat.

RESHAPING CITIES IN SOUTH SUDAN

MALAKAL

INTEGRATED URBAN STRATEGIC PLAN 2035

Funded by the European Union

UNHCR

UN-HABITAT

FOREWORD

Since 2024, UN-Habitat, the United Nations Human Settlements Programme and United Nation High Commision for Refugees (UNHCR) with the generous fund from the European Union Delegation to South Sudan, have been working hand in hand to improve living conditions for displaced and host communities in Malakal through the Strengthening Community Adaptability and Resilience (SCAR-SS) Project. This collaboration has been instrumental in advancing Durable Solutions while laying the foundations for sustainable urban development in one of South Sudan's most complex and dynamic contexts.

The Malakal Integrated Urban Strategic Plan 2035, led by UN-Habitat represents a milestone in this collective effort. Developed in close partnership with the National Ministry of Housing, Land and Urban Development to South Sudan (MHLUD), the Upper Nile State Ministry of Housing, Land and Public Utilities to South Sudan (MHLPU), UNHCR Juba the Upper Nile State Area Based Coordination for Durable Solutions, and local communities of Malakal. The plan combines displacement durable solutions with broader urban development objectives. It responds to Malakal's projected population growth by 2035 and provides a framework for guiding settlement expansion, infrastructure investment, and service delivery in an inclusive, resilient and sustainable manner.

The plan supports the gradual decongestion of the former Protection of Civilian site of Malakal, the voluntary reintegration of internally displaced persons into land allocated by the State Government and enhacement of living conditions of host communities in Malakal. It strengthens housing, flood resilience and livelihoods ensuring that urban recovery is aligned with humanitarian and urban priorities and durable solutions strategies.

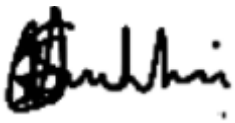
On behalf of UN-Habitat Regional Office for Africa, East and Horn of Africa Sub Region, I wish to express sincere appreciation to the MHLUD, the MHLPU, the European Union Delegation to South Sudan, UNHCR South Sudan, who have contributed to this process. Their collaboration and dedication have been essential in shaping a vision for Malakal that reflects both immediate needs and long-term aspirations.

This report is offered as a tool for decision-makers and communities alike a foundation for coordinated action and a shared roadmap toward a more sustainable and inclusive future for Malakal and South Sudan.



Ishaku Maitumbi

Head of the East and Horn of Africa Sub Region
ROAf | Regional Office for Africa



Ishaku Maitumbi, Head of the East and Horn of Africa Sub Region
ROAf | Regional Office for Africa
UN-Habitat | United Nations Human Settlements Programme

Funded by the European Union

FOREWORD





Fig. 1: Durable Housing *in* Hai Matar, project EU INTPA
Source: @UN-Habitat 2024

EXECUTIVE SUMMARY

South Sudan continues to face one of the world's most protracted displacement crises, driven by years of conflict, recurrent flooding, economic instability, and the spillover effects of the conflict in neighbouring Sudan. By the end of 2025, over 2.7 million people remain internally displaced. Many have lived in camps and overcrowded settlements for over a decade with no realistic way to return home, resettle elsewhere or rebuild their lives. Moreover, over 2.3 million South Sudanese have fled to neighboring countries. (UNHCR 2026).

These overlapping shocks have displaced millions of people and placed immense pressure on urban centres across the country, which increasingly serve as destinations for internally displaced persons (IDPs), returnees, and refugees.

Within this context, Malakal, the capital of Upper Nile State and South Sudan's second-largest city, has emerged as a critical centre for humanitarian response, recovery, and urban development. Historically a major hub along the White Nile, Malakal has been profoundly affected by conflict.

The continued presence of displaced populations, combined with spontaneous returns and limited urban investment, has transformed Malakal into a rapidly growing secondary city. Urban expansion is increasingly occurring in peri-urban and surrounding rural areas, generating growing demand for housing, livelihoods, water and sanitation services, healthcare, education, and public infrastructure. These pressures have heightened vulnerabilities among both displaced and host communities while underscoring the need for integrated and sustainable urban development approaches. (unhcr.org), (southsudan.un.org).

In 2024, the Government launched for the first time a Durable Solutions Strategy and Action Plan to guide the collective efforts of authorities, UN entities, NGOs and civil society in creating conditions that support the return, resettlement and integration of displaced populations into their communities in a safe and dignified manner.

In January 2026, the Government of South Sudan convened the first National Steering Committee on Durable Solutions in Juba, reaffirming the progress in July 2026 during 2nd Steering Committee meeting, marking an important step translating policy commitments into coordinated actions on the ground.

The National Government and its partners set a shared goal: to support at least 60 000 displaced people in achieving sustainable solutions by 31 December 2026, recognizing the durable solutions progress and reaffirming its targets during 16 June meeting.

Since 2024, UN-Habitat and UNHCR, through the European Union-funded Strengthening Community Adaptability and Resilience (SCAR-SS) Project, have worked jointly to improve living conditions for displaced and host communities in Malakal.

As part of this initiative, UN-Habitat is leading the development of the Malakal Integrated Urban Strategic Plan 2035, combining displacement solutions with broader urban development objectives. The plan responds to projected population growth from approximately 233,412 inhabitants in 2026 to more than 304,000 inhabitants by 2035. (MLHPU, and OCHA projection 3% growth rate).

The programme supports the gradual decongestion of the former PoC site and the voluntary reintegration of IDPs into land allocated by the Upper Nile State Government.

Given the pace of demographic change and spatial expansion, urban analysis has become a critical tool for evidence-based decision-making, helping identify priority interventions and establish a foundation for sustainable recovery and long-term development.

The planning process is led by UN-Habitat, with area-based coordination with UNHCR and UNMAS, particularly in relation to land, clearance, and demining activities. Developed in close collaboration with the State Ministry of Land, Housing and Public Utilities and local communities, the process ensures strong government ownership while aligning urban development priorities with humanitarian and durable solutions objectives.

The present report documents the development of the Malakal Integrated Urban Strategic Plan 2035 and outlines a strategic framework for managing urban growth, improving service provision, and integrating displacement-affected populations while dvancing recovery and development goals.

The Strategic Plan is strongly aligned with national and state-level durable solutions frameworks. These include the South Sudan Durable Solutions Strategy and Action Plan for Refugees, IDPs, Returnees and Host Communities (2024), which provides national guidance for addressing displacement, as well as the Upper Nile State Area-Based Durable Solutions Roadmap (2024–2026), one of several state-level frameworks designed to coordinate humanitarian, development, and peacebuilding interventions towards sustainable solutions for displacement. (southsudan.un.org), (undp.org).

Through the integration of humanitarian, recovery, and development approaches, the Plan seeks to foster a more cohesive, prosperous, and sustainable future for Malakal and its residents.

TABLE OF CONTENTS

FOREWORD p. 4 - 5
EXECUTIVE SUMMARY p. 8 - 9
TABLE OF CONTENTS p. 10 - 11
LIST OF ACRONYMS p. 12
LIST OF PICTURES p. 13 - 19

01 INTRODUCTION p. 21
1.1 The EU INTPA SCAR-SS Project p. 22
1.2 Area Based Coordination p. 22
1.3 Integrated Urban Strategic Planning p. 23
1.4 Methodology p. 24
1.5 Stakeholder Engagement p. 28

02 NATIONAL URBAN PLANNING FRAMEWORKS p. 33
2.1 National Urban Planning Regulations and Durable Solutions p. 34
2.2 Urban Governance Structure p. 36
2.3 South Sudan Historical Crisis Overview p. 38

03 SITIUATIONAL ANALYSIS
National Scale _ South Sudan **p. 41**
3.1 Governance System p. 42
3.2 Urbanization Dynamics p. 44
3.3 Migration and Conflict Induced Displacement p. 46
3.4 Environmental Hazards and Displacement p. 48
3.5 National Mobility and Corridors p. 50

State Scale _ Upper Nile **p. 52**
3.6 Demographic trends p. 54
3.7 Migration Dynamics p. 56
3.8 Natural Resources and Hazards p. 58
3.9 Economic perspectives p. 60

04 SOCIO - SPATIAL ANALYSIS AND DIAGNOSTIC
City Scale_ Malakal **p. 62**
4.1 Governance
4.1.1 Administrative Boundaries p. 64
4.2 Urbanization Dynamics
4.2.1 Demographic Growth p. 66
4.2.2 Urban disruptions p. 68
4.2.3 Conflict and Climate induced displacement p. 70
4.2.4 Land Use p. 74
4.2.5 Housing Typology p. 76

4.3 Environmental Features and Hazards p. 78
4.3.1 Land Cover p. 80
4.3.2 Hydrography p. 82
4.3.3 Flood Vulnerability p. 84

4.4 Connectivity and Mobility p. 86
4.4.1 Road Network p. 88
4.4.2 Transport System p. 90

4.5 Accessibility to Basic Services and Social Equipment p. 92
4.5.1 Water and electricity network p. 94
4.5.2 Waste Management p. 96
4.5.3 Educational Facilities p. 98
4.5.4. Health Facilities p. 100
4.5.3 Public Spaces and Urban life p. 102

4.6 Local Urban Economy p. 104
4.6.1 Municipal Finance overview

4.7 Overall Socio -Spatial Diagnostic p. 106

05 STRATEGIC DEVELOPMENT p. 110
5.1 Visioning planning process p. 112
5.2 Development Scenario p. 116
5.3 Strategic Urban Vision of Malakal 2035 p. 118
5.4 Development Strategies p. 122
5.4.1 The Compact City - Demographic Growth and Migration Mitigation p. 124
5.4.2 The Resilient City - Climate Resilinece and Natural Resources Valorisation p. 128
5.4.3 The Connected City - Mobility and Connectivity Improvement p. 132
5.4.4 The Inclusive City - Equitable Access to Basic Services and Facilities p. 136
5.4.5 The Vibrant City - Local Economy and Livelihood Enhancement p. 142
5.5 Malakal Integrated Urban Strategic Plan 2035 p. 146

06 IMPLEMENTATION p. 148
6.1 Proposed Land Use Plan p. 150
6.2 Priority Areas for future investment p. 156
6.3 The Action Plan p. 162
6.4 Short Term Projects p. 164
6.5 Medium Term Projects p. 166
6.6 Long Term Projects p. 168
6.7 Linkages to finance p. 170
6.8 Selected pilot projects p. 174

07 WAY FORWARD p. 182
7.1 Plan Implementation Responsabilities p. 184
7.2 Knowledge sharing and capacity building p. 186
7.3 Dissemenation p. 188

REFERENCES p. 192

LIST OF ACRONYSM

ABA	Area-Based Assessment
ABC	Area-Based Coordinator
CAD	Community Area Development
DAC	Displaced Affected Communities
DTM	Displacement Tracking Matrix
EU	European Union
EU INTPA	European Union – International Partnerships
GDP	Gross Domestic Product
GIS	Geographic Information System
ha	hectare
HDC	Humanitarian Development Consortium
HNRP	Humanitarian Needs and Response Plan
ICCG	Inter-Cluster Coordination Group
ICT	Information and Communication Technology
IDP	Internally Displaced Person
IGAD	Intergovernmental Authority on Development
IMAS	International Mine Action Standards
IOM	International Organization for Migration
JICA	Japan International Cooperation Agency
JMMI	Joint Market Monitoring Initiative
km²	square kilometer
MHLUD	Ministry of Housing, Land and Urban Development
MLHPU	Ministry of Housing, Land and Public Utilities
m	meter
MSSMEB	Multi-Sectoral Survival Minimum Expenditure Basket
NGO	Non-Governmental Organization
NBS	Nature-Based Solutions
OCHA	Office for the Coordination of Humanitarian Affairs
OCHA DTM	OCHA Displacement Tracking Matrix
PoC	Protection of Civilians site
REACH	Registration, Evaluation, Authorization, and Restriction of Chemicals
RRC	Relief and Rehabilitation Commission
ROAF	Regional Office for Africa
SCARS	Strengthening Community Adaptability and Resilience
SSSLTFS	Soith Sudan State Level Taskforce on Solutions
SSP	South Sudanese Pound
SSUWC	South Sudan Urban Water Corporation
TB	Tuberculosis
UN	United Nations
UN-Habitat	United Nations Human Settlements Programme
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNMAS	United Nations Mine Action Service
UNMISS	United Nations Mission in South Sudan
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
USD	United States Dollar
UXO	Unexploded Ordnance
WASH	Water, Sanitation and Hygiene Programme

LIST OF PICTURES

COVER
Damaged housing in Malakal, South Sudan
Source: @UN-Habitat 2025

FOREWORD
Fig. 1: Durable Housing in Hai Matar, Project EU INTPA p.7
Source: @UN-Habitat 2024

01 INTRODUCTION

Fig. 2: Malakal urban agricolture, South Sudan p.20
Source: @ @UN-Habitat 2026
Fig. 3: Hai Matar settlement proposal vs Integrated settlment planning approach, Malakal, South Sudan p.23
Source: @UN-Habitat 2024
Fig. 4: Urban Planning Process – Methodology p.26
Source: @UN-Habitat 2026
Fig. 5: UNMAS Training on Land Clearance, Malakal, South Sudan p.29
Source: @UN-Habitat 2025
Fig. 6: Meeting with group of women Hai Matar' IDPs, EU,UNHCR and UN-Habitat, Malakal South Sudan p.31
Source: @UN-Habitat 2024
Fig. 7: Meetings with community representatives Hai Matar, UNHCR and UN-Habitat, Malakal South Sudan p.31
Source: @UN-Habitat 2025

02 NATIONAL PLANNING FRAMEWORKS

Fig. 8: Urban Infrastructure Assessment Workshop, Malakal South Sudan p.33
Source: @UN-Habitat 2024
Fig. 9: National and Upper Nile State Durable Solutions Reports p.35
Source: National and State Government of South Sudan
Fig. 10: South Sudan Urban Governance Structure based on the Local Government Act (2009) p.37
Source: Graduate Institute Publication, 2012

03 SITUATIONAL ANALYSIS - SOUTH SUDAN

Fig. 11: Satellite View of Juba p.40
Source: @Google Earth Engine 2026
Map 1: South Sudan States Boundaries p.43
Source: UN-Habitat, 2026
Fig. 12: South Sudan Administrative Boundaries p.43
Source: @UN-Habitat 2026
Map 2: South Sudan Main Cities Population p.45
Source: UN-Habitat, 2026
Fig.13a: Urban Population growth in percentage between 1960 - 2050, South Sudan p.45
Fig.13b: Annual urban population growth and total population growth (%, 1980–2024)
Source: @World Development Indicators (WDI), 2025

LIST OF PICTURES

Map 3: Migration and Displacement in South Sudan p.47
Source: UN-Habitat, 2026
Fig. 14: Migration movements to South Sudan analysis 2026 p.47
Source: @UNHCR 2026
Fig. 15: Disaster risk (vertical axis) and urban stress (horizontal axis) scores p.48
for cities in South Sudan Source: @WBG/Triple Line 2025
Map 4: South Sudan Flooded Area Extent p.49
Source: World Bank staff estimates and design, based on Earth Observation data, 2026
Fig. 16: Projected impacts of flooding on grid infrastructure under two climate scenarios p.49
Source: @ World Bank staff estimates and design, based on Earth Observation data
Map 5: South Sudan Mobility, Transport and Corridors p.51
Source: UN-Habitat, 2026
Fig. 17: Sources of livelihood by area, 2021–22 and Poverty and extreme poverty rates, 2021–22 p.51
Source: @World Bank South Sudan Urbanzation Report 2026

03 SITUATIONAL ANALYSIS - UPPER NILE STATE

Fig. 18: Hospital in Malakal, South Sudan p.52
Source: @UN-Habitat 2024
Map 6: Administrative Division- Upper Nile State p.55
UN-Habitat, 2025
Fig.19: Clean-up campaign in Malakal, South Sudan p.55
Source: @UNHCR 2026
Map 7: Conflict Displacement Flows - Upper Nile State p.57
Un-Habitat, 2026
Fig.20: Population in Malakal ex-PoC, South Sudan p.57
Source: @UNHCR 2026
Map 8: e Natural Resources and Climate Change - Upper Nile Stat p.59
Source: No source clearly stated
Fig.21: Water bodies in Malakal ex-PoC, South Sudan p.59
Source: @UNHCR 2026
Map 9: Economic Resources - Upper Nile State p.61
Source: UN-Habitat, 2026
Fig. 23: Economic activity in Malakal South Sudan p.61
Source: @UN-Habitat 2024
Fig. 24: Malakal Former Protection of Civilians Site p.62
Source: @UN-Habitat 2025

LIST OF PICTURES

04 SOCIO-SPATIAL ANALYSIS AND DIAGNOSTIC - MALAKAL

Fig. 25: Table of Malakal Neighbourhoods – Bomas p.64
Source: Upper Nile State Ministry of Land, Housing and Public Utilities and IOM, 2025
Map 10: Bomas' Administrative Boundaries – Malakal p.65
Source: UN-Habitat 2026
Fig. 26: Malakal Master Plan 1957, visit at MHLPU p.66
Source: @UN-Habitat 2025
Fig. 27: Malakal 2024 historical satellite view p.67
Source: @google earth historical view
Fig. 28: Malakal's Urban growth 2008 - 2025 p.68
Source: National Census 2008, World-gazetteer.com, OCHA 2025
Map 11: Urban Growth, Malakal, 2008–2026 p.69
Source: UN-Habitat 2026
Map 12: Displacement-Affected Communities Settlements – Malakal p.71
Source: UN-Habitat 2026
Fig. 29: Ex-Protection of Civilian Site Plan, Malakal, South Sudan p.73
Source: @UN-Habitat 2025
Fig. 30: Ex-Protection of Civilian Site, Malakal, South Sudan p.73
Source: @UN-Habitat 2025
Fig. 31: Malakal land use allocation percentage By JICA 2014 and current 2026 p.74
Source: Openstreetmap, geofabrik 2025, JICA 2014
MAP 13: Land Use - Malakal 2026 p.75
UN-Habitat 2026
Fig. 32: Malakal different housing typologies in the city p.76
Source: @UN-Habitat 2024 -2025
Fig. 33: Malakal Flooded Area p.78
Source: @UN-Habitat 2025
Fig. 34: Annual Climate Data for Malakal p.80
Source: @NOAA 2025
Map 11: Land Cover – Malakal p.81
Source: UN-Habitat 2025
Fig. 35: Entertainments in water bodies in Ex-Protection of Civilian Site, Malakal, South Sudan p.83
Source: @UNHCR 2026
Fig. 36: Flood dameges on road network, Malakal, South Sudan p.83
Source: @UNHCR 2026
Fig. 37: Flooding Return Period of 100 Years in Malakal p.84
Source: @UN-Habitat Flood Risk Analysis 2025
Map 15: Vulnerability to Flooding – Malakal p.85
Source: UN-Habitat 2025
Fig. 38: Malakal Central Port p.86
Source: @UN-Habitat 2024
Map 16: Road Network – Malakal p.89
Source: UN-Habitat, 2026
Fig. 39: Malakal Earthen Road in Good Condition, South Sudan p.91
Source: @UN-Habitat 2025
Fig. 40: Malakal Transport system example, South Sudan p.91
Source: UN-Habitat 2026

LIST OF PICTURES

Fig.41: Malakal Road with a Non-Operational Electricity Network p.92
Source: @UN-Habitat 2024
Map 17: Accessibility to Basic Services – Malakal p.95
Source: UN-Habitat 2026
Fig. 42: Village Assessment Survey Results for Basic Services in Malakal p.96
Source: @IOM Village Assessment Survey (VAS), Malakal, South Sudan, January 2025
Fig. 43: Anarchic waste deposit in the ex-PoC, Malakal South Sudan p.97
Source: @UN-Habitat 2024
Fig. 44: Waste sorting by DACs communities, Malakal South Sudan p. 97
Source: @UN-Habitat 2026
Fig. 45: Village Assessment Survey Malaka results, educational facilities p.98
Source: @IOM_Village Assessment Survey (VAS) Malakal South Sudan, January 2025
Map 18: Accessibility to Educational Facilities – Malakal p. 99
Source: UN-Habitat 2026
Fig. 46: Village Assessment Survey Malakal results, Health facilities p.100
Source: @IOM_Village Assessment Survey (VAS) Malakal South Sudan, January 2025
Map 19: Accessibility to Health Facilities – Malakal p. 101
Source: UN-Habitat 2026
Map 20: Accessibility to Public Spaces – Malakal p.103
Source: UN-Habitat 2026
Fig. 45: Fath El Rahman Mosque, Malakal, South Sudan p.105
Source: @UN-Habitat 2024
Fig. 45: Participatory exercise during visioning Workshop, Malakal, South Sudan p.106
Source: @UN-Habitat 2025
Fig. 47: Socio-Spatial Diagnostic Overview Table p.107
Source: UN-Habitat 2026
Fig. 48: Participatory exercise during visioning Workshop, Malakal, South Sudan p.108
Source: @UN-Habitat 2025
Fig. 49: Socio-Spatial Reccomandation Table p.108
Source: @UN-Habitat 2026
Map 21: Socio- Spatial Diagnostic - Malakal p.109
UN-Habitat 2026

05 STRATEGIC DEVELOPMENT

Fig. 50: Workshop on Identification of Infrastructure, Malakal p.110
Source: @UN-Habitat 2024
Map 22: Reintegration Areas- Malakal p.113
Source: UN-Habitat, 2026
Fig. 51: Reintegration Areas and Area Planning p.115
Source: @UN-Habitat 2025
Fig. 52: Development Scenarios p.117
Source: @UN-Habitat 2026
Map 23: Urban Vision - Malakal p.121
Source: UN-Habitat, 2026
Map 24: Compact City Strategy - Malakal p.123
Source: UN-Habitat, 2026
Fig. 53:Exemple of Urban Development Interventions p.125
Source: @UN-Habitat 2026
Fig. 54: Proposal of needed shelters and density p.126
Source: @UN-Habitat 2025, Minister of Land, Housing and Public Utilities, Upper Nile State

LIST OF PICTURES

Map 24: Compact City Strategy - Malakal p.123
Source: UN-Habitat, 2026
Fig. 53:Exemple of Urban Development Interventions p.125
Source: @UN-Habitat 2026
Fig. 54: Proposal of needed shelters and density p.126
Source: @UN-Habitat 2025, Minister of Land, Housing and Public Utilities, Upper Nile State
Map 25: Resilient City Strategy - Malakal p.129
Source: UN-Habitat, 2026
Fig. 56: Examples of Natural based solutions and cliamte resilience intervention p.131
Source: @UN-Habitat 2025
Map 26: Connected City Strategy - Malakal p.133
Source: UN-Habitat, 2026
Fig. 57: Proposal of extended road network hierarchy p.135
Source: @UN-Habitat 2026
Map 27: Inclusive City Strategy - Malakal p.137
Source: UN-Habitat, 2026
Fig. 58: UN-Habitat Walking distance Radius principle p.139
Source: @UN-Habitat 2026
Fig. 59: Educational and Helath facilities proposal p.141
Source: @UN-Habitat 2026
Map 28: Vibrant City Strategy - Malakal p.143
UN-Habitat, 2026
Fig. 60: Example of public spaces interventions within the city p.145
Source: @UN-Habitat 2026
Map 28: Malakal Integrated Urban Strategic Plan 2035 p.147
UN-Habitat, 2026

06 IMPLEMENTATION

Fig. 61: Community led waste clean up-day, Malakal, South Sudan p.148
Source: @UNHCR 2026
Map 30: Proposed Land Use - Malakal 2035 p.151
UN-Habitat, 2026
Fig. 62: Comparison between Malakal Land Use _ JICA 2014 and UN-Habitat 2026 and 2035 p.153
Source: UN-Habitat 2026
Fig 63: Tecnical meeting with MHLPU - Participatory projects identification, South Sudan p.155
Source: @UN-Habitat 2025
Map 31: Action Plan 2035 - Malakal p.157
UN-Habitat, 2026
Fig. 64: Action Plan Short Term projects p.159
Source: @UN-Habitat 2026
Fig. 65: Action Plan Medium Term projects p.161
Source: @UN-Habitat 2026
Fig. 66: Action Plan Long Term projects p.163
Source: @UN-Habitat 2026
Map 32: Short term Projects - Action Plan Malakal p.165
UN-Habitat, 2026
Map 33: Medium term Projects - Action Plan Malakal p.167
UN-Habitat, 2026
Map 34: Medium term Projects - Action Plan Malakal p.169
UN-Habitat, 2026

LIST OF PICTURES

Fig.67: Projects Life cycle for implementation p.171
Source: @UN-Habitat 2026
Fig. 68: Current and Proposed Grants for projects Implementation p.173
Source: @UN-Habitat 2026
Fig. 70: Pilot projects area p.175
Source: @UN-Habitat 2026
Fig. 71: Project Briefs Cover Pages p.175
Source: @UN-Habitat 2026
Fig. 72: Project 1: Local Market in Hai Luakat Example p.177
Source: @UN-Habitat 2026
Fig. 73: Project 2: Public lighting with solar panels a long secondary roads p.179
Source: @UN-Habitat 2026
Fig. 74: Project 3: Urban Park With Nature-Based Solutions p.181
Source: @UN-Habitat 2026
Fig. 75: Project 4: Cemetery and Memorial in Assosa p.183
Source: @UN-Habitat 2026
Fig. 76: Project 5: Public Transport Station p.185
Source: @UN-Habitat 2026

07 WAY FORWARD

Fig. 77: Clean-up campaign with UNHCR and communities, Malakal, South Sudan p. 186
Source: @UNHCR 2026
Fig. 78: Coordination Meeting with Governor, MHLPU, UNHCR ABC Team Upper Nile State, South Sudan p.189
Source: @UN-Habitat 2026
Fig. 79: Visioning Workshop with the MHLPUand Stakeholders, Malakal, December 2025 p.189
Source: @UN-Habitat 2025
Fig. 80: Meeting with IDPs women community, Malakal, South Sudan p.190
Source: @UNHCR 2026
Fig. 81: Meeting with technical local authorities at MLHPU, Malakal, South Sudan p.191
Source: @UN-Habitat 2026
Fig. 82: Malakal Plan Workshop with the MHLPU and Malakal Plan dissemination p.192
Source: @UN-Habitat 2025 - 2026
Fig. 83: Malakal Integrated Urban Strategic Plan 2035 Launch, October 2026, Malakal, South Sudan p.193
Source: @UN-Habitat 2026
Fig. 84: Malakal Integrated Urban Strategic Plan, September 2026 Juba, South Sudan p.193
Source: @UN-Habitat 2026
Fig. 85: Games along water bodies in the ex-PoC, Malakal, South Sudan p.194
Source: @UNHCR 2026

01



Fig. 2: Malakal urban agricolture, South Sudan
Source: @UNHCR 2026



INTRODUCTION

01 INTRODUCTION

1.1 THE EU INTPA SCAR-SS PROJECT

The SCAR-SS (Strengthening Community Adaptability and Resilience for Displaced and Host Populations in South Sudan) project, funded by the European Union Delegation to South Sudan, creates a conducive environment for displaced and host populations by supporting stabilization and strengthening resilience among vulnerable communities affected by the Sudan crisis.

This Action is a joint effort between UNHCR and IOM, with the technical support of UN-Habitat, and focuses on strengthening stabilization and resilience in Upper Nile State, Malakal, a city significantly impacted by the crisis. Greater Malakal remains a critical point of return where the agencies scale up ongoing transition and early recovery interventions.

The direct beneficiaries include refugees, returnees, internally displaced persons (IDPs), and host communities.

Output 1.3 – Urban Reintegration and Strategic Planning (UN-Habitat)

Under this Output, the project

- **The gradual decongestion of the former PoC site and the voluntary return and reintegration of IDPs t**o their places of origin or into land allocated by the Upper Nile State Government..
- **Advances the development of Malakal** as a city prepared for sustainable urbanization over the next 10 years.

The Plan provides a comprehensive framework for managing settlement growth, infrastructure investment, service delivery, and urban expansion in an inclusive, resilient, and well-regulated manner.

It also supports the return and reintegration of displacement-affected populations into the urban fabric, while ensuring alignment with:

- **The National Durable Solutions Strategy and Action Plan (2024),** launched by the Government of South Sudan to guide collective efforts for safe and dignified return, resettlement, and integration.
- **The National Steering Committee on Durable Solutions (January 2026),** which sets the shared goal of supporting at least 60,000 displaced people in achieving sustainable solutions by 31 December 2026.

1.2 AREA BASED COORDINATION

To address complex challenges and advance durable solutions, the Action prioritizes Area-Based Coordination (ABC) in Upper Nile, anchored in Malakal with UNHCR as the lead agency.

A comprehensive approach integrates livelihoods, shelter, and disaster risk reduction, empowering communities and individuals to improve living conditions, foster social cohesion, and build long-term resilience.

Malakal Integrated Urban Strategic Plan 2035 Developed by UN-Habitat in collaboration with the Upper Nile State Ministry of Land, Housing and Public Utilities (MLHPU) and the Upper Nile State ABC (UNHCR), the Plan prioritizes:

- Reintegration of displacement-affected communities (DACs) from the ex PoC site.
- Improved living conditions for vulnerable host communities.
- Resilient infrastructure, basic services, climate adaptation, and sustainable urban expansion.
- The Plan guides sustainable urban growth as Malakal's population increases from 233 412 inhabitants (MLHPU, 2026) to 371 800 by 2035 (4% annual growth rate), including the 39 800 IDPs from the former PoC site (IOM 2026).

1.3 INTEGRATED SETTLEMENT PLANNING

As the Sudan crisis continues to drive large-scale displacement across borders, host countries are facing mounting urbanization pressures and the rapid development of new or expanding settlements. Aligning humanitarian responses with urban planning approaches has therefore become essential to support both displaced populations and host communities in a sustainable manner.

In camp settings, assistance is typically centralized and focused on immediate needs, but opportunities for longer-term development are often limited. Increasingly, displaced populations are settling in urban areas or in newly established settlements near existing towns and villages. While these arrangements can provide greater prospects for mobility and socio-economic inclusion, they also place additional demands on services, infrastructure, and land expansion risks straining already fragile local systems—particularly in low-income and post-conflict contexts, where authorities must balance population growth with the strengthening of essential services.

Integrated settlement planning acknowledges that displacement is not only a humanitarian challenge but also an urban management issue. UN-Habitat works with national and state governments to advance this approach, linking humanitarian needs with medium- and longer-term urban planning Strategies.

In Juba, this work has been initiated through the Strategic Plan of Juba 2022, realized by UN-Habitat.

The Integrated Urban Strategic Plan for Malakal 2035 establishes a clear long-term vision, strategic objectives, and priority actions to guide the city's sustainable development. At the same time, it outlines measures to improve the distribution of basic services, enhance living conditions, and build climate resilience, all within the framework of integrated settlement planning.

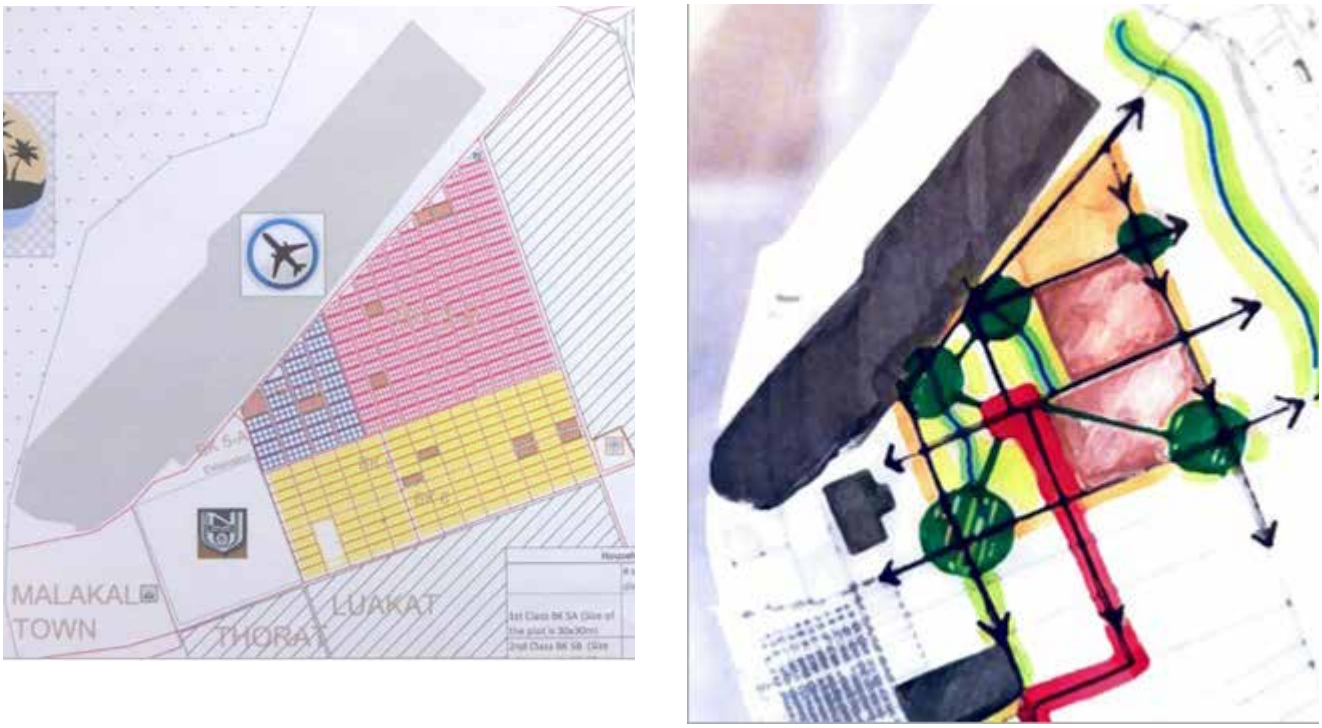


Fig. 3: Hai Matar settlement proposal vs Integrated settlment planning approach, Malakal, South Sudan
Source: @UN-Habitat 2024

01 INTRODUCTION

1.4 METHODOLOGY

PLANNING PROCESS

UN-Habitat has applied a phased methodology to develop the Malakal Integrated Urban Strategic Plan 2035. This methodology, designed for flexibility and adaptability, is structured around four interconnected components.

COMPONENT 1 - SOCIAL-SPATIAL ANALYSIS

This component focuses on identifying key trends, challenges, and opportunities, and validating needs and priorities through participatory processes.

Primary data collection - Review of national and Upper Nile State Durable Solutions frameworks, the draft South Sudan Land Policy, relevant planning regulations, UNHCR reports, IOM-DTM partner reports, UNMISS inputs, and geo-referenced data for mapping.

Secondary data collection - Fieldwork including interviews with displaced and affected communities, technical sessions with the MLHPU in Hai Matar, Hai Luakat and site assessments with UNMAS to identify safe and suitable areas. Diagnostic processing was conducted in collaboration with local and state governments and key partners.

Validation of Findings - The diagnostic was validated through stakeholder workshops at city, state, and national levels. These workshops highlighted critical challenges such as flood-prone areas, service delivery gaps, and social concerns including safety and security.

COMPONENT 2 - SCENARIO, VISION, DEVELOPMENT STRATEGY WITHIN DURABLE SOLUTIONS

This component addressed land tenure complexities while promoting equitable access to basic services, improved infrastructure, and resilience to natural hazards.

Future growth scenarios were developed to guide Malakal's urban trajectory.

Urban Vision - was articulated, supported by key development strategies that balance durable solutions with sustainable urban growth.

Development Strategies - Five development strategies were validated through consultations with technical partners from the Upper Nile State government, international agencies, and community representatives. These discussions determined how, where, and when interventions should be implemented to maximize impact within available resources.

Validation of Urban Vision of Malakal - was formally validated during the Vision workshop held on 9 December 2026, with participation from the Ministry of Land, Housing and Urban Development (MLHUD), UNHCR, and development partners.

COMPONENT 3 - ACTION PLAN, AND INVESTMENT PROJECTS

This phase translated the development strategies into actionable, investment-ready interventions.

Operationalization of Strategies - The five development strategies were operationalized through a comprehensive Action Plan forMalakal.

Action Plan - The plan was designed to deliver bankable pilot projects over a 10-year horizon, ensuring tangible results and scalability.

Validation and Prioritization of the projects - Actions and pilot projects were prioritized in alignment with national planning regulations. Validation was carried out with technical partners from the Upper Nile State government, international agencies, and community representatives to ensure coherence and feasibility.

Linkage to Project Finance - connection between cost, investment to project finance life cycle, was made to ensure that proposed interventions are not only identified but also actionable and feasible.

COMPONENT 4 - CAPACITY BUILDING AND STAKEHOLDERS' ENGAGEMENT

This cross-cutting component spans all phases of the methodology, focusing on institutional and community knowledge exchange.

Capacity Building with Local Authorities - Technical working sessions were conducted with the Upper Nile State Ministry of Land, Housing, and Public Utilities (MLHPU).
- These sessions facilitated knowledge exchange on urban planning dynamics, including the city's historical background and current challenges.
- Local authorities strengthened their technical capacities while contributing contextual expertise to the planning process.

Community Engagement with IDP Communities
- Engagement activities with internally displaced persons (IDP) communities integrated their perspectives into the urban diagnostic.
- Community inputs were essential in validating subsequent phases, including the development strategies, urban vision, and the action plan.
- This ensured inclusivity and fostered ownership of the project outcomes, making the results more sustainable and responsive to community needs.

01 INTRODUCTION

1.4 METHODOLOGY



Fig. 4: Urban Planning Process - Methodology
Source: @UN-Habitat 2026

3 Transforming the city

3.1: Action Plan

3.2 Resource Mobilization

3.3 Projects Briefs

Project Prioritization Workshop

Validation & Endorsement

4 Knowledge Exchange & Capacity Building









01 INTRODUCTION

1.5 STAKEHOLDER ENGAGEMENT

TECHNICAL EXPERTS ENGAGEMENT

In Malakal, UN-Habitat and UNHCR have worked closely with technical experts from the Ministry of Housing, Land and Public Utilities of Upper Nile State (MLHPU) through a series of technical exchange sessions to ensure that the planning framework was grounded in reliable data and aligned with institutional capacities.

This collaborative approach strengthens institutional capacity, enhances trust in governance, promotes durable solutions for IDPs, and lays the foundation for resilient and sustainable urban development in Malakal.
These sessions focused on:

Urban Plans and Census Data: Reviewing Malakal's existing urban plans and demographic information to understand settlement patterns and population dynamics.

Land Use Patterns: Analyzing current and projected land use to identify opportunities for housing, services, and livelihoods while mitigating risks of environmental degradation.

Geo - referenced Data Exchange: Sharing spatial datasets and mapping resources to build a comprehensive geo-data package.

The resulting geo-data package empowers the Ministry to continuously update and refine the plan, making it a living document responsive to demographic shifts, environmental pressures, and community priorities.

Through these meetings and technical exchanges, displaced persons were not passive beneficiaries but active contributors whose lived experiences of climate shocks and flooding shaped reintegration strategies that address both immediate needs and long-term resilience.

UNMAS AND LAND CLEARANCE

At the core of the Action Plan for the Malakal Strategic Plan is the Land Clearance for Safe Human Settlement Development conducted by the UNMAS.

The clearance of land contaminated by landmines, unexploded ordnance (UXOs), missile remnants, and war related metal debris is an essential prerequisite for any safe and sustainable human settlement.

This effort ensures that reintegration from POC can only takes place once areas are safe and cleared of mines.

Following established clearance procedures is critical for several interconnected reasons:

1. Ensuring the Safety of Present and Future Residents _ War remnants pose severe risks long after conflict ends. Landmines and UXOs can remain active for decades, triggered by pressure, movement, or construction activity..

2. Enabling the Construction of Housing and Infrastructure _ Urban development, roads, schools, water lines, power networks, and drainage infrastructure—cannot proceed on contaminated ground. Unexploded devices can detonate during excavation, surveying, or construction.

3. Supporting Sustainable Land Use and Urban Planning _ Cleared land ensures that development aligns with spatial plans and long term growth strategies. It allows planners to designate safe zones for settlement, agriculture, trade, and public services.

4. Protecting Livelihoods and Economic Activities Mines and unexploded ordnance create barriers to livelihoods—agriculture, fishing, trade routes, markets, and mobility. Clearance opens opportunities for economic recovery, employment, and stable growth.

5. Preventing Environmental Degradation and Health Risks _ War debris can contaminate soil and water sources. Clearance operations remove hazardous materials and support environmental restoration. This is important where settlements depend on wells, farming, or natural ecosystems for daily needs.

6. Promoting Social Stability and Confidence in Resettlement Processes _ Communities are more willing to return, relocate, or resettle when they trust that the land has been properly inspected and declared safe. Clearance supports peaceful reintegration, reduces tensions over land rights.

7. Meeting Legal, Humanitarian, and International Standards _ Clearance procedure ensures compliance with national regulations and international humanitarian obligations. It aligns with the Mine Action Standards and supports government commitments to protect citizens and uphold safe urban development practices.







Fig. 5: UNMAS training on land clearance, Malakal South Sudan
Source: @UN-Habitat 2025

01 INTRODUCTION

1.5 STAKEHOLDER ENGAGEMENT

C0MMUNITY ENGAGEMENT

Between October 2024 and December March 20265, UN-Habitat and UNHCR convened a series of participatory meetings with IDPs communities of Hai Matar and Malakal to ensure that displaced populations were actively involved in the planning process.

October 2024 – Identification of Challenges and Needs - Women from Hai Matar highlighted the compounded vulnerabilities of recurrent floods and lack of safety and security during nighttime because of abscence of public lighting. Their testimonies emphasized the urgent need for safe settlement areas, access to basic services, and climate-resilient infrastructure.

October 2025 – Validation of Urban Diagnostic- A plenary session with women's groups and police representatives validated the diagnostic findings. Discussions underscored integrated approaches that combine urban planning with disaster risk reduction.

December 2025 and March 2026 – Workshop on Vision, Development Strategies, and Action Plan - Representatives of women, youth, and security co-developed strategies for reintegration. The workshop emphasized resilience-building—such as flood mitigation, livelihood diversification, and inclusive governance — as essential pillars for durable solutions.

By involving community representatives alongside technical experts from the line ministries, and working with UNHCR on urban plans, census data, land use patterns, and geo-referenced datasets, UN-Habitat ensured that planning was evidence-based, inclusive, and adaptable.

GENDER INCLUSION

In the development of the Malakal settlement plan, UN-Habitat placed strong emphasis on the direct involvement of women from displaced communities, particularly representatives from the former Protection of Civilian (PoC) site. This engagement ensured that gender perspectives were not an afterthought but a central component of socio-spatial analysis and community mapping.

Women representatives actively contributed to identifying priorities such as:

1. **Safe gathering spaces and child-friendly** areas to foster social cohesion and protect vulnerable groups.
2. **Safety concerns and insecurity assessments,** including risks linked to inadequate public lighting and exposure to violence.
3. **Water and basic service gaps,** highlighting the need for equitable access to essential infrastructure.
4. **Spatial barriers such as distance to services,** exposure to flooding, and heat-related risks, which disproportionately affect women and children.

Through participatory mapping exercises, women's voices shaped the identification of community facilities and resilience priorities. Their involvement provided direct evidence of gender-sensitive socio-spatial analysis, strengthening the inclusiveness of the Malakal settlement-planning component.



Fig. 6: Meeting with group of women of the IDPS in Hai Matar, EU,UNHCR and UN-Habitat, Malakal South Sudan
Source: @UN-Habitat 2024



Fig. 7: Meetings with returnee community representatives in Hai Matar, UNHCR and UN-Habitat, Malakal South Sudan
Source: @UN-Habitat 2025

03



NATIONAL PLANNING FRAMEWORKS



Fig. 8: Urban Infrastructure Assessment Workshop, Malakal South Sudan
Source: @UN-Habitat 2024

02 NATIONAL URBAN PLANNING FRAMEWORKS

2.1 NATIONAL REGULATIONS AND DURABLE SOLUTIONS

UN-Habitat's diagnostic under the SCAR-SS initiative builds a robust evidence base for sustainable urban recovery and resilience in South Sudan, culminating in the Malakal Integrated Strategic Plan 2035. The approach integrates spatial, socio-environmental, and economic analyses across scales—from national to local—to define a holistic vision for inclusive urban growth aligned with South Sudan's planning frameworks. The plan aligns with national and state-level frameworks, ensuring coherence with South Sudan's urban development vision and durable solutions agenda.

National Urban Policy Framework - Provides guidelines for sustainable urbanization, infrastructure development, and service delivery. Seeks to integrate humanitarian responses with long-term urban planning (2020).

South Sudan Land Policy (Draft) - Establishes principles for equitable land tenure, access, and management, crucial for settlement planning and durable solutions (2019).

South Sudan Action Plan on Returns, Integration, and Recovery - Achieving Durable Solutions (2020-2022).

South Sudan - Durable solution strategy and action plan for refugees, IDPs, returnees and host communities (2024).

Upper Nile State - area based durable solutions (2024-2026 and TierII 2026-2028) - Focuses on reintegration of displaced populations, equitable land access, and strengthening local governance.

SOUTH SUDAN - DURABLE SOLUTION STRATEGY AND ACTION PLAN FOR REFUGEES, IDPS, RETURNEES AND HOST COMMUNITIES, 2024

The Durable Solutions Strategy and Action Plan is intended to guide Government, humanitarian and development organizations as well as other stakeholders, in addressing the concerns expressed. The challenges and hurdles faced by displaced persons as they seek to return to their areas of origin and settle into alternative locations, or integrate into the society to which they were displaced.

The strategic objectives of the Durable Solutions Strategy seek to ensure displaced persons are able to rebuild their lives and sustain their lives with dignity. Here are the objectives aligns with the Malakal Integrated Strategy Plan:

- **Security and safety of refugees**, IDPs, returnees, stateless and host communities;
- **Provision of basic services** such as food, clean drinking water, shelters, passable roads, and primary and secondary education to sustain voluntary return;
- **Creation of livelihood opportunities** for refugees, IDPs, returnees and host communities, and
- **Environmental protection** to strengthen household and local economies, and mobilisation of resources

UPPER NILE STATE - AREA BASED DURABLE SOLUTIONS ROADMAP, UPPER NILE STATE, 2024-2026 - TierII 2026-2028

One of several area-based strategies in South Sudan, adapted to the specific context for each State, recognizing the Government's responsibility to seek durable solutions to displacement, and seeking to enhance support across the combined and coordinated efforts of humanitarian, development and peace actors

Here are objectives and activities in the Roadmap that aligns with the Malakal Integrated Strategy Plan in the local level:

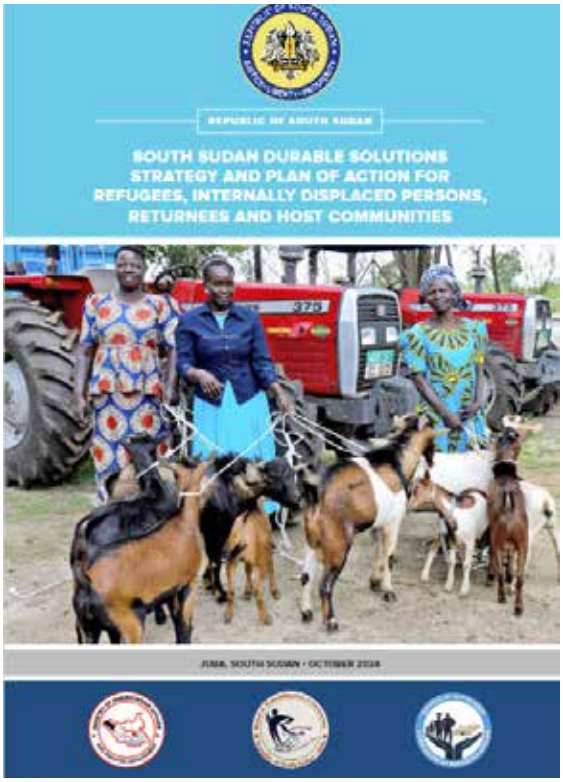
Objective 1- Establishing safe and sustainable settlements for IDPs and returnees on government-identified and non-disputed lands.

Objective 2 - Reclaiming individual plots/land for IDPs and returnees title holders.

Objective 3 - Strengthen area-based support services and livelihoods for vulnerable returnees from the Sudan crisis.

Objective 4 - Strengthening basic/public services infrastructure in Upper Nile State.

Objective 5 - Expand peace and community cohesion activities within Upper Nile State and other key return locations.



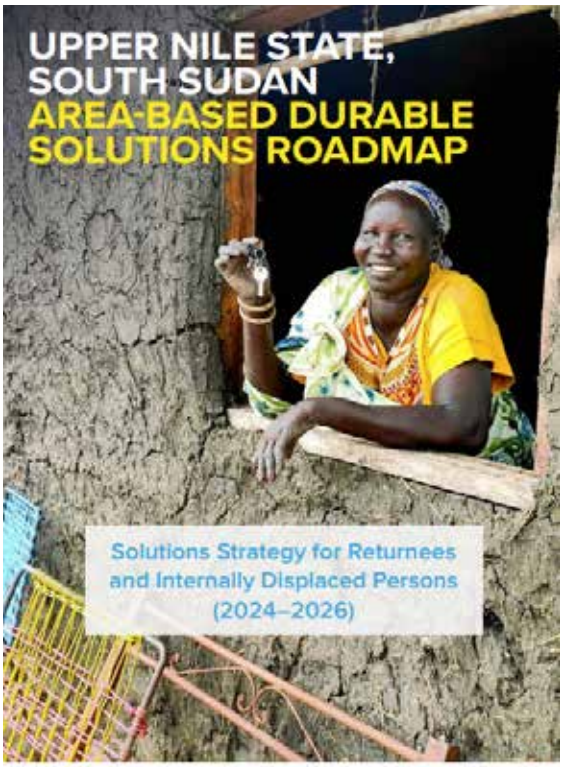


Fig. 9: National and Upper Nile State Durable Solutions
Source: @ National and State government of South Sudan

02 NATIONAL URBAN PLANNING FRAMEWORKS

2.2 URBAN GOVERNANCE STRUCTURE

South Sudan's urban planning and governance structure is still evolving, shaped by post-conflict fragility, rapid urbanization, and limited institutional capacity. The Ministry of Land, Housing and Urban Development (MLHUD) leads national policy, while state and local governments manage land use, service delivery, and settlement planning, often with support from international partners.

- **National Level**
  Ministry of Land, Housing and Urban Development (MLHUD)

  Primary authority for urban planning, land policy, and housing regulation.

  Oversees drafting of the South Sudan Land Policy (2019, draft) and national urban frameworks.

  Partners for Durable Solutions and integrated settlement planning.

- **State Level (i.e Upper Nile, Equatoria)**
  State Ministries of Land, Housing, and Public Utilities (MLHPU)

  Adapt national policies to state realities.

  Manage land allocation, settlement expansion, and service distribution.

  Work with humanitarian agencies on IDP and refugee integration.

- **Local Government & Municipalities**
  County and Payam Administrations

  Handle day-to-day land management, urban services, and community engagement.

  Often under-resourced, relying on technical support from NGOs and UN agencies.

- **Municipal Councils (e.g., Juba City Council)**

  Responsible for zoning, infrastructure maintenance, and regulating informal settlements.

  Struggle with limited revenue and weak enforcement capacity.

South Sudan's urban planning governance is anchored in MLHUD at the national level, supported by state ministries and local councils. However, weak institutional capacity and unplanned urbanization demand coordination, investment, and resilience-focused planning.

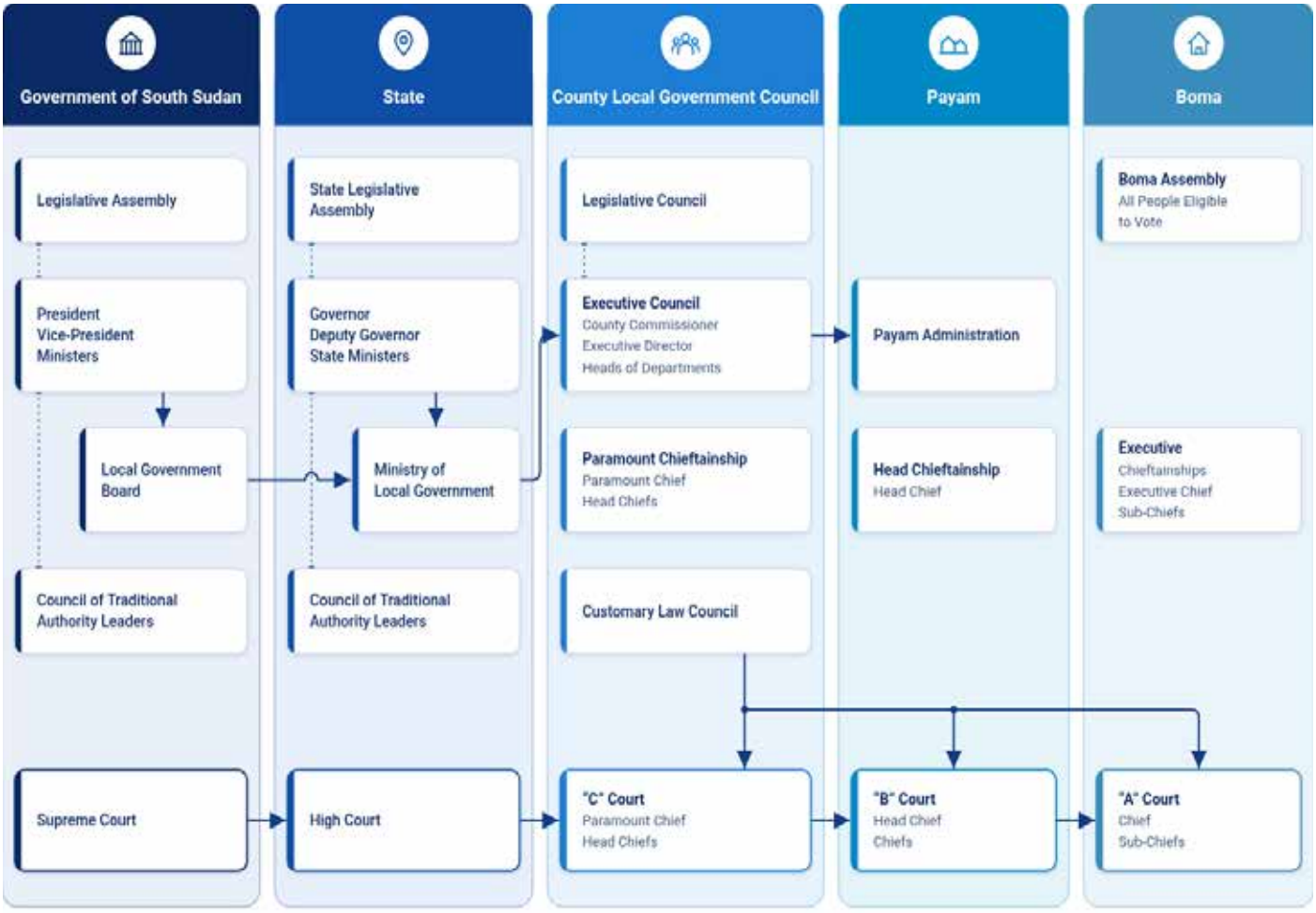


Fig. 10: South Sudan Governance Structure based on the Local Government Act (2009)
Source: Graduate Institute Publication, 2012

03 SOUTH SUDAN HISTORICAL CRISIS OVERVIEW

2.2 URBAN GOVERNANCE STRUCTURE

FIRST SUDAN CONFLICT, 1955-1972

South Sudan was once a marginalized region in the Republic of Sudan administered by tribal chiefs during the British colonial period (1899-1955). In the 1950s, marginalization gave rise to the Anyanya I rebellion, spearheaded by southern Sudanese separatists and resulting in the First Sudanese Civil War (1955-1972). The war ended after the 1972 Addis Ababa Agreement.

SECOND SUDAN CONFLICT, 1983-2005

One of the longest civil wars on record, officially ended in 2005 with the signing of the Comprehensive Peace Agreement (CPA) by the Sudan People's Liberation Movement (SPLM) and the government of Sudan. **In 2011, six years after the end of the second civil war, South Sudan gained independence from the Republic of Sudan, making South Sudan the newest country in the world** (Source: Institute for Peace and Security Studies (2018), South Sudan Conflict Insight).

South Sudan is home to more than 60 ethnic groups. Most of these groups are further divided into clans and sub-clans. Economically, South Sudan depends primarily on oil revenues, with the resource accounting for almost the entirety of its exports, around 80% of GDP and 98% of government revenues, according to the International Monetary Fund (IMF) and the majority of the population depends on farming. These two natural resources in South Sudan are critical sources of competition and inter-communal conflicts.

SOUTH SUDAN CONFLICT, 2013

Despite its independence in 2011, South Sudan remains enmeshed in a protracted conflict. In December 2013, civil war broke out in the country between government forces and the SPLM-IO (Sudan People's Liberation Movement in Opposition) spreading quickly across the country. The fighting displaced millions, destroyed communities, and created one of the world's worst humanitarian crises. Renewed clashes in 2016 deepened the conflict, and despite the 2018 Revitalized Peace Agreement, progress has been slow.

THIRD SUDAN CONFLCIT, 2023

In April 2023, a civil war erupted in Sudan between the Sudan Armed Forces (SAF) and the Rapid Support Forces (RSF). The war started on the streets of the capital city, Khartoum. Since then, intense fighting has spread to other parts of the country. As of mid-2026, Sudan remains the world's largest displacement crisis. Nearly 15 million people have been uprooted since the civil war began in April 2023, with about 8.9 million still internally displaced and millions more sheltering in neighboring countries, including South Sudan.

THE SIEGE OF EL FASHER, 2025

In October 2025, paramilitary forces seized El-Fasher in North Darfur, escalating Sudan's civil war. Since the siege began in May 2024, more than 138,000 people have been displaced from the city and nearby villages, many uprooted multiple times from camps such as Shagra, Zamzam, and Abu Shouk. Across Sudan, the conflict has created the world's largest displacement crisis, with over 9 million internally displaced and 4.5 million refugees in neighboring countries. Children make up nearly half of those affected, underscoring the scale of the humanitarian emergency (IOM DTM 2026, UN News).

CRISIS IMPACT

Displacement in South Sudan has a long history, dating back to the pre-independence period. When South Sudan became independent on 9 July 2011, it inherited refugees from Sudan, the Democratic Republic of Congo, and the Central African Republic. At the same time, Sudanese IDPs living in South Sudan became refugees overnight, as the new nation seceded from Sudan.

Sudan's decision to revoke citizenship from individuals eligible for South Sudanese nationality left many at risk of statelessness. This problem was compounded by the lack of identity and nationality documents, making statelessness a persistent concern in the country.

Climate change has also played a major role in displacement. Latest data shows that flooding in South Sudan remains a major driver of displacement. In 2025 alone, floods affected about 1.35 million people and displaced 376,000, with the worst impacts in Jonglei, Upper Nile, Fangak, Pibor, Terekeka, and Awerial counties (IOM DTM 2025). Flooding accounted for 29% of all displacement events in 2025, second only to conflict.

At the national level, Sudan's civil war has created the world's largest internal displacement crisis. As of February 2026, over 9 million people are internally displaced, while 4.5 million refugees and returnees have fled to neighboring countries including Chad, Egypt, South Sudan, Ethiopia, Uganda, and the Central African Republic. Women and children make up the majority of those displaced, with proportions exceeding 80% in some host countries.

PEACE EFFORTS IN SOUTH SUDAN

Since independence in 2011, South Sudan has faced repeated cycles of conflict and fragile peace. Efforts to stabilize the country have unfolded through multiple agreements and dialogues, yet progress has often been slow and uneven.

- **In 2015, the Intergovernmental Authority on Development (IGAD)** brokered the Agreement on the Resolution of the Conflict in the Republic of South Sudan (ARCSS), laying the foundation for peace. A National Dialogue was launched in late 2016, aiming to foster reconciliation and inclusivity.

- **By 2018, regional leaders from Ethiopia, Sudan, Uganda, and Kenya spearheaded renewed peace processes**, culminating in the Revitalized Agreement on the Resolution of the Conflict in South Sudan (R-ARCSS). This agreement remains the cornerstone of current stabilization efforts, though its implementation has been slow.

- **Since 2025, the African Union Peace and Security Council has convened several sessions (1265th–1302nd)** to monitor progress. The most recent, in October 2025, highlighted delays in implementing the R-ARCSS, underscoring persistent political and security challenges.

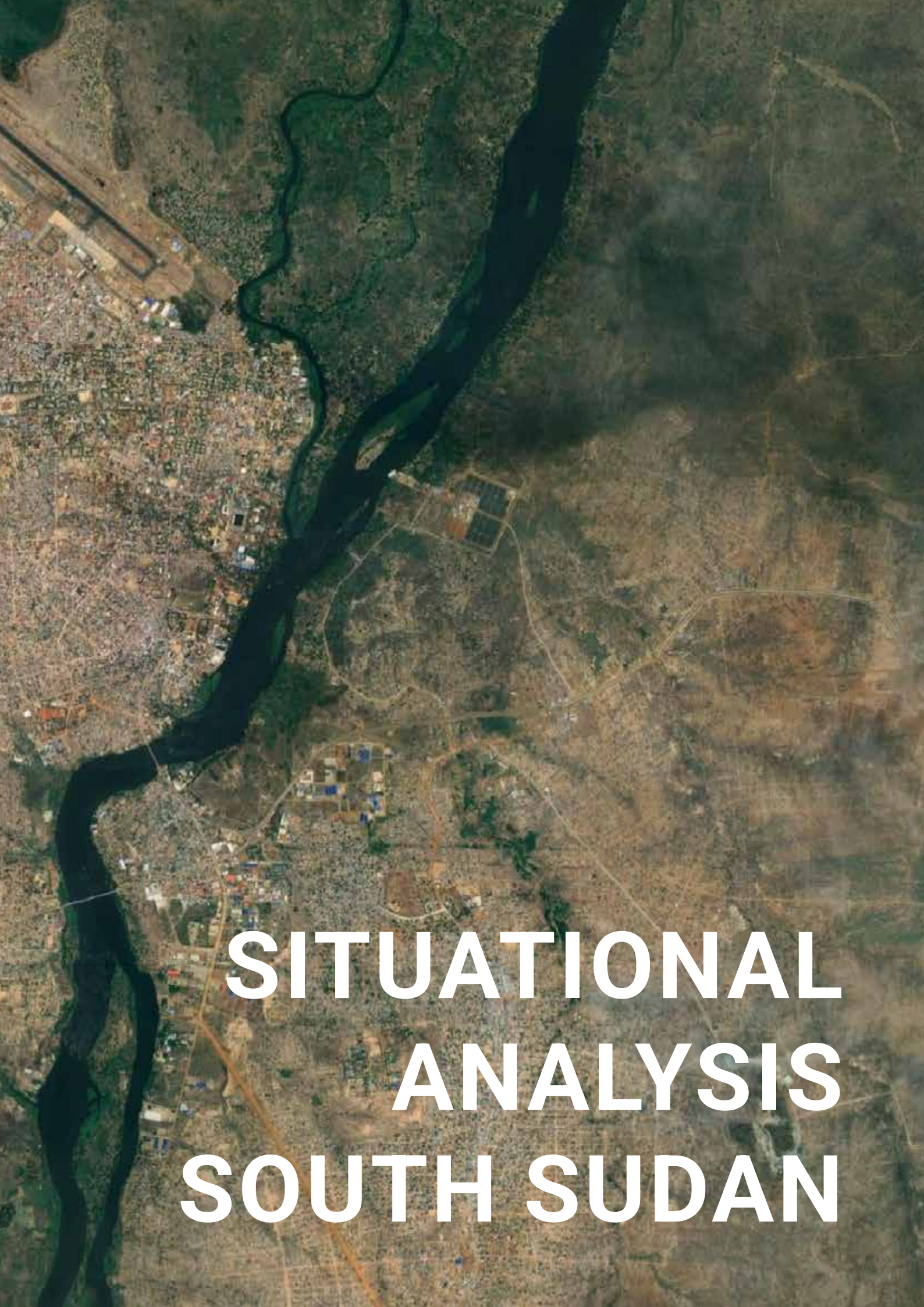
Despite these obstacles, the gradual return of peace—supported by IGAD, the AU, and international partners—offers cautious hope.

Durable solutions for refugees, IDPs, returnees, and host communities depend on sustained commitment to dialogue, inclusive governance, and resilience-building.

03



Fig. 11: Satellite view Juba
Source: @google earth engine 2026



SITUATIONAL ANALYSIS SOUTH SUDAN

03 SITUATIONAL ANALYSIS - SOUTH SUDAN

3.1 GOVERNANCE SYSTEM

South Sudan is located in the Northeast of Africa, South of the Sahara Desert, between latitudes 3° and 13°N and longitudes 24° and 36°E.
It borders Sudan on the north, Ethiopia on the east, Kenya on the southeast, Uganda on the south, the Democratic Republic of the Congo (DRC) on the southwest, and the Central African Republic to the west and it covers an area of 610 521 km$^{2.}$

The country is divided into three regions:

1. Greater Upper Nile
2. Bahr El Ghazal
3. Equatoria.

Each region is subdivided into states, which are further broken down into counties and payams. In total, South Sudan comprises 79 counties and 540 payams, forming its local administrative structure.

Following independence, South Sudan adopted a presidential system of government in which the President serves as the Head of State, Head of Government, and Commander-in-Chief of the armed forces. The Constitution establishes a bicameral National Legislature composed of two chambers: the National Legislative Assembly, whose members are directly elected, and the Council of States, which represents the states at the national level. **Part Eleven of the Constitution, titled "The States, Local Government and Traditional Authority," outlines the country's system of decentralized governance.**

Each state is granted legislative and executive powers and may adopt its own constitution, provided it aligns with the national Constitution. States are responsible for promoting and strengthening local government institutions through urban and rural councils, including determining their structures, composition, financing, and functions.

At the subnational level,

- **State authorities** oversee the implementation of policies and regulations within counties.

- **County administrations** coordinate local governance activities, while Payam administrators supervise public administration and service delivery within the Bomas.

- **Boma administrators** are responsible for managing local affairs at the village level.

The Constitution also recognizes the significant role of traditional authorities and local chiefs in governance. These customary leaders remain important actors in the country's local administrative system, contributing to community leadership, dispute resolution, and governance at the grassroots level.



Country
South Sudan

Capital
Juba



Population 2026

12.6 000 000 inh.
(WorldBank 2026)

Total Area
632 000 km²

Density
19.93 inh/km²



Administrative Division
3 Regions
10 States
79 Counties
540 Payams

MAP 1: SOUTH-SUDAN STATES BOUNDARIES
UN-Habitat, 2026

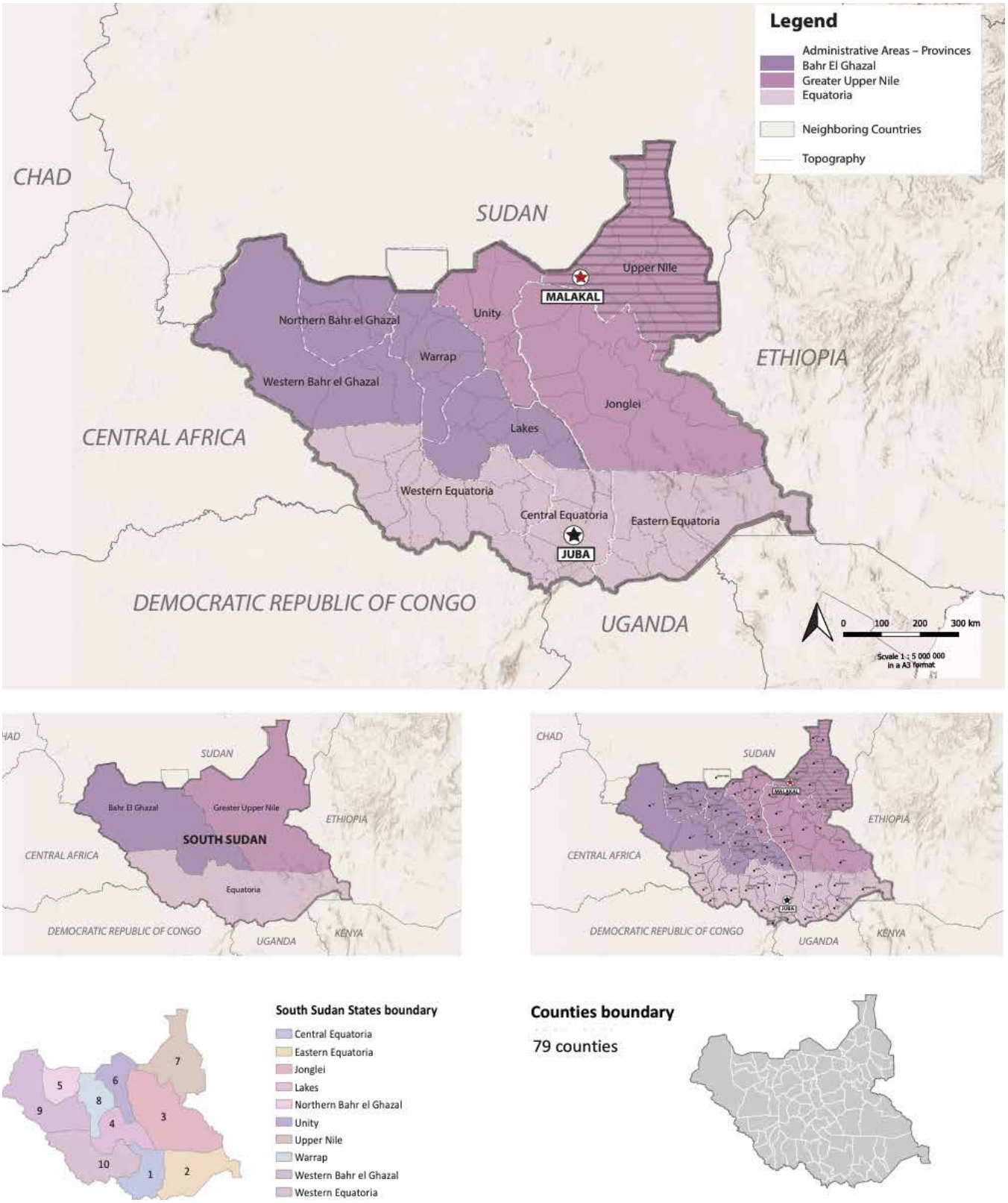


Fig. 12: South Sudan administrative boundaries
Source: @UN-Habitat 2026

03 SITUATIONAL ANALYSIS - SOUTH SUDAN

3.2 URBANIZATION DYNAMICS

More recent UN-based estimates compiled by Worldometer place the population at approximately 12.6 million in 2026. While only about one-fifth of the population currently lives in urban areas. The country has a population density of 20 people per square kilometre, and approximately 27.72% of the population resides in urban areas. Most of the South Sudanese live in rural areas, where livestock and agriculture are their main occupations, despite the country being rich in petroleum and other natural resources.

The last census from South Sudan is from 2008.

Since then, several relevant events have happened, such as independence, rapid urbanization and relevant migration influx due to conflicts, droughts and floods. This means that most figures from the population assessment are either (1) the official but not the most up-to-date data, or (2) projections up to date but possibly imprecise due to the long extrapolation of the time frame.
South Sudan is a predominately rural country with only around 22 percent of the population (~2.5 million people) living in towns or cities (World Bank 2026).

The South Sudanese population is demographically among the youngest in the world, with 38% of the population under 14 years old (World Bank 2026). The average life expectancy in 2019 was 57.6 years. It was 55.3 years by the time of independence, and the record,from 1960, showed a life expectancy of 31,7 years. South Sudan has emerged as one of the fastest-urbanizing countries in the world. During the past five years (2019–2024), the compound annual growth rate (CAGR) was +4.3 percent.
As per the latest projections, in the next 15 years (2040), the number of urban dwellers in South Sudan is expected to increase by more than 2 million people, or nearly double, augmenting the urbanization level to about 30 percent (World Bank 2026). Forced displacement (both conflict and climate related) constitutes one of the most pronounced and characteristic drivers of urbanization.
The second key driver of urbanization is rural–urban migration, as people move to cities and towns in search of better economic opportunities or as rural livelihoods become unsustainable in the face of insecurity and land dispossession.

Finally, high birth rates and the country's young demographic: t**he South Sudanese population is demographically among the youngest in the world, with 38% of the population under 14 years old** (World Bank 2026). Regardless of the successful referendum and widely shared hope for a peaceful transition, in December 2013, conflict erupted, which eventually escalated into most parts of the country, resulting in widespread displacement of South Sudanese.

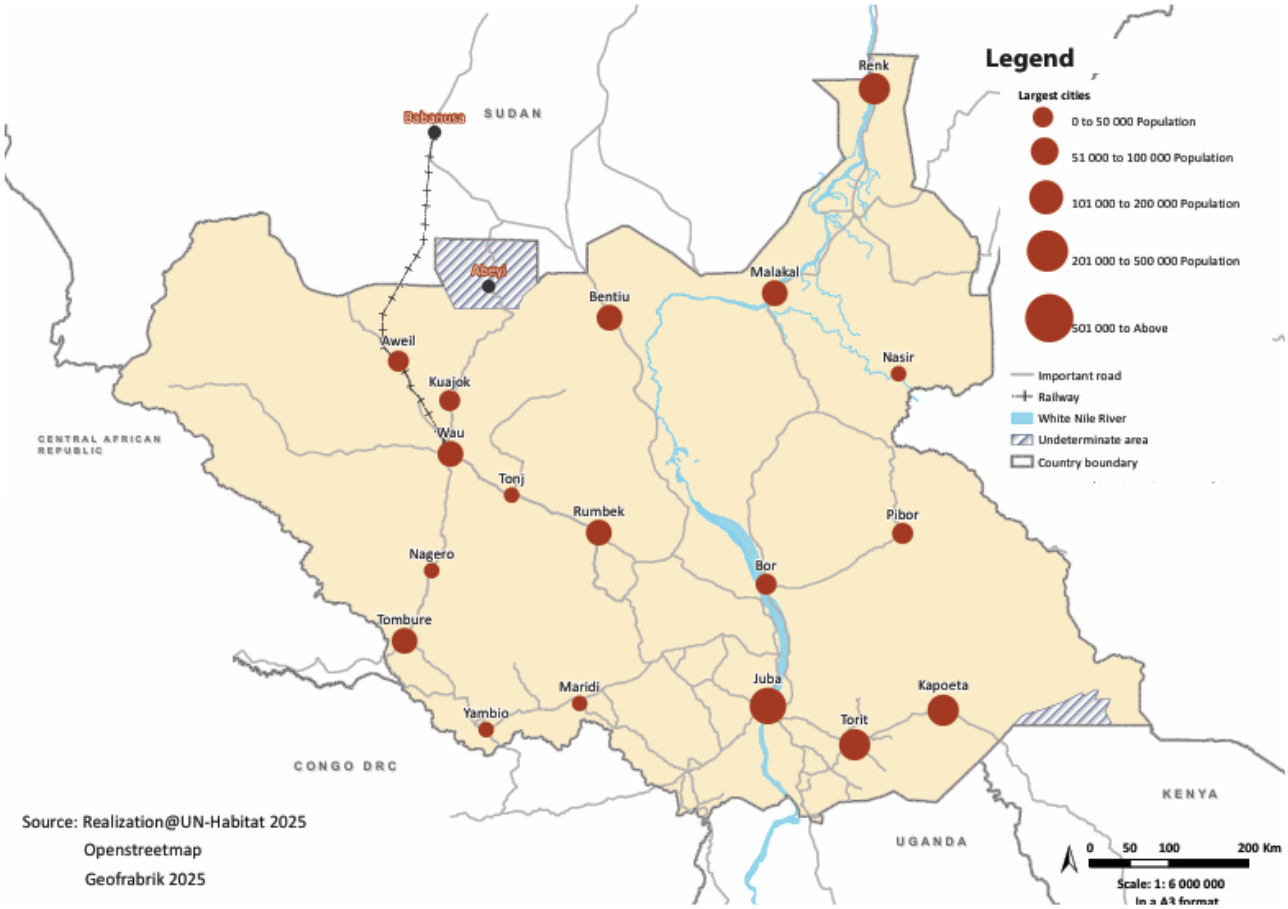
SETTLEMENT SYSTEM AND CLUSTERS

South Sudan shows a multi-scalar urban system with a hierarchy of settlements ranging from the national capital to regional cities, intermediate towns, and local urban centres. Urban growth is driven largely by conflict-induced displacement, climate shocks, migration, and natural population. Major urban centres such as Juba, Malakal, Wau, and Bor are located on major river systems. South Sudan has a dispersed and fragmented settlement pattern, characterized by many small settlements and relatively weak urban concentration compared with other African countries.

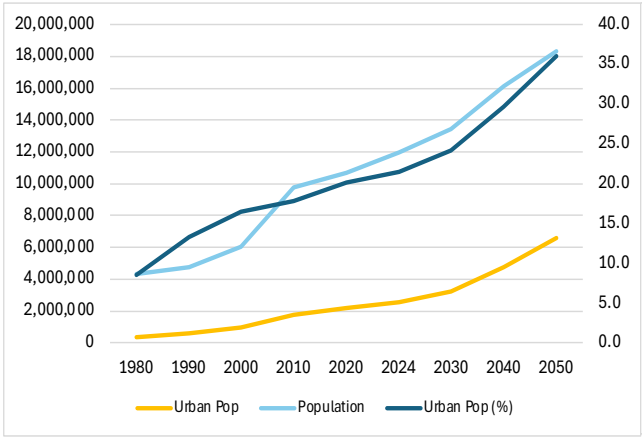
Nevertheless, there are five important settlement clusters, that interact economically, socially, and administratively:

- **Juba Metropolitan Cluster:** National capital region and largest concentration of population, government, services, and economic activity.
- **Western Cluster:** Cantered on Wau, Aweil, and Yambio, functioning as agricultural and trade hubs.
- **Upper Nile Cluster:** Cantered on Malakal and Renk, linked to river transport, border trade with Sudan, and humanitarian operations.
- **Central Nile Cluster:** Includes Bor, which serves as an important river-port and market centre connected to Juba.
- **Southern Border Corridor Cluster:** Includes Nimule, a key gateway for imports and trade with Uganda via the Juba-Nimule corridor.
- **Lakes and Warrap Cluster:** Includes Rumbek and Kuajok, serving as regional administrative and livestock-based economic centres.

MAP 2: SOUTH SUDAN MAIN CITIES POPULATION
UN-Habitat, 2026



URBAN POPULATION GROWTH IN PERCENTAGE BETWEEN 1960 - 2050, SOUTH SUDAN



ANNUAL URBAN POPULATION GROWTH AND TOTAL POPULATION GROWTH (%, 1980–2024)

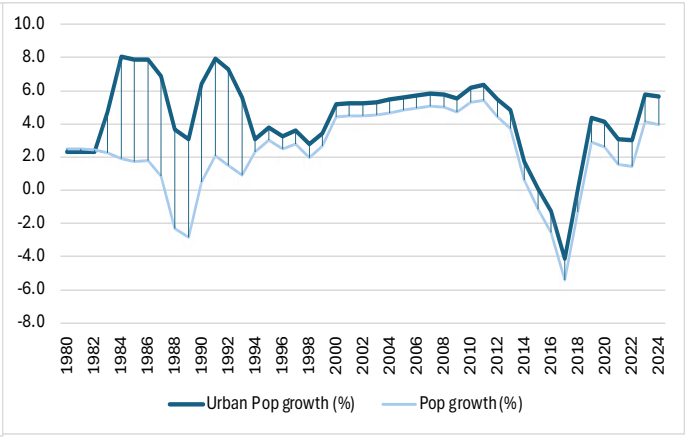


Fig.13a: Urban Population growth in percentage between 1960 - 2050, South Sudan
Fig.13b: Annual urban population growth and total population growth (%, 1980–2024)
Source: @World Development Indicators (WDI), 2025

03 SITUATIONAL ANALYSIS - SOUTH SUDAN

3.3 MIGRATION AND CONFLICT INDUCED DISPLACEMENT

South Sudan, the world's youngest nation, continues to face the long-term effects of conflict, economic instability, and large-scale displacement, all of which have significantly influenced its urban development. Since the signing of the Revitalized Agreement on the Resolution of the Conflict in South Sudan (R-ARCSS) in 2018, the country's urban population is estimated to have grown by more than 590 000 people. This growth has been driven by a combination of natural population increase, conflict- and climate-induced displacement, refugee and returnee movements, and economic migration.

Since the outbreak of the Second Sudanese Civil War in 1983, recurring armed conflicts, disease outbreaks, and climate-related shocks, particularly severe flooding, have forced millions of South Sudanese from their homes. Today, displacement remains a defining feature of the country's demographic landscape, driven by ongoing insecurity, political instability, environmental pressures, and limited economic opportunities.

The persistence of weak governance, high levels of state fragility, corruption, and the mismanagement of natural resources continues to exacerbate displacement and humanitarian vulnerabilities across the country.

Most displacement movements occur within South Sudan's borders. According to IOM displacement monitoring data, approximately 85.5% of recorded movements were internal, involving people relocating within counties or states, while the remaining 14.5% involved cross-border movements to neighbouring countries. These patterns highlight the predominance of internal displacement as communities seek safety, access to livelihoods, and protection from conflict and environmental shocks.

Refugees

As of 2026, about 2.3 million South Sudanese refugees are hosted in neighbouring countries, primarily Uganda, Sudan, Ethiopia, Kenya, and the Democratic Republic of the Congo (UNHCR 2026). Renewed conflict and political violence since February 2025 have triggered fresh cross-border movements, with more than 164 000 people fleeing to neighbouring countries in 2025 alone. At the same time, as of July 2026 South Sudan hosts approximately 654 037 refugees and asylum seekers, of whom about 95% are Sudanese refugees who fled the ongoing war in Sudan and are living mainly in border settlements and urban areas.

Internally Displaced Persons (IDPs)

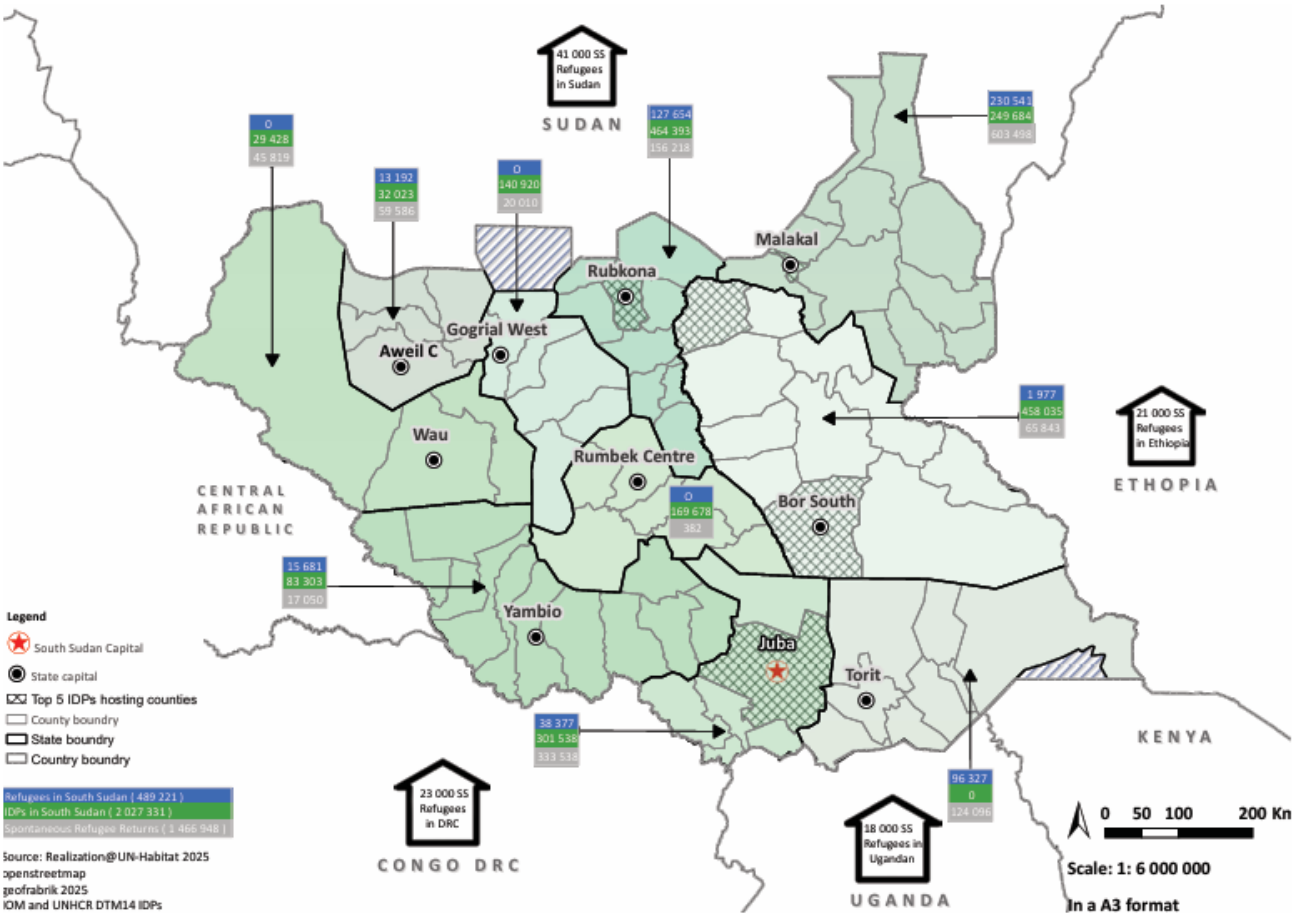
According to recent UNHCR and IOM reports, South Sudan has approximately 1.9 million internally displaced persons (IDPs) across the country. Escalating conflict in Upper Nile, Jonglei, and Equatoria states since early 2025 has caused the displacement of more than 337 000 people during 2025, including around 200 000 people displaced by intensified fighting since February 2025. Many IDPs remain in host communities, informal settlements, and displacement camps with limited access to humanitarian assistance due to insecurity and access constraints.

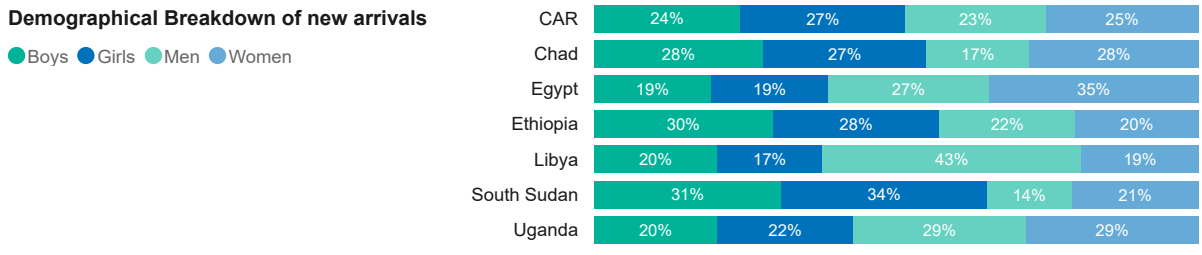
Returnees

The conflict in neighbouring Sudan has resulted in large-scale returns of South Sudanese nationals. Since the outbreak of war in Sudan in April 2023, **more than 1.2 million people have arrived in South Sudan, with approximately 68% being South Sudanese returnees returning from Sudan.**

Many returnees enter through border locations such as Renk, Aweil and face significant challenges related to shelter, livelihoods, land access, and basic services. While some families attempt to return permanently to their home areas, ongoing conflict, economic hardship, and climatic shocks continue to limit sustainable reintegration and durable solutions.

MAP 3: MIGRATION AND DISPLACEMENT IN SOUTH SUDAN
UN-Habitat, 2026





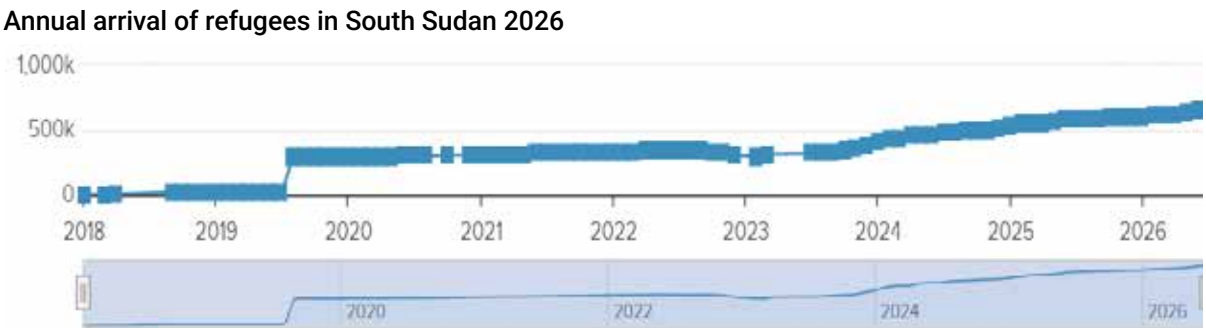


Fig. 14: Migration movements to South Sudan analysis 2026

Source: @UNHCR 2026

03 SITUATIONAL ANALYSIS - SOUTH SUDAN

3.4 ENVIRONMENTAL HAZARDS AND DISPLACEMENT

South Sudan's urbanization is being shaped as much by climate hazards as by conflict. The World Bank's Urbanization Review 2026 shows that climate-induced displacement is a defining force behind the rapid growth of towns and cities.

Floods are the most significant hazard: In recent years, over 900,000 people were displaced by flooding events, particularly in Jonglei, Upper Nile, and Unity states. Many of these families moved into urban centers like Malakal and Bentiu, where services are already overstretched.

Drought cycles compound migration: Recurrent dry spells reduce agricultural yields and drive food insecurity, pushing rural populations toward towns in search of aid and livelihoods.

Environmental degradation: Deforestation and poor land management exacerbate soil erosion and vulnerability, leaving both rural and urban communities exposed to future hazards.

In short, climate factors—flooding, drought, and environmental stress—are not peripheral; they are central drivers of displacement and urban growth.

When the Nile overflows or heavy rains inundate low-lying areas, villages are swallowed by water, leaving families with no choice but to seek refuge in urban centers. **Cities like Juba, Malakal, and Aweil are absorbing waves of climate migrants, often in informal settlements on flood-prone land, creating a cycle of vulnerability that demands urgent climate-sensitive urban planning.**

These floods are not occasional disruptions—they are recurrent crises that displace thousands every year. At the same time, prolonged droughts parch the land, strip away livelihoods, and push rural populations toward towns in search of food, water, and work.
The result is a steady stream of climate migrants arriving in cities already struggling to cope with conflict-driven displacement.
Urban areas, however, are ill-prepared for this influx.

- **Drainage systems are weak, housing is scarce,** and informal settlements expand rapidly on flood-prone land.
- **Climate-induced displacement thus compounds the fragility of South Sudan's cities**, creating overcrowding, sanitation crises, and heightened risks of disease.
- **Environmental degradation, soil erosion, and poor land management—**further undermines resilience, leaving ural and urban communities vulnerable to the next climate shock.

Urban areas in South Sudan face compounding disaster risks as climate shocks—including recurrent flooding and extreme heat—intersect with persistent conflict to produce multilayered vulnerabilities. **A countrywide analysis done in 2026 by World Bank, of urban disaster risk indicates that all major cities—Juba, Wau, Aweil, Yei, and Bor— exhibit high exposure and vulnerability to climate-related hazards, facing the so called Urban Stress.**More extreme rainfall and rising temperatures are driving floods and heat stress, while fast population growth and the influx of displaced people are expanding informal settlements into hazard-prone areas such as flood zones.

e 20. Disaster risk (vertical axis) and urban stress (horizontal axis) for cities in South Sudan

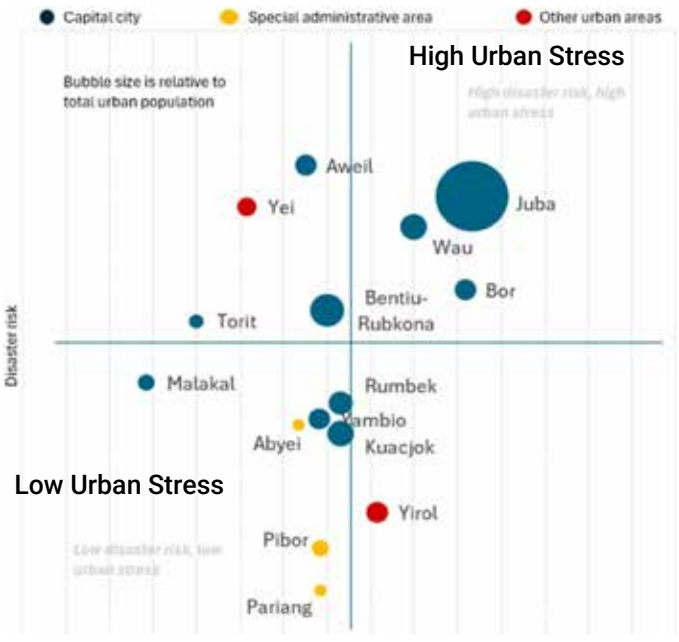
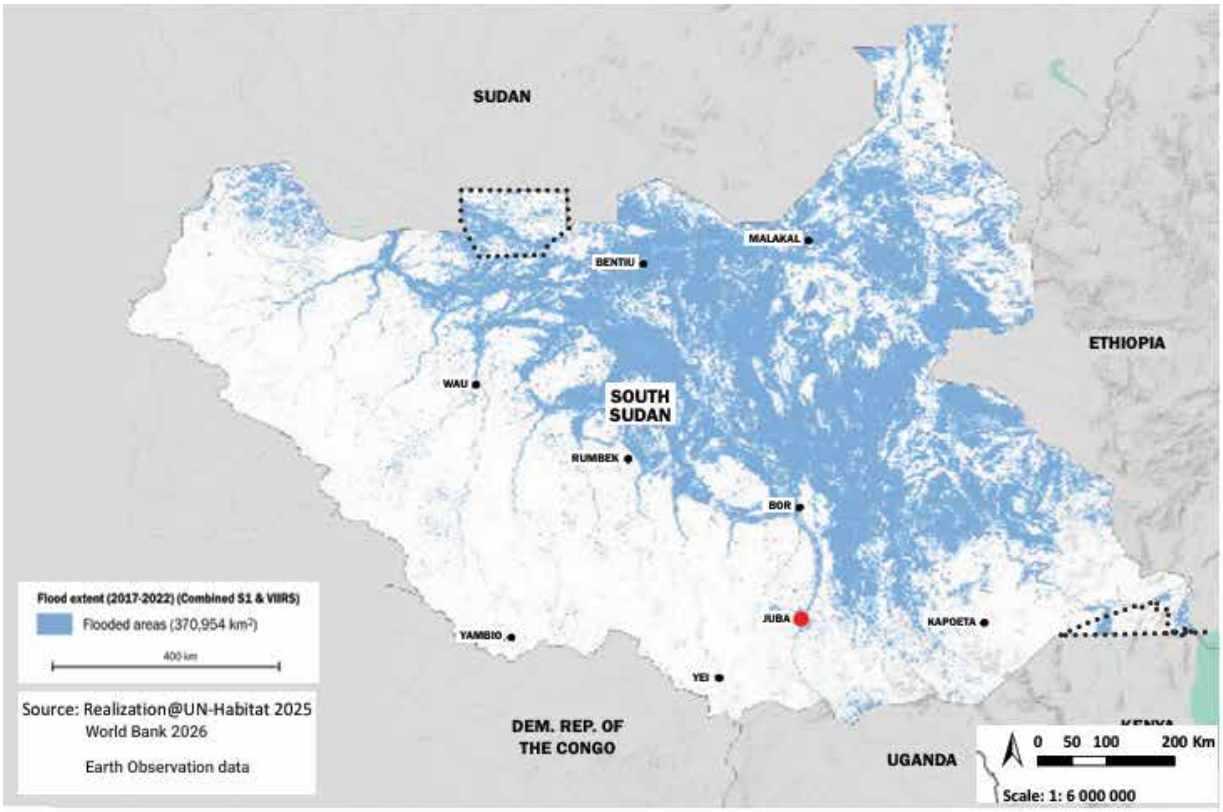
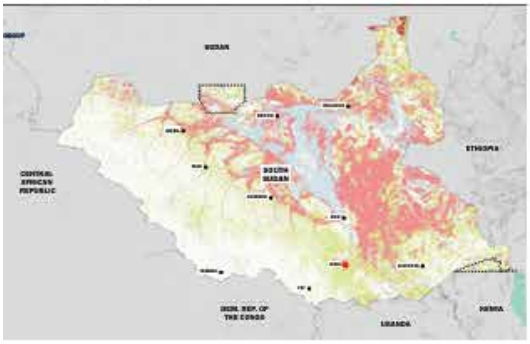


Fig. 15: Disaster risk (vertical axis) and urban stress (horizontal axis) scores for cities in South Sudan Source: @WBG/Triple Line 2025

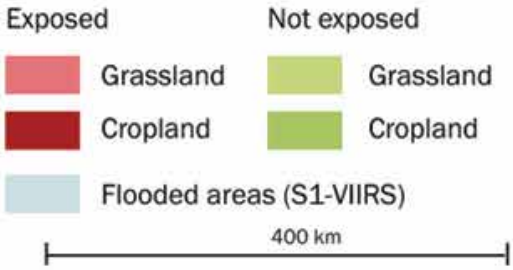
MAP 4: SOUTH SUDAN FLOODED AREA EXTENT 2017 - 2022
World Bank staff estimates and design, based on Earth Observation data, 2026



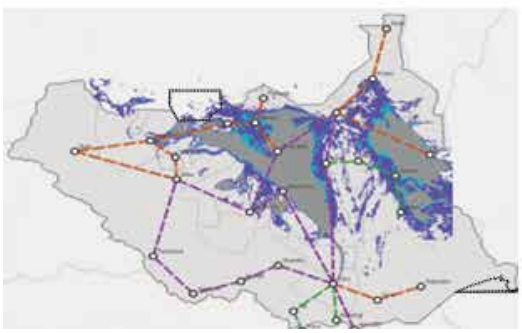
Flooding exposure on croplands and grasslands



Cropland and grassland (ESA-World Cover)



Annual Maximum flooded Area



Permanently flooded area (for 6 months in a year)

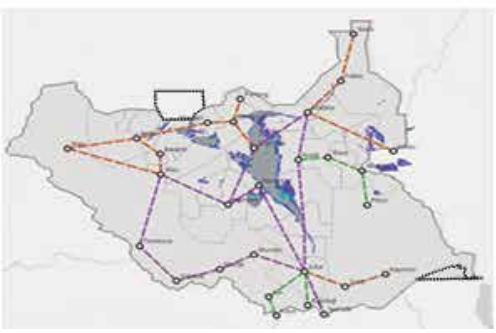


Fig. 16: Projected impacts of flooding on planned transmission grid infrastructure by the 2040s under two climate scenarios
Source: @ World Bank staff estimates and design, based on Earth Observation data, 2026

03 SITUATIONAL ANALYSIS - SOUTH SUDAN

3.5 NATIONAL MOBILITY AND CORRIDORS

MOBILITY

The transport system in South Sudan consists of road, rail, river and air transport.

The largest being road transport. According to the Transport Policy document, the country has an estimated road network of 12.642 km, consisting of 7.369 km of Interstate roads, 1.451 km of State primary roads and 3.822 km of State secondary roads.

Roads: South Sudan is estimated to have a road network and highways of 12.642 km, and only 2% of the existing road infrastructure is paved.
The main roads in South Sudan, heavily focused around the capital Juba, **include key routes like the Juba- Nimule Road (to Uganda), Juba-Bor Highway, and the Juba-Terekeka-Rumbek Road,** linking major towns and connecting to neighboring countries for regional trade, though most are unpaved gravel, with ongoing rehabilitation projects aiming to improve connectivity and economic access for communities. The road infrastructure was largely destroyed or left in disrepair during the war; nowadays, multiple projects are set to restore and maintain basic links between major towns and regions, (UN-Habitat 2023).

Railway: South Sudan is connected only to the **Babanusa-Aweil-Wau railway line, un operational** from 1991 to 2010 due to the war. It connects Wau the capital of the Western Bahr el Ghazal state to Babanusa, Khartoum and Port Sudan, but the service is irregular and limited. The total length of the railway in the country is 248 km from Wau to the Sudan border. There are proposals to connect the railway to Juba and then to Gulu in Uganda, allowing international traffic for South Sudan and Sudan, (UN-Habitat, Juba Strategic Plan, 2023).

Airports: Alongside the main airport in South Sudan, Juba International Airport, there are regional airports such as Wau and Nimule Airports, which support humanitarian logistics, regional connectivity, and economic activities. They also play a critical role in the economy and mobility because seasonal flooding often makes it impossible to use roads. However, the airports themselves are also often affected by the flooding.

CORRIDORS

South Sudan is central to several major East African transport corridors.

Here are Key corridors:

1. Multinational: Kenya-South Sudan Road Corridor

Lesseru-Kitale (55km)
Morpus-Lokichar (138 km)
Lesseru–Nadapal–Kapoeta–Juba (945 km).

The project development objective is to improve transport connectivity between Kenya and South Sudan, thereby deepening regional integration and trade, and contributing to the alleviation of fragility by providing a more efficient, safe and effective cross-border transport system.

2. The LAPSSET (Lamu Port South Sudan-Ethiopia) transport corridor is a transport infrastructure that will connect South Sudan and Ethiopia with the port of Lamu, Kenya. At the national level, the connection will extend from Eastern Equatoria to Juba, including the inter-regional highway, the inter-regional standard-gauge railway, and a crude oil pipeline.

3. The Uganda Corridor (Mombasa/Malaba) traditional route through Kenya and Uganda to South Sudan, with ongoing efforts to improve border crossings (like Malaba/Busia) and link directly to South Sudan via the Nadapal-Nakodok segment.

Ports: The White Nile River is one of South Sudan's most important transport corridors and has historically shaped the location and growth of major settlements. Along the river, there are several ports for inland waterway transport. Malakal functions as an important river transport and trading hub in Upper Nile State, while Bor functions as a strategic river-port city, benefiting from its location on the Nile and its transport connections to Juba.

MAP 5: SOUTH SUDAN MOBILITY TRANSPORT AND CORRIDORS
UN-Habitat, 2026



Sources of livelihood by area, 2021–22
WBG 2024b (estimates based on FSNMS+ 2021 and HBS

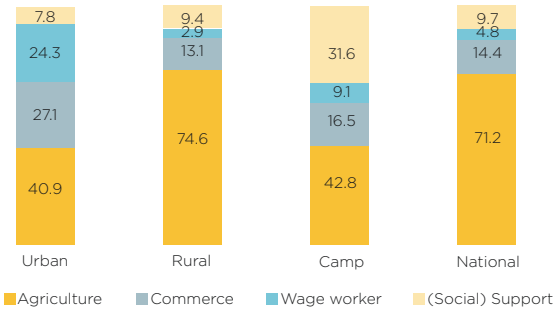
Job opportunities are concentrated in connected urban centers, while rural communities remain locked in subsistence livelihoods and chronic poverty.

The absence of reliable transport and service networks prevents rural populations from participating in wider economic activity, reinforcing inequality and making infrastructure investment in cities a critical lever for both poverty reduction and job creation.

Poverty and extreme poverty rates, 2021–22
WBG 2024b (estimates based on FSNMS+ 2021 and HBS

With over 80 percent of the population living below the poverty line, rural areas remain off from basic services and markets due to poor roads, limited electricity, and weak connectivity.

In contrast, cities like Juba, Wau, and Malakal—though fragile—offer relatively better access to water, schools, health facilities, and some formal employment.



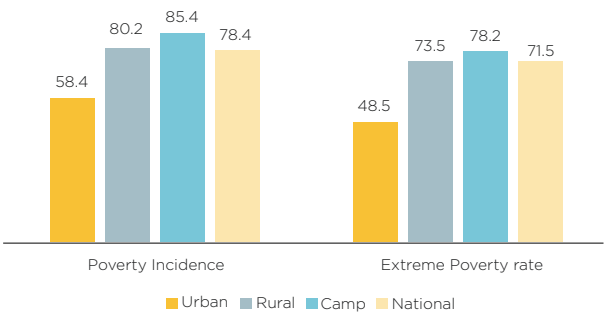
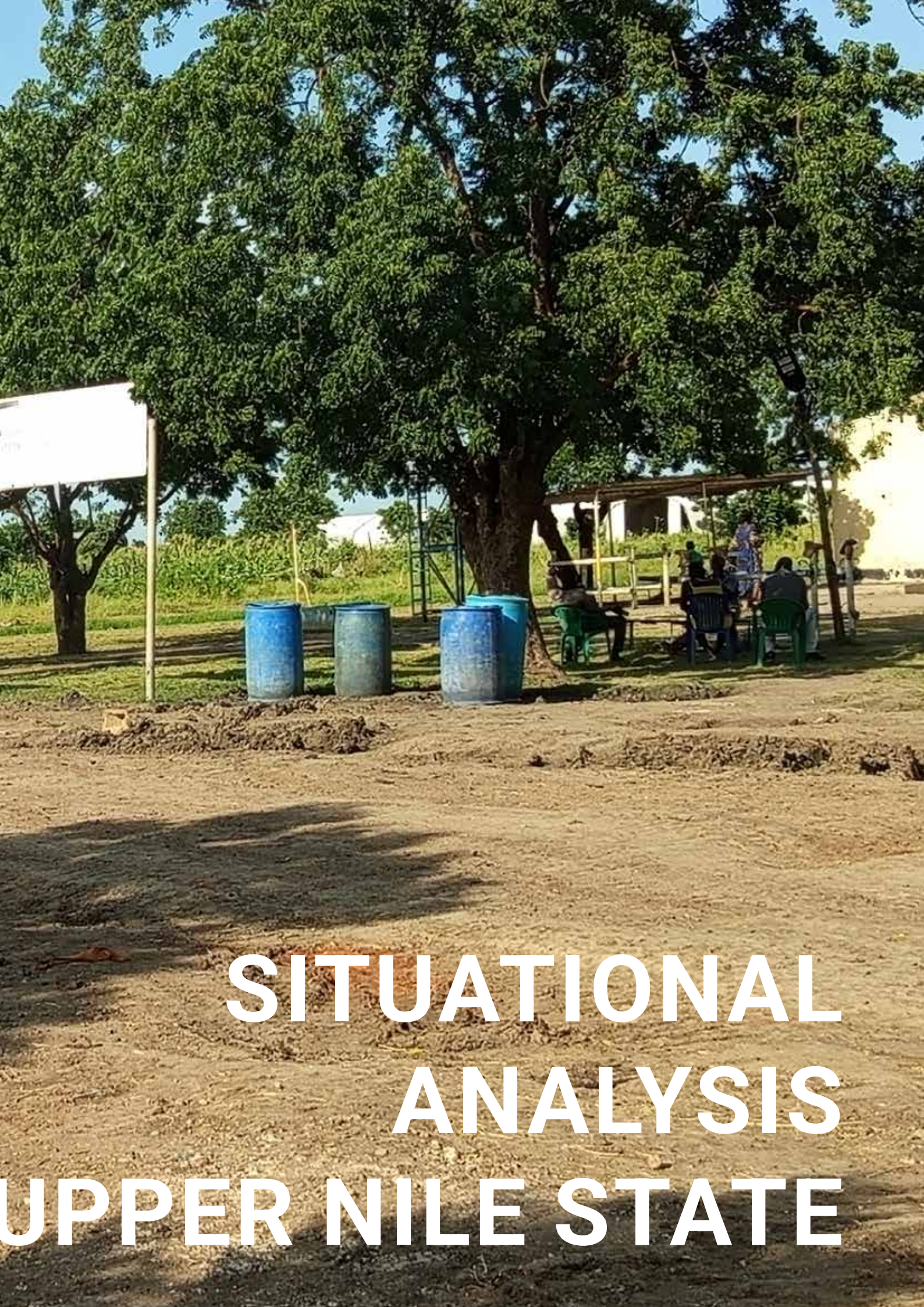


Fig. 17: Sources of livelihood by area, 2021–22 and Poverty and extreme poverty rates, 2021–22

Source: @World Bank South Sudan Urbanzation Report 2026

04





SITUATIONAL ANALYSIS UPPER NILE STATE

03 SITUATIONAL ANALYSYS - UPPER NILE STATE

3.6 DEMOGRAPHIC TRENDS

Upper Nile is a northeastern state in South Sudan, named for the White Nile that flows through it, withan area of 77 283 km², and its capital is in Malakal County. The state is divided into 13 counties, which are further subdivided into administrative units called payams and then bomas.

The state shares borders with Sudan and Ethiopia, serving as a key region for humanitarian aid and development, despite its challenges.
South Sudan is located in the Northeast of Africa, Upper Nile State's population has grown significantly and has a very young demographic profile over the past years, and continues to increase. According to South Sudan's National Bureau of Statistics, the estimated population of Upper Nile State is 2 410 951 in 2025, reflecting projections based on the 2008 census adjusted for growth rates and migration patterns.

POPULATION GROWTH

By 2035, projections indicate growth to approximately 3.1 million people. Upper Nile State has one of the highest fertility rates globally, estimated at around 5 children born per woman in 2022, according to estimates are from South Sudan's National Bureau of Statistics. This high birth rate is a primary driver of the rapid population growth and the young age structure.
Despite this rapid and young population growth, theUpper Nile state has a low life expectancy.

A combination of limited medical careprovision, poverty,violence,andendemicdiseasehasresulted in low life expectancy. In 2025, life expectancy in Upper Nile State is around 57.9 to 59.2 years, significantly below the global average, which is 54.9 years for males and 60.9 years for females.

Migration in Upper Nile State is not a linear path but a cycle of movement, return, and re-displacement. The state's geography—bordering Sudan and traversed by the White Nile—makes it both a gateway and a refuge. Yet, this position also exposes communities to waves of instability that continually reshape their lives.

Upper Nile State shares a 900 kilometer border with Sudan and is therefore particularly affected by the conflict in Sudan, but also by climate-induced displacement due to the high vulnerabilty to Natural Hazards.

Like many other regions in South Sudan, Upper Nile State is affected by prolonged, severe flooding caused by the seasonal rains. Either, people are forced to leave their homes temporarily, to return during the dry season, or permanently, since the flooded land cannot recover quickly enough.



Administrative Division
Upper Nile State, South Sudan

Capital - Malakal



Population 2026

1.3 000 000 inh.(WorldBank 2026)

Total Area
77 773 km²

Density
17 inh/km²

MAP 6: ADMINISTRATIVE DIVISION - UPPER NILE STATE
UN-Habitat, 2026

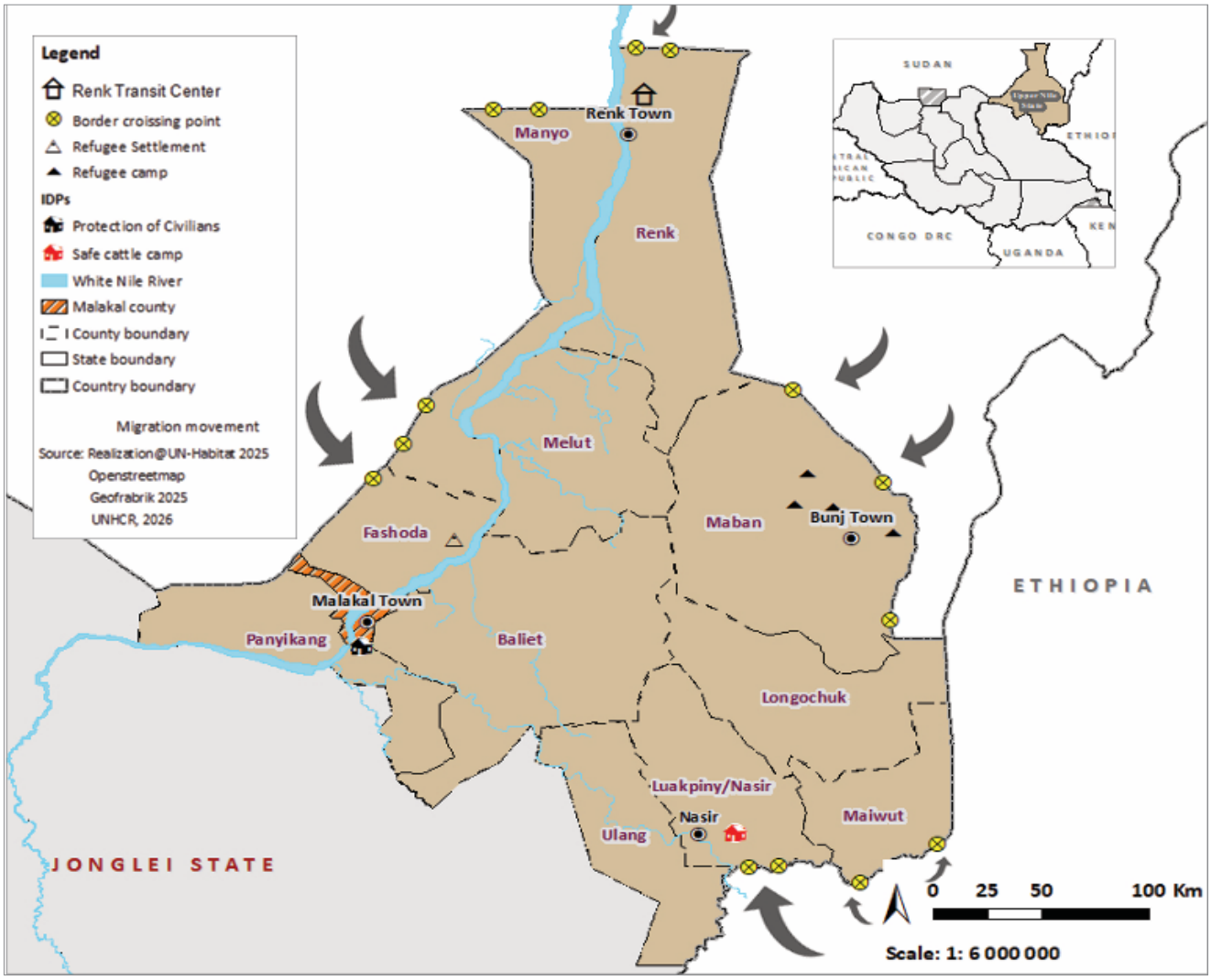




Fig.19: Clean-up campaign in Malakal, South Sudan
Source: @UNHCR 2026

03 SITUATIONAL ANALYSYS - UPPER NILE STATE

3.6 MIGRATION DYNAMICS

Upper Nile State, whichshares borders with Sudan, has been among theState most impacted by the conflict.

Internally Displaced Persons (IDPs)

The South Sudanese Civil War (2013–2018) displaced large portions of Upper Nile's population to camps in White Nile State and Khartoum. As of September 2026, there are 225 000 IDPs residing in Upper Nile State (IOM DTM 2025–2026). Malakal remains a major hub, with **39 800 as residing in the former Malakal Protection of Civilians (PoC) site of July 2026 IOM DTM Headcount.**

Refugees and Returnees

The state also hosts more than 293 000 refugees, primarily accommodated in the Maban refugee camps, making Upper Nile the largest refugee-hosting state in South Sudan. At 94.6%, the majority originate from Sudan, numbering 615 046 people (UNHCR, 2026). Most of these refugees fled conflict in Sudan and entered South Sudan through Renk county before moving toward Malakal and surrounding areas.

In addition, Upper Nile records the highest number of returnees in the country, The number of returnees in Upper Nile State doubled in 2026 to over 750 000 (UNHCR, 2026).Many re-entered via Renk county, following the Sudan crisis in April 2023. **Malakal and surrounding counties have absorbed a significant share of these returnees, straining housing, land tenure, and basic services.**

The UNHCR-supported Renk County Area-Based Durable Solutions Strategy (2026-2028) recognizes that Renk has evolved from a transit point into a destination area. While initial responses focused on emergency transit assistance, thousands of refugees and returnees now remain in Renk for prolonged periods, with more than 10 000 people still residing in transit centres as of December 2025.

However, the Area-Based Coordination (ABC) initiative, launched in 2023, and the Durable Solutions Roadmap (2024) aim to stabilize migration dynamics in the Upper Nile State.

Key interventions include:

- **Landmine clearance** and restitution of land rights.
- **Houses construction** and allocation of government land for settlement.
- **Livelihood support:** Over 318 000 people received agricultural inputs, fishing kits, or cash assistance.
- **Social cohesion:** Peace structures and trauma-awareness training for community leaders.
- **Essential services:** Rehabilitation of hospitals, schools, and water plants.

MAP 7: CONFLICT DISPLACEMENT FLOWS - UPPER NILE STATE
UN-Habitat, 2026

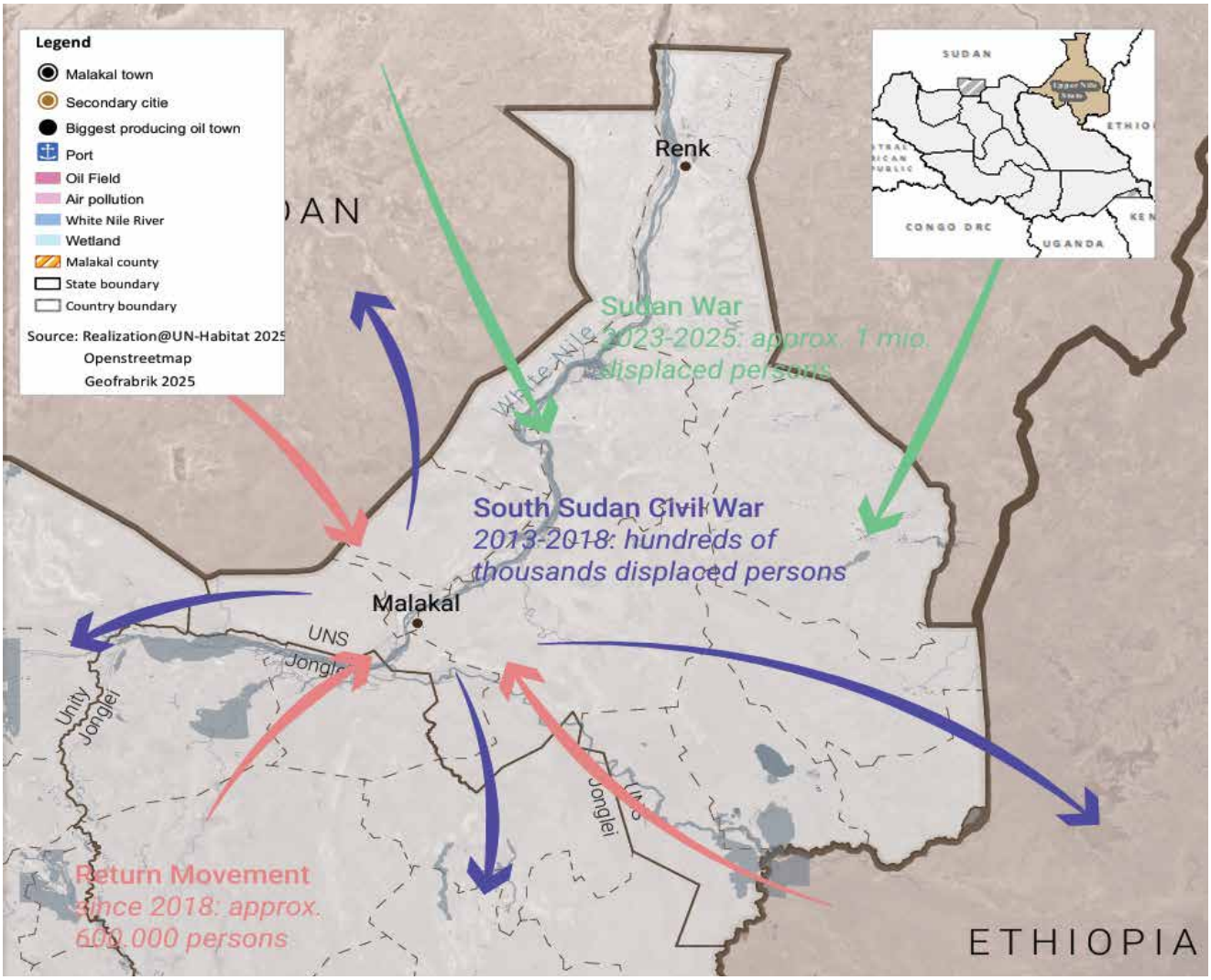




Fig.20: Population in Malakal ex-PoC, South Sudan
Source: @UNHCR 2026

03 SITUATIONAL ANALYSYS - UPPER NILE STATE

3.7 NATURAL RESOURCES AND HAZARDS

Upper Nile State in South Sudan is rich in natural resources, primarily Oil, which is a major economic driver, becoming one of the largest oil-producing states with more than 7 oil fields, and making the Greater Upper Nile a focal point of oil extraction activities for decades in South Sudan.

The significant natural resource in the Upper Nile State is its vast water resource from the White Nile in Malakal County to Renk. The White Nile is a crucial natural resource, providing water for the massive Sudd wetlands, which support crops (sorghum, maize) and forest products such as shea nuts, gum Arabic and Hashab (for wood, poles, honey).
The Sudd wetlands and river systems offer substantial seasonal fishing opportunities, supporting local livelihoods and also supporting biodiversity and wildlife.

Agriculture in Upper Nile State is a critical natural resource, functioning as the backbone of the local economy and livelihoods. It consists of traditional subsistence farming (sorghum, maize, cassava) and significant large-scale mechanized cereal production, particularly in northern counties like Renk and Melut.

Fisheries represent a vital, largely underdeveloped natural resource in South Sudan's Upper Nile State, providing essential food security, livelihoods, and economic activity for communities along the White Nile and Sobat rivers

CLIMATE CHANGE EFFECTS

Climate change in South Sudan's Upper Nile State is primarily characterized by severe, consecutive, and unprecedented flooding, oil extraction and the conflict causing massive displacement, destruction of infrastructure, and widespread food insecurity.

Flooding: According to *"Escalating Crisis, Rising Floods: Insecurity, Conflict, and Displacement in South Sudan, 2025"* by Rachel Stromsta, the Greater Upper Nile region, including Jonglei, Upper Nile, and Unity, remains highly vulnerable, with some areas flooding twice in a year. Cumulatively, around 1.4 million people are affected across 22 counties, with 379,000 displaced in 2024 alone, Infrastructure damage, loss of livelihoods, and exposure to waterborne diseases continue to rise as climate shocks intensify.

Oil extraction: One of the most significant environmental impacts of oil extraction in the Upper Nile region is the pollution of water sources, which has widespread consequences. The oil industry's activities have led to the contamination of water bodies, making the water unsuitable for drinking, irrigation, or supporting aquatic life. Impacts of conflict on Climate Vulnerability:

The conflict in Upper Nile State have destroyed traditional agricultural practices, local infrastructure, and community resilience, leaving populations unable to cope with recurrent droughts and devastating floods, and has spurred the militarized production of charcoal as a source of income,leading to significant deforestation and reduced biodiversity.

MAP 8: NATURAL RESOURCES AND HAZARDS - UPPER NILE STATE
UN-Habitat, 2026

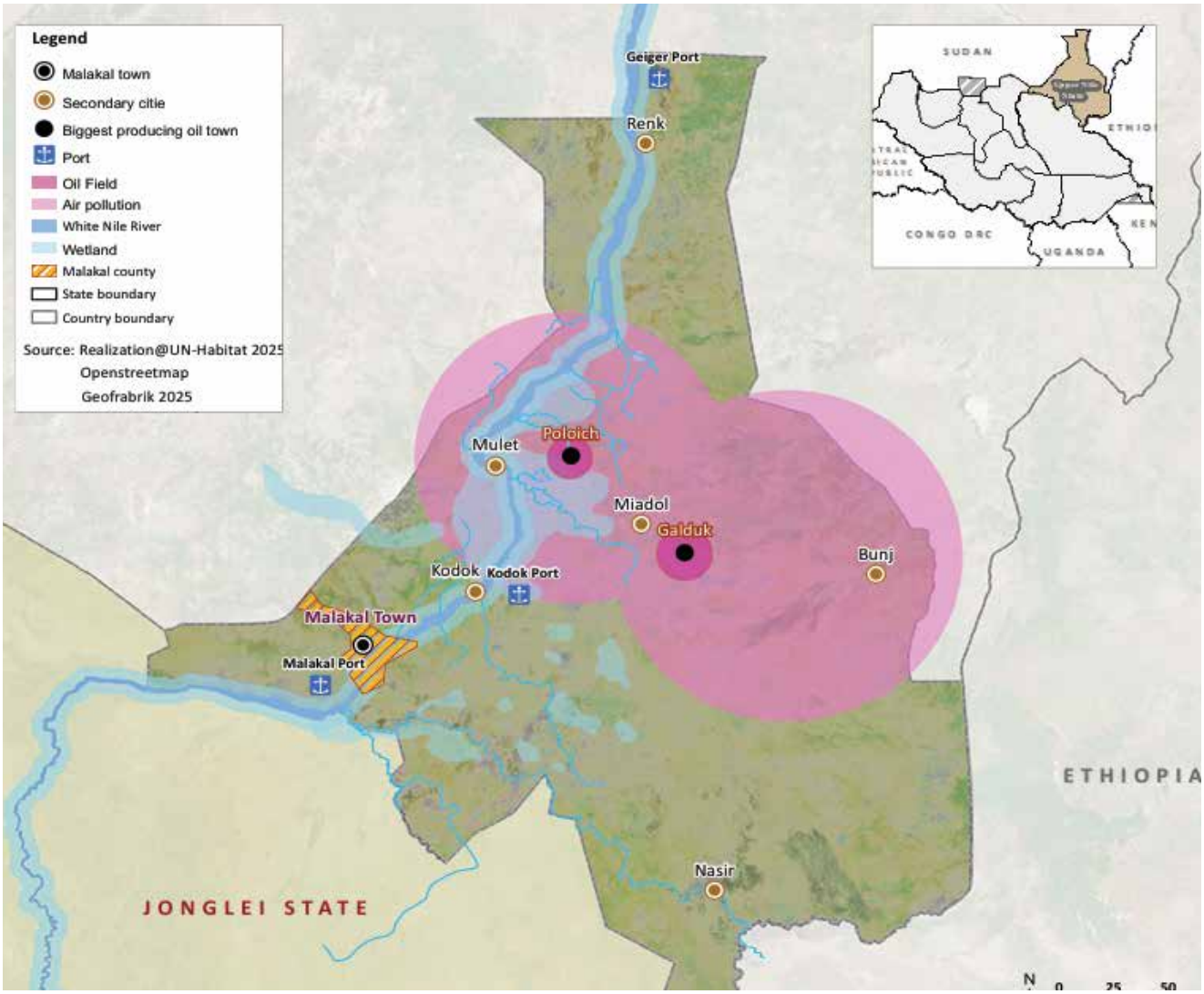




Fig.21: Water bodies in Malakal ex-PoC, South Sudan
Source: @UNHCR 2026

03 SITUATIONAL ANALYSYS - UPPER NILE STATE

3.8 ECONOMIC PERSPECTIVES

The economy of Upper Nile State relies primarily on oil revenue and agriculture, which are the state's main natural resources.

Oil: The oil extraction is concentrated in the Melt Basin, particularly within Melt and Maban counties in Paloch & Adar Yale towns and along the Khor Adar River, covering Concession Blocks 3 and 7.
The state's oil revenues provide the vast majority of South Sudan's national budget and Gross Domestic Product (GDP). Its activities have created some employment and led to some development in roads, communication, and services, but these are often insufficient or poorly maintained.

In December 2025, South Sudan and Sudan agreed on a free zone in Port Sudan to facilitate the import and export of oil and other goods. The establishment of the Port Sudan free zone is expected to streamline trade, boost regional commerce and create opportunities for closer economic integration between Sudan and South Sudan.

South Sudan's economy is heavily oil-dependent, with around 98% of the government's annual operating budget and 80% of its gross domestic product (GDP) derived from oil, according to Garcia, COL L. Bortoluzzi (27 July 2020). The GDP growth rate in 2025 was 24.3%, according to the International Monetary Fund (IMF). GDP per Capita in South Sudan was $313 in 2025, an increase of $12 from $301 in 2024; this represents a change of 4.1% in GDP per capita.

Fisheries represent a vital, largely underdeveloped natural resource in South Sudan's Upper Nile State, providing essential food security, livelihoods, and economic activity for communities along the White Nile and Sobat rivers

Agriculture: Upper Nile State's agriculture sector depends on rain-fed subsistence cultivation of cereals, including sorghum, maize, rice, finger millet, and pearl millet, which form the backbone of local food security. The state possesses some of South Sudan's most fertile arable lands, supporting both smallholder farming and limited mechanized operations. Sugarcane cultivation is viable in areas like Melut due to suitable soil and water conditions from the White Nile River.

Livestock rearing, centred on cattle pastoralism, integrates with agro-pastoral systems across Upper Nile State, where herds serve as primary sources of milk, meat and wealth accumulation for communities. The state's savanna and swamp ecosystems support seasonal transhumance with pastoralists moving.

EMPLOYMENT

Oil production in South Sudan's Upper Nile State is the cornerstone of the national economy. Its activities have created some employment for locals. In Melut County, employment in the formal sector is low, and in the informal sector, jobs are mostly available at the growing markets in Melut and Paloich. Very few South Sudanese so far have the skills and qualifications necessary to find employment in the formal sector, according to Brief 48, Oil Investment and Conflict in Upper Nile State, South Sudan, 2013.

Whereas agriculture, a potentially labour-intensive sector, is only slightly formalised. Most households are involved in small-scale farming, and there is some commercial agricultural activity, with businesses. The agricultural field, serving as a "basket" for the state.

MAP 9: ECONOMIC RESOURCES - UPPER NILE STATE
UN-Habitat, 2026

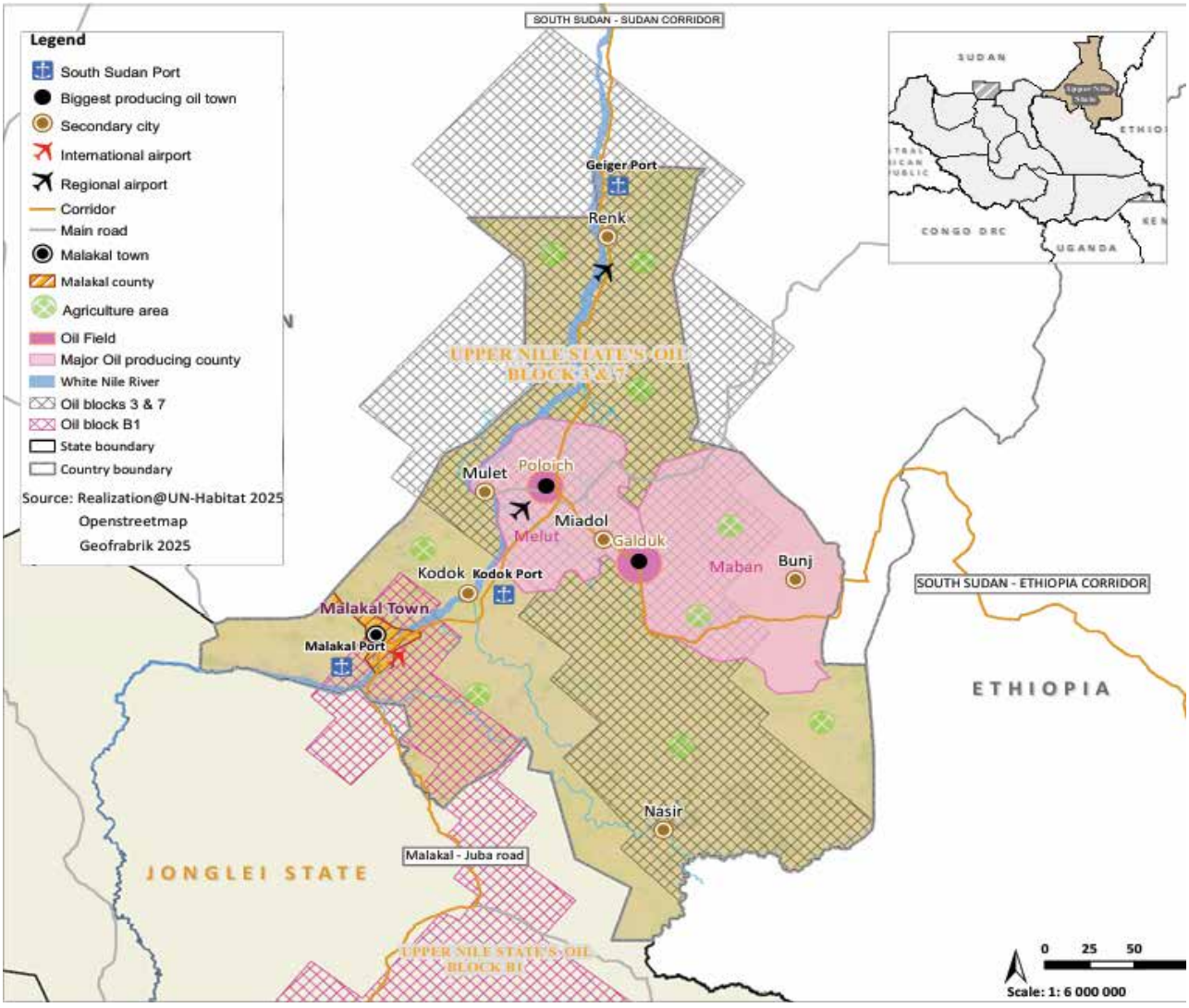


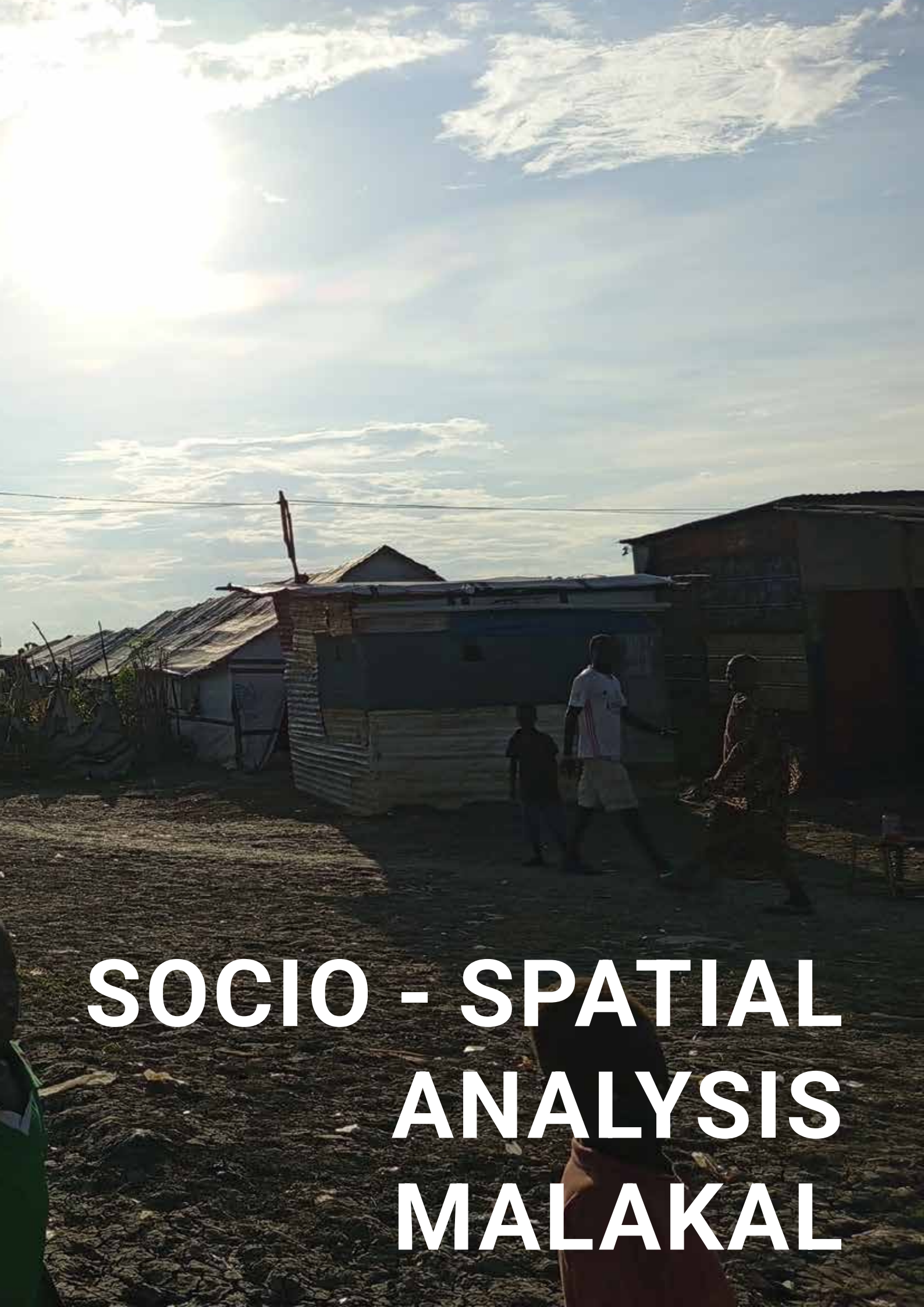


Fig. 23: Economic activity in Malakal South Sudan
Source: @UN-Habitat 2024

04



Fig. 24: Malakal former Protection of Civilian Site
Source: @UN-Habitat 2025



SOCIO - SPATIAL ANALYSIS MALAKAL

4.1 GOVERNANCE

4.1.1 ADMINISTRATIVE BOUNDARIES

Malakal Town lies on the eastern bank of the White Nile River and serves as the capital of both Upper Nile State and Maakal County.

Strategically positioned about 650 km north of Juba, South Sudan's capital, and 500 miles south of Khartoum, Sudan's capital, Malakal occupies a critical location in the region.
It covers an area of 40.88 km² and is divided into 6 payams and 23 Bomas, the smallest administrative units, with the population of 233 412 inhabitants in 2026 (MHLPU 2026).
The main ethnic groups are the Dinka, Nuer and Shilluk. Malakal has long been a vital administrative and economic center, functioning as a major trade hub in the Greater Upper Nile region. Prior to the 2013 conflict, Malakal played an essential role in commerce and governance, linking South Sudan with Sudan and Ethiopia through riverine and overland trade routes.

The 23 Bomas are distributed across its Payams (Central Malakal and Southern Malakal).
While the exact list varies slightly depending on administrative updates. This administrative division reflect both its urban core and rural periphery, highlighting the complexity of planning for recovery and growth. The war's destruction left many Bomas partially depopulated, yet their boundaries remain intact, offering a framework for urban extension, densification, and resilience planning. Peripheral settlements across the White Nile further expand Malakal's socio-economic footprint, underscoring its role as a regional hub for trade, governance, and humanitarian operations. **Before the conflict outbreak in 2013, all neighbourhoods were fully occupied, but the military clashes left severe impacts:** major part of critical infrastructure was destroyed, and large portions of land remain unoccupied despite administrative boundaries being intact.

The Naivasha–Academia Boma, located in a completely rural area in the western extension of the city, was outside the main urban zone even prior to the conflict. **Additionally, there are other settlements situated the White Nile River,** outside Malakal's immediate urban footprint, contributing to the broader socio-economic dynamics of the region : **Obuwr – Obuei – Lelo – Obwa – Kowgo - Tomer Kwogo**

KEY FIGURES



Population 2026

233 412 inh. (MHLPU 2026)

Municipal area
75.3 km²



Malakal urban area
40.88 km²

Built up area in 2026
10.045 km²



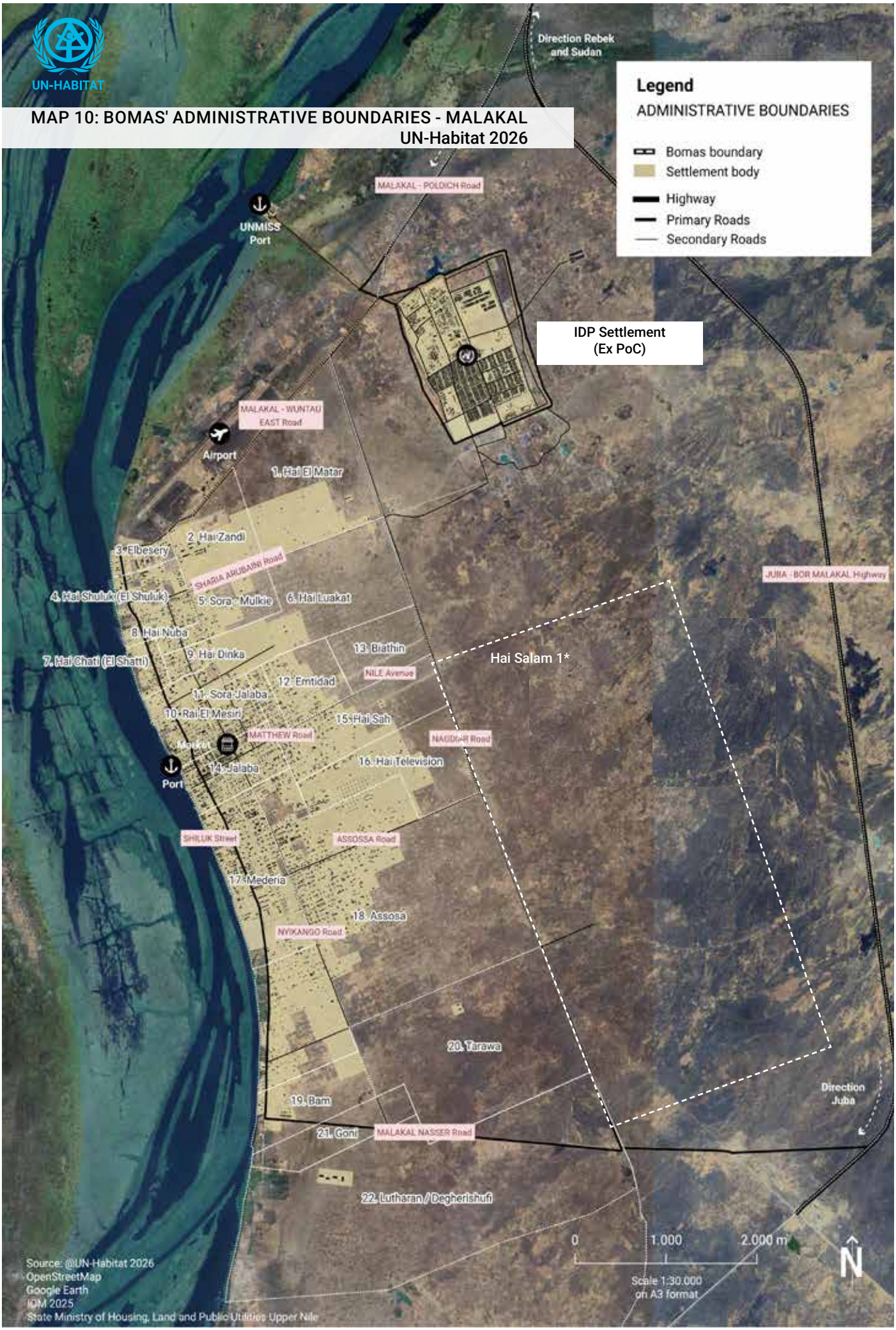
Density
5 709.68 inh/km²

MALAKAL'S LIST OF BOMAS

	BOMAS	AREA IN KM²
1	Hai Matar	2.017 km²
2	Hai Zandi	0.750 km²
3	Elbesery	0.187 km²
4	Hai Shilluk	0.594 km²
5	Sora - Mulkia	0.508 km²
6	Luakat	1.783 km²
7	Hai Dinka	0.145 km²
8	Hai Nuba	0.102 km²
9	Rai El Mesiri	0.866 km²
10	Hai Chati	0.194 km²
11	Biathin	0.612 km²
12	Emtidad	0.565 km²
13	Hai Sah	1.051 km²
14	Hai Television	1.177 km²
15	Sora-Jalaba	0.142 km²
16	Jalaba	0.611 km²
17	Assosa	6.190 km²
18	Mederia	1.213 km²
19	Goni	0.630 km²
20	Bam	0.738 km²
21	Tarawa	3.101 km²
22	Dengherishufi	6.103 km²
23	Hai Salam 1	11.292 km²

Fig. 25: Table of Malakal neighbourhoods - Bomas

Source: Upper Nile State Ministry of Land, Housing and Public Utilities, IOM 2025


UN-HABITAT
MAP 10: BOMAS' ADMINISTRATIVE BOUNDARIES - MALAKAL
UN-Habitat 2026
Direction Rebek and Sudan
Legend
ADMINISTRATIVE BOUNDARIES
Bomas boundary
Settlement body
Highway
Primary Roads
Secondary Roads
MALAKAL - POLOICH Road
UNMISS Port
IDP Settlement (Ex PoC)
MALAKAL - WUNTAU EAST Road
Airport
1. Hai El Matar
2. Hai Zandi
3. Elbesery
SHARIA ARUBARNI Road
4. Hai Shuluk (El Shuluk)
5. Sora Mulkie
6. Hai Luakat
JUBA - BOR MALAKAL Highway
8. Hai Nuba
7. Hai Chati (El Shatti)
9. Hai Dinka
13. Brathin
Hai Salam 1*
NILE Avenue
12. Emtidad
11. Sora Jalaba
10. Hai El Mesiri
15. Hai Sah
MATTHEW Road
NASIR Road
Market
16. Hai Television
Port
14. Jalaba
SHILUK Street
ASSOSSA Road
17. Mederia
18. Assosa
NYIKANGO Road
20. Tarawa
Direction Juba
19. Bam
21. Goni
MALAKAL NASSER Road
22. Lutharan / Degherishufi
0
1.000
2.000 m
Scale 1:30.000 on A3 format
N
Source: @UN-Habitat 2026
OpenStreetMap
Google Earth
IOM 2025
State Ministry of Housing, Land and Public Utilities Upper Nile

4.2 URBANIZATION DYNAMICS

4.2.1 URBAN DISRUPTION

Malakal's growth began during the Turko–Egyptian rule and accelerated under the Anglo-Egypt Condominium Government (1908–1955). Alongside Wau and later Juba, Malakal emerged as a strong center of Muslim traders and Arabic-speaking communities, reflecting its role as a cultural and commercial hub. Malakal developed a deeply entrenched Muslim, Arabic-speaking population, shaping its social fabric and trade.

Malakal's history reflects both colonial-era planning and its enduring role as a trade and governance hub. As the gateway to Africa on the Nile, Malakal became an important river port for steamers, facilitating commerce and connectivity across the Greater Upper Nile region. Its location made it a critical node for trade between Sudan, Ethiopia, and South Sudan, reinforcing its role as a regional economic center.

Prior to the conflict, Malakal was experiencing rapid development and growth, with expanding neighborhoods and infrastructure.

The city had a well detailed Master Plan, currently in the offcies of the Upper Nile State Ministry of Housing, Land and Public Utilities dating 1957. The military conflict disrupted this trajectory, leaving the city's urban fabric fractured yet still anchored in its original grid.

Today, Malakal faces the dual challenge of rebuilding infrastructure and managing rapid, often unplanned urbanization, while leveraging its strategic position on the Nile to regain its role as a regional center of commerce and administration.

In 2013, the military conflict in South Sudan erupted, pitting the government against the Sudan People's Liberation Movement–In Opposition (SPLM-IO). The conflict drew in Sudanese government forces, Ugandan troops, and UNMISS peacekeepers. A Compromise Peace Agreement was signed in August 2015, but fighting resumed in Juba in 2016, undermining stability.

Since 2013, however, progress has slowed dramatically, and the town has undergone gradual deterioration and stagnation Conflict, insecurity, and climate shocks have driven complex urbanization pressures, turning once vibrant neighborhoods into crowded settlements.

The repeated destruction of key facilities and properties has hindered recovery and growth. **Despite 75% of infrastructure being destroyed, Malakal's initial grid layout—distinguished by squares intersected by streets—remains visible, a testament to its planned origins.**





Fig. 26: Malakal Plan 1957, visit at MHLPU
Source: @UN-Habitat 2025





Fig. 27: Malakal 2013 and 2024 historical satellite view
Source: @google earth historical view

4.2 URBANIZATION DYNAMICS

4.2.2 URBAN GROWTH

Malakal has long been one of Upper Nile's most significant urban centers, experiencing rapid demographic changes over the past decades.

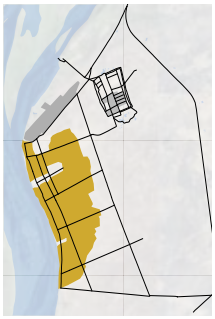
Before the conflict, the city grew at an extraordinary pace—its population surged by 252.4% between 1975 and 2015, and by 63.7% between 2000 and 2015 alone. However, the outbreak of conflict in South Sudan reversed this trend, causing a sharp decline in residents as displacement and insecurity took hold.

According to the 2008 census, Malakal's urban population stood at 114 528, with an additional 11 955 individuals living outside the town, totaling 126 483. **Since then, instability has reshaped the demographic landscape. Upper Nile State bore the brunt of displacement, with 18 430 individuals affected, while continued unrest in Sudan drove cross-border movements.**

By late the end of 2025, South Sudan hosted over refugees, many of whom passed through or settled in Upper Nile. Despite these challenges, Malakal's population is rebounding. **The Upper Nile State Ministry of Housing, Land and Public Utilities (MHLPU), estimates that in 2026 the city host approximately 233 412 residents within its 40.88 km² area, resulting in a density of 5 709.21 in-habitants per km².**
This marks a 40.66% increase compared to 2014 figures which counted 165 935 inhabitants. Looking ahead, if current trends persist at an **annual growth rate of about 4%, according to World Bank estimates in 2026, Malakal could reach by 2035 approximately 332 236 inhabitants.**

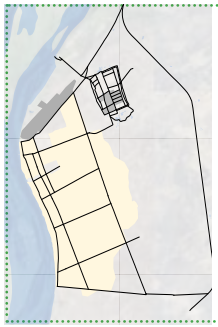
Several factors drive this growth: persistently high fertility rates, migration and displacement linked to conflict, return movements during periods of peace, and urbanization pressures as Malakal remains a vital trade and administrative hub in Upper Nile.

HISTORICAL URBAN GROWTH



YEAR 2008

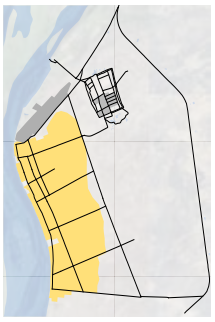
Population	126 500 inh.
Area	12 Km²
Density	10 542 Inh/Km²
Source	National Census 2008



YEAR 2010

Population	**139 500 Inh.**
Area	**24.70 km²**
Density	**5 650 Inh/km²**
Source	**World-gazetteer.com**

PRIOR TO THE CONFLICT



YEAR 2014

Population	165 935 inh.
Area	2.52 km²
Density	13 400 Inh/km²
Source	UN-Habitat Projection



YEAR 2018

Population	**76 231 Inh.**
Area	**6.65 km²**
Density	**11 464 Inh/km²**

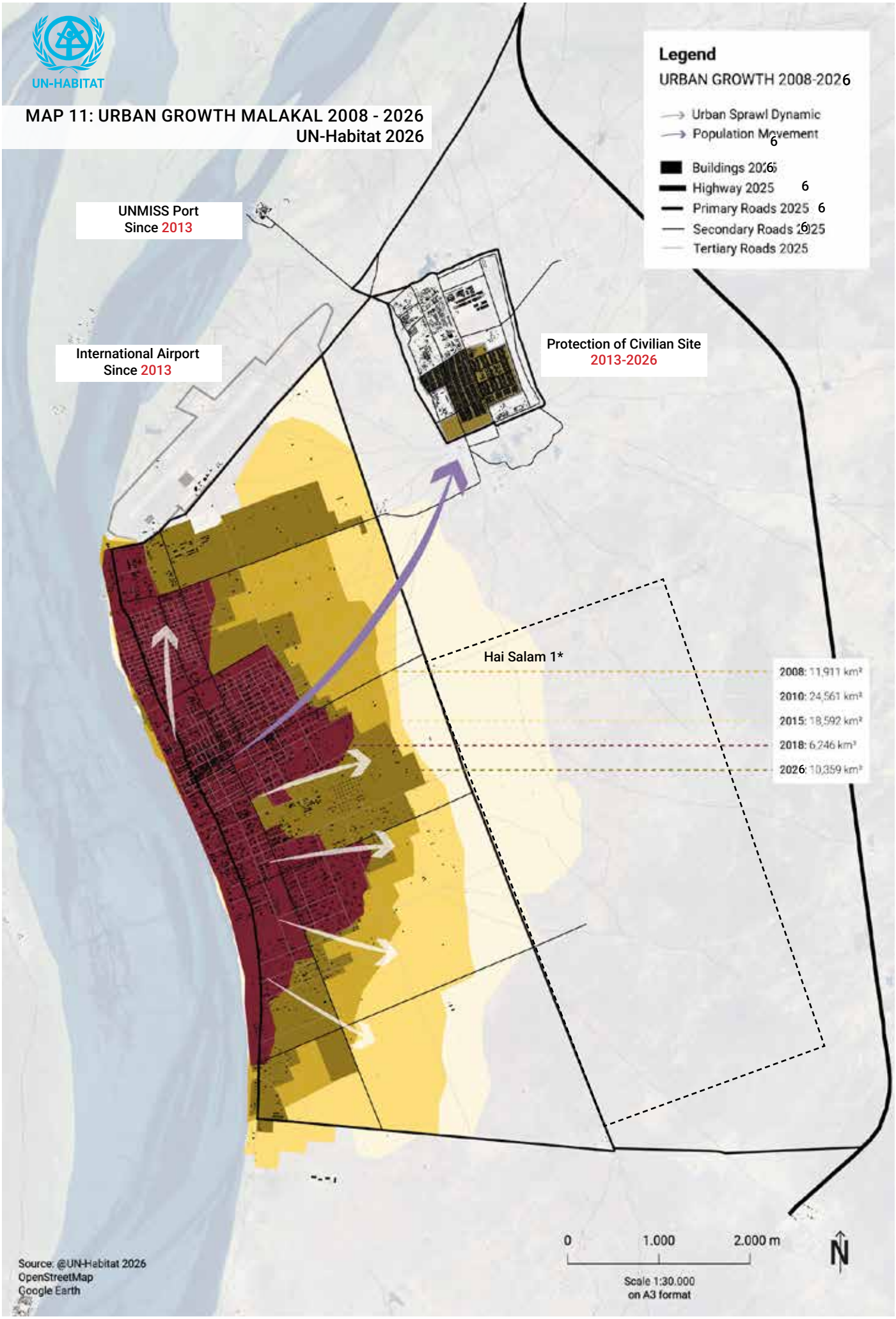
AFTER THE CONFLICT



YEAR 2026

Population	233 412 Inh.
Area	40.88 km²
Density	37.99 Inh/km²
Source	MHLPU 2026

Fig. 28: Malakal's Urban growth 2008 - 2025
Source: National Census 2008, World-gazetteer.com, OCHA 2025


UN-HABITAT
MAP 11: URBAN GROWTH MALAKAL 2008 - 2026
UN-Habitat 2026
Legend
URBAN GROWTH 2008-2026
Urban Sprawl Dynamic
Population Movement
Buildings 2026
Highway 2025
Primary Roads 2025
Secondary Roads 2025
Tertiary Roads 2025
UNMISS Port
Since 2013
International Airport
Since 2013
Protection of Civilian Site
2013-2026
Hai Salam 1*
2008: 11,911 km²
2010: 24,561 km²
2015: 18,592 km²
2018: 6,246 km²
2026: 10,359 km²
0
1.000
2.000 m
Scale 1:30.000
on A3 format
N
Source: @UN-Habitat 2026
OpenStreetMap
Google Earth

4. 2 URBANIZATION DYNAMICS

4.2.3 CONFLICT AND CLIMATE INDUCED DISPLACEMENT

Ongoing conflict and instability, compounded by the Sudan crisis, continue to drive large-scale displacement and cross-border movements in South Sudan.

As of 28th February 2026, South Sudan hosts 618 947 refugees and asylum-seekers (166 328 households), with a significant proportion (49%) settling in the Upper Nile State. Since March 2025, armed clashes have claimed more than 180 lives and displaced approximately 125 000 people, forcing many to relocate to safer areas—particularly the western bank of the Nile.
Malakal and its surrounding areas have become key destinations for those seeking refuge (UNHCR, 2025).

Before the conflict, UNICEF estimated Malakal city hosted 76 000 IDPs in 2011. The political power struggle in 2013 triggered widespread violence, severely impacting Upper Nile State and Malakal in particular. That year, Malakal town was extensively burned and looted, causing mass forced displacement. Malakal recorded the highest number of IDPs nationwide—89 434 individuals (IOM-DTM, February 2025).
According to IOM DTM's Mobility Tracking Round 16, Malakal hosted approximately 12 680 IDP households (67 184 individuals) and 2 312 returnee households (11 857 individuals) as of January 2026.

The Ex - Protection of Civilian Site (PoC)

Between 2013 and 2016, most Malakal's residents fled either to Sudan or to the former Protection of Civilians (PoC) site established under UNMISS mandate, marking the beginning of a prolonged displacement crisis.
Approximately 12 000 civilians sought refuge at the UNMISS base, which later became the Protection of Civilians (PoC) site, and the population there quickly surged to around 28 000.

The site is divided into 4 main sectors and 38 blocks, adjacent to the UNMISS base in Malakal, with a total surface of approximately 40 hectares.

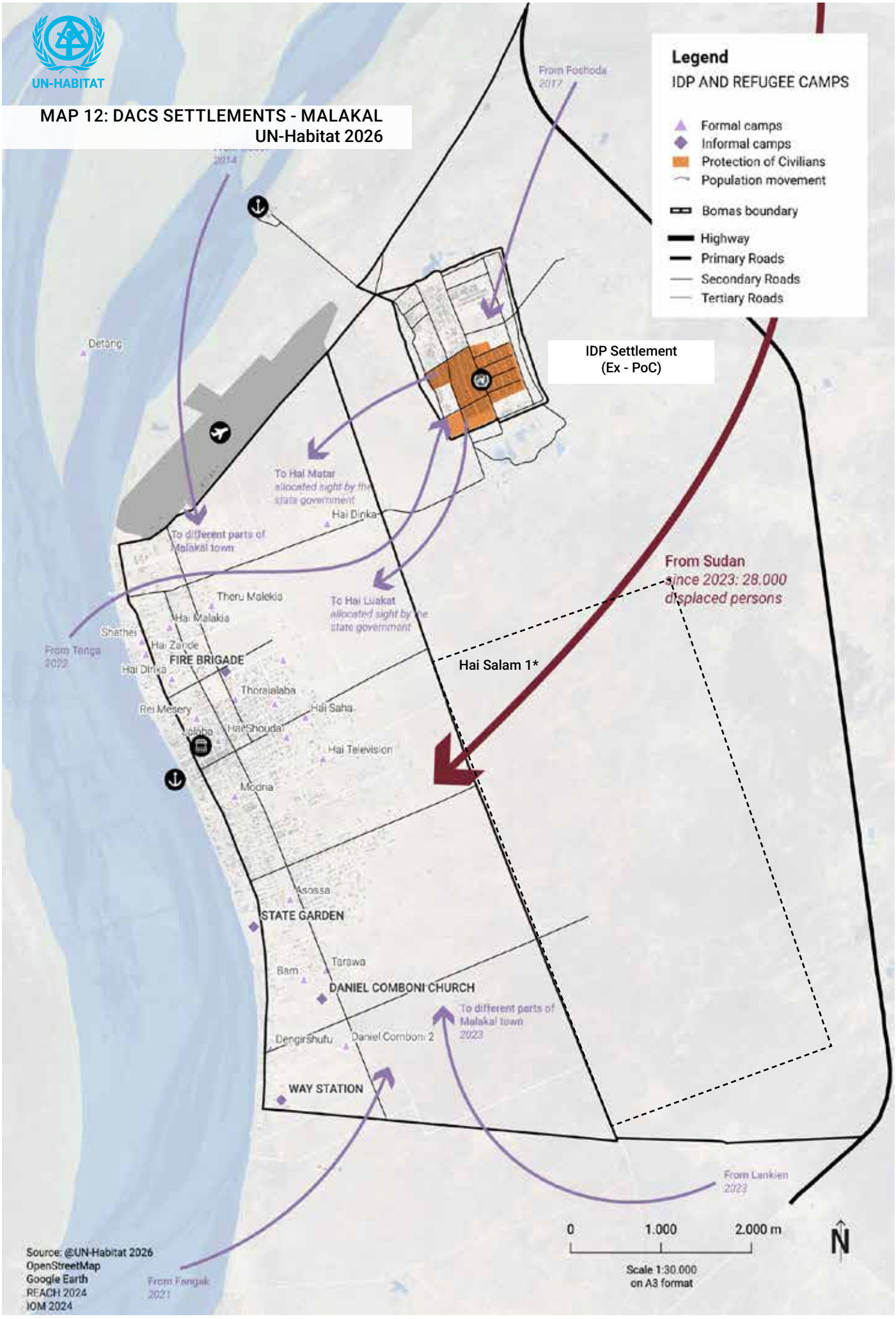
By 2022, UNHCR declared a Level 1 emergency in response to escalating humanitarian needs.
In 2023, tensions among remaining communities in the PoC escalated into further violence, forcing another wave of displacement.
Many fled into Malakal town, where UNHCR and IOM, in partnership with the government, were allocated state-owned land to construct shelters in the State Garden settlement.

Currently, the conditions in the IDP settlement (ex-PoC) are critical.

The Malakal ex-PoC site is densely populated, with shelters often grouped closely together, increasing the risk of disease transmission, especially tuberculosis (TB) and cholera.

- **Overflowing latrines and poor drainage** systems lead to stagnant sludge, which poses serious health risks, especially for children who play near these areas.
- **Clean water access is limited,** and hygiene promotion efforts are often under-resourced.
- **Women and girls are particularly vulnerable to gender-based violence,** both within and outside the camp.
- **Armed clashes in Upper Nile since March 2025 have killed over 180 people and displaced 125 000 individuals,** many seeking refuge in Malakal and its outskirts. Meanwhile, instability in neighbouring Sudan has compounded the crisis.

In the IDP settlement (ex-Malakal PoC site) Children under 18 make up 62% of the population, and nearly one in four households is female-headed, stark reminders of family separation and vulnerability. Older persons, pregnant women, and individuals with disabilities face heightened risks in this fragile environment. **Many of these residents have endured displacement for nearly a decade, with prospects for return hindered by persistent insecurity and limited funding for durable solutions.**


UN-HABITAT
MAP 12: DACS SETTLEMENTS - MALAKAL
UN-Habitat 2026
Legend
IDP AND REFUGEE CAMPS
Formal camps
Informal camps
Protection of Civilians
Population movement
Bomas boundary
Highway
Primary Roads
Secondary Roads
Tertiary Roads
IDP Settlement
(Ex - PoC)
From Sudan
since 2023: 28.000
displaced persons
Hai Salam 1*
From Fashoda
2017
To Hai Matar
allocated sight by the
state government
To different parts of
Malakal town
To Hai Luakat
allocated sight by the
state government
From Tonga
2022
From Lankien
2023
To different parts of
Malakal town
2023
From Fangak
2021
Detang
Hai Dinka
Theru Malekia
Hai Malakia
Shethei
Hai Zande
FIRE BRIGADE
Thoralalaba
Rei Mesery
Hai Saha
Hai Shouda
Hai Television
Modria
Asossa
STATE GARDEN
Bam
Tarawa
DANIEL COMBONI CHURCH
Dengirshufu
Daniel Comboni 2
WAY STATION
0
1.000
2.000 m
Scale 1:30.000
on A3 format
N
Source: @UN-Habitat 2026
OpenStreetMap
Google Earth
REACH 2024
IOM 2024

4. 2 URBANIZATION DYNAMICS

4.2.3 CONFLICT AND CLIMATE INDUCED DISPLACEMENT

Despite these challenges, efforts to restore normality have begun. In 2024, residents of the PoC expressed desire to return to the city.

Ex- POCs IDPs REINTEGRATION AREAS

The Upper Nile State government has given identified the **Hai Matar (pilot area), Hai Luakat and Hai Salam 1 reestablishment as reintegration sites, to accommodate people from the ex-PoC who prior to the war owned a land**.
Hai Matar, for example, covers 230 hectares near the international airport and Upper Nile University and became the focus of a resettlement initiative under the Roadmap for Durable Solutions in Upper Nile State, supported by EU funding.

As of June 2026, the site counts 224 UNHCR constructed housing solution for families and 50 houses built by IOM with a total of 274 houses consisting of 1 644 individuals. While in Hai Luakat, UNHCR constructed 94 houses benefiting 564 individuals.

Within Malakal, IDPs are hosted across multiple sites, as of December 2025, including:

- **Way Station – 1 234 individuals**
- **Fire Brigade – 2 970 individuals**
- **Daniel Comboni Church – 1 480 individuals**
- **State Garden IDP site – 2 923 individuals**

Most new arrivals originated from Jonglei State (84%), particularly Fangak and Canal Pigi counties, where the combined effects of conflict and flooding have deepened vulnerabilities.

Behind these statistics are stories of resilience: families enduring displacement for nearly a decade, children growing up in ex- PoC sites, and communities striving to rebuild amid persistent uncertainty.

HANDOVER OF THE POC

On 13 February 2026, a major milestone occurred for Malakal's Protection of Civilians (PoC) site:

The United Nations Mission in South Sudan (UNMISS) formally handed over administrative and security roles in the Malakal PoC to the Government of Upper Nile State after more than a decade of UN administration marking its transition to the IDP site settings.

The site was originally established in 2013 to shelter civilians fleeing violence during the civil war. Over time, it transitioned into a semi-permanent settlement, especially after the 2018 peace agreement. **At the time of the handover (February 2026), the PoC still housed around 45 000 displaced people, affected not only by conflict but also by flooding and climate shocks.**

The transition followed extensive consultations with displaced communities, humanitarian partners, and government authorities to ensure a smooth and responsible handover process.
UNMISS also announced the withdrawal of its peacekeeping troops from the site, marking the end of UN-administered PoCs in South Sudan and a shift toward national and local responsibility for displaced populations.

This handover is significant because Malakal's PoC was the last UN-administered camp in South Sudan, symbolizing both progress in stabilization efforts and the challenges of integrating tens of thousands of displaced people into longer-term urban and rural development plans.



Fig. 29: Ex-Protection of Civilian Site Plan, Malakal, South Sudan
Source: @UN-Habitat 2025



Fig. 30: Ex-Protection of Civilian Site, Malakal, South Sudan
Source: @UN-Habitat 2025

4.2 URBANIZATION DYNAMICS

4.2.4 LAND USE 2026

Malakal spans an area of approximately 40 km², with land use patterns reflecting both historical planning and the disruptions caused by years of conflict and displacement. According to the JICA 2014 study, 41% of the total area is occupied by private residential developments, while 25.2% remains as open space or undeveloped land. These figures highlight a city where large tracts of land remain underutilized, even as population pressures and informal settlements grow.

A comparison of land use between the JICA study (2014) and today's situation highlights the consequences of historical developments. Although the JICA study applied slightly different land use categories, meaningful comparisons remain possible.

- **Open space/undeveloped land:** The most significant change is in this category. In 2014, it accounted for 25%, whereas today it has risen to 61%, reflecting widespread destruction and abandonment.

- **Residential (private):** This category shows the largest decline, dropping from 41% in 2014 to only 18% today. The extensive destruction of housing remains clearly visible in the settlement structure and has not recovered, despite high settlement pressure. Since the JICA study, several challenges have reshaped land use patterns:

Conflict: First wave (2013)
Conflict: Second wave (2023)
Health crisis: COVID-19 pandemic (2020)
Humanitarian response: Establishment of informal IDP settlements, including the ex-Protection of Civilians (PoC) site

These developments introduced new land use categories.

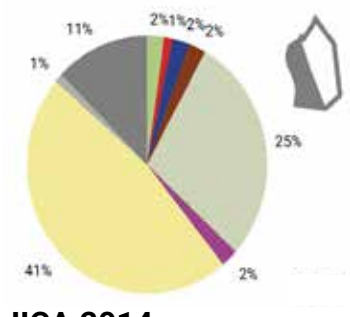
- **Informal IDP camps settlements** appear as a distinct category, representing 1% of land use—introduced in response to humanitarian needs and absent in the earlier JICA study.

The comparison and figures refer to the same area surveyed by JICA in 2014. However, future development considerations also extend into the Academia Boma, which—apart from the former PoC site—remains entirely undeveloped.

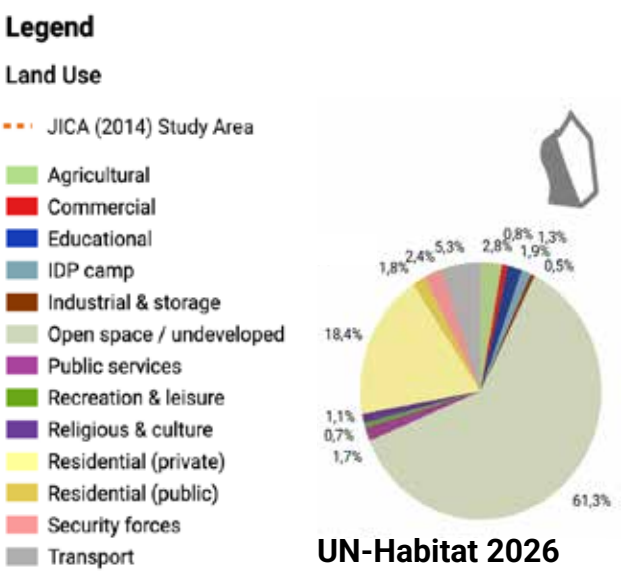
Other categories such as agricultural, commercial, educational, industrial/storage, public services, recreation, religious/cultural, security forces, and transport/roads remain present but at much smaller proportions, each typically ranging between 0.5% and 5%.

The UN-Habitat chart highlights a city where undeveloped land has expanded massively, while residential areas have contracted sharply.

The persistence of the original grid layout is visible, but the functional use of land has shifted toward abandonment and humanitarian response rather than growth and planned development.



JICA 2014

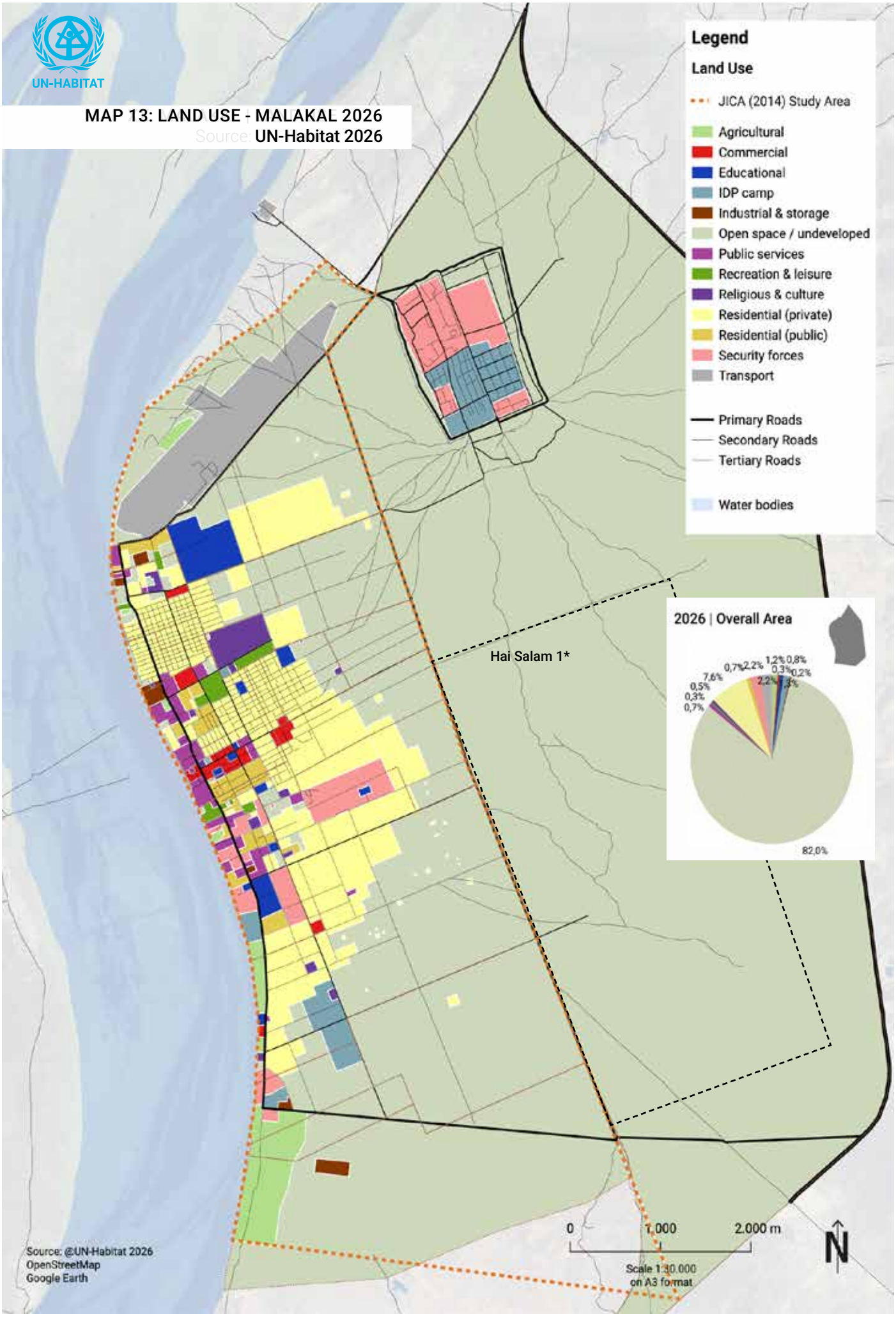


UN-Habitat 2026

Fig. 31: Malakal land use allocation percentage By JICA 2014 and current 2026
Source: Openstreetmap, geofabrik 2025, JICA 2014

UN-HABITAT

MAP 13: LAND USE - MALAKAL 2026
Source: **UN-Habitat 2026**



4.2 URBANIZATION DYNAMICS

4.2.5 HOUSING TYPOLOGY

Malakal, a historic town along the White Nile in Upper Nile State, presents a housing landscape deeply shaped by climate, culture, conflict, and displacement. Housing in Malakal—and across South Sudan—extends beyond physical structures; it reflects lived realities of adaptation, resilience, and socio-political transition.

The built environment is characterized by a mix of traditional tukuls, semi-permanent dwellings, and humanitarian-provided shelters, illustrating both enduring cultural practices and the lasting impacts of instability. Much of the housing remains informal, with limited infrastructure and a significant reliance on aid-supported settlements.

1. Traditional Vernacular Housing: The Tukul

The tukul is the most recognizable and culturally significant housing typology in Malakal's rural and peri-urban areas. Tukuls are typically arranged in family compounds, reflecting kinship systems and social organization. The tukul embodies continuity with tradition and the environment. It represents an architecture of self-reliance and ecological adaptation, deeply rooted in local knowledge systems.

Form: Circular huts with conical thatched roofs
Materials: Locally sourced materials such as mud, straw, and timber poles
Structure (Climate-Responsive Design):
Thick earthen walls provide insulation against intense daytime heat, while the thatched roof enhances ventilation and protects against rain



2. Urban Hybrid Housing: Mud-Brick and Corrugated Iron

This typology reflects Malakal's evolution as a trading and administrative center, marking a transition toward more permanent urban settlement. These dwellings signal a shift toward durability, urban identity, and modernization, while still relying on accessible and affordable materials. They represent an intermediate stage between traditional and fully modern housing.

Form: Rectangular or square units
Materials: Stabilized mud bricks or fired bricks combined with corrugated iron roofing
Structure: Often organized in linear layouts or enclosed compounds:



3. Colonial and Institutional Housing

Older sections of Malakal retain elements of colonial-era planning, reflecting external influences on the urban fabric. These structures tell a story of imposed urban order and governance. Today, many are damaged, abandoned, or repurposed, symbolizing both historical legacy and disruption.

Form: Larger rectangular buildings with verandas and spaced layouts
Materials: Concrete, fired bricks, and metal roofing
Use: Administrative offices, staff housing, and mission buildings repurposed, symbolizing both historical legacy

Fig. 32: Malakal different housing typologies in the city
Source: @UN-Habitat 2024 -2025





4. Emergency and Humanitarian Shelters

Due to recurring conflict—particularly since 2013—Malakal has experienced significant displacement, leading to the proliferation of humanitarian housing typologies.

Types of Shelters:
Tents provided by UN agencies and NGOs Plastic-sheet shelters Transitional shelters using timber frames and tarpaulins.
Spatial Organization:
Dense, grid-like camp layouts
Key Challenges: Overcrowding, lack of privacy, poor durability, and vulnerability to flooding

Although intended as temporary solutions, many of these shelters have become semi-permanent homes, reshaping the meaning of domestic space under crisis. They represent an architecture of survival and displacement.



5. Reconstruction and Emerging Typologies

Recent efforts by NGOs, communities, and government actors aim t o move beyond emergency housing toward long-term resilience and recovery.

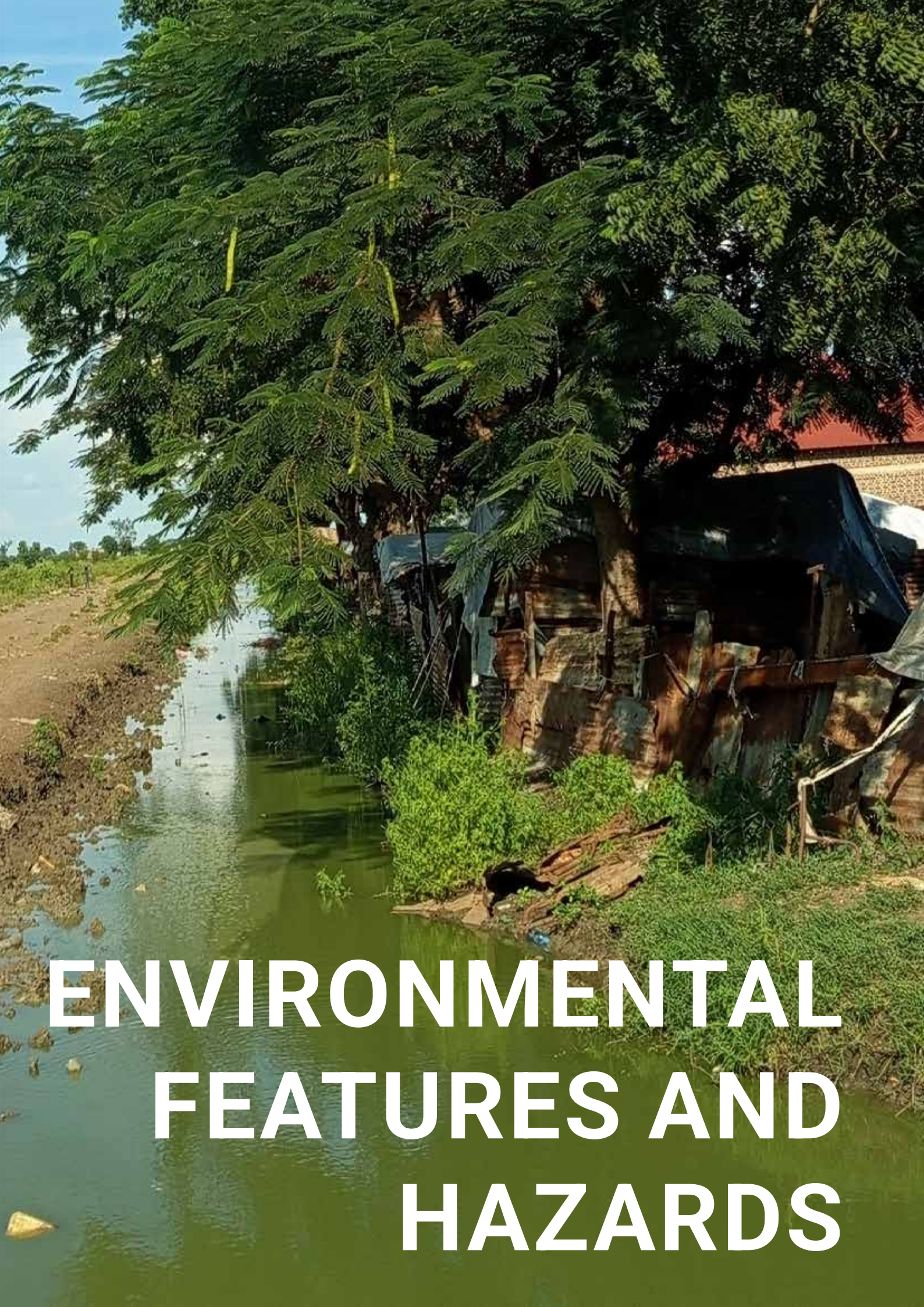
Key Features:
Improved brick construction techniques Elevated, flood-resistant plinths .Reinforced metal roofing systems.

Approach:
Community-based rebuilding that often integrates local construction practices with external technical support. **This emerging typology reflects a transition from humanitarian response to development-oriented housing, embodying hope, stability, and future growth.**

04



Fig. 33: Malakal Flooded area
Source: @UN-Habitat 2024



ENVIRONMENTAL FEATURES AND HAZARDS

4.3 ENVIRONMENTAL FEATURES AND HAZARDS

4.3.1 LAND COVER

TOPOGRAPHY

Malakal's terrain is predominantly flat, averaging 393 meters above sea level with only minor elevation variation of about three meters across the area. This lack of natural gradient severely limits drainage capacity, making the city highly vulnerable to water accumulation during floods. While the broader region ranges from 200 to 1 000 meters in elevation, Malakal itself remains level, amplifying flood risks.

LAND COVER

The land cover is dominated by savanna grasslands interspersed with seasonal wetlands, which expand during the rainy season and contract in the dry months.
Riparian vegetation lines the banks of the Nile, providing limited natural barriers against rising waters.

CLIMATE

Malakal lies within a tropical savanna climate, marked by a distinct wet season from June to September and a dry season for the remainder of the year. **Temperatures are extreme, with annual averages reaching 36°C at the maximum and 21.4°C at the minimum.** These geographic and climatic conditions, combined with its proximity to major river systems, create an environment where even moderate hydrological changes can have severe consequences for communities and infrastructure.

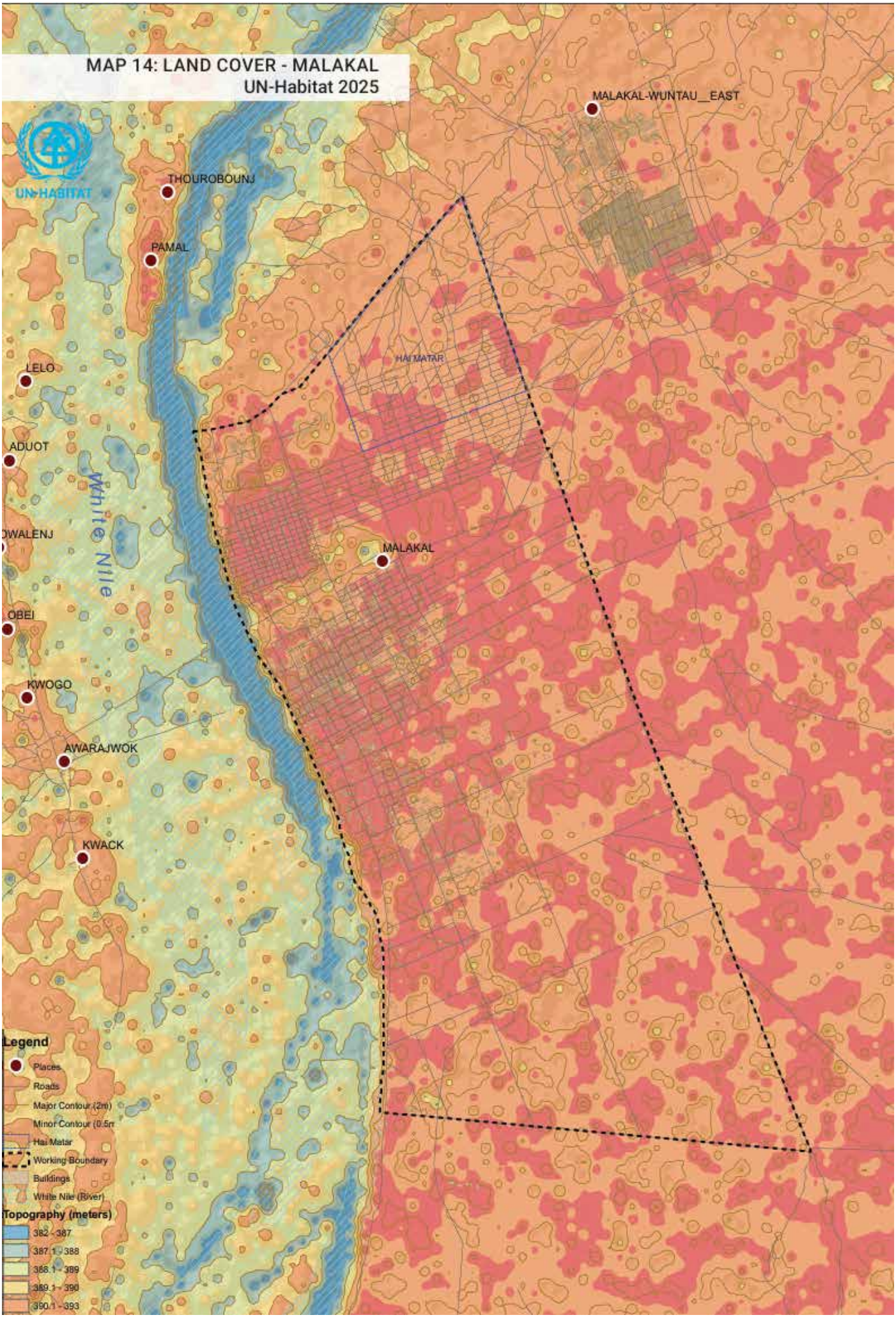
- **Dry season (January - April):** Minimal rainfall (0–20 mm) combined with high temperatures and low humidity (25–40%) created harsh living conditions, stressing water access and livelihoods.
- **Intense Rainfall (June - September):** precipitation peaks at 163.6 mm in August and humidity rises above 80%.

Climate data for Malakal

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °C (°F)	41.7 (107.1)	43.0 (109.4)	44.4 (111.9)	43.7 (110.7)	42.5 (108.5)	39.5 (103.1)	38.0 (100.4)	36.7 (98.1)	37.8 (100.0)	39.5 (103.1)	40.0 (104.0)	40.5 (104.9)	44.4 (111.9)
Mean daily maximum °C (°F)	34.9 (94.8)	36.8 (98.2)	38.7 (101.7)	38.8 (101.8)	35.9 (96.6)	33.1 (91.6)	31.1 (88.0)	30.9 (87.6)	31.9 (89.4)	33.6 (92.5)	35.1 (95.2)	35.0 (95.0)	34.7 (94.5)
Daily mean °C (°F)	26.7 (80.1)	28.5 (83.3)	30.9 (87.6)	31.5 (88.7)	29.8 (85.6)	27.7 (81.9)	26.5 (79.7)	26.3 (79.3)	26.9 (80.4)	27.7 (81.9)	27.5 (81.5)	26.8 (80.2)	28.1 (82.6)
Mean daily minimum °C (°F)	18.5 (65.3)	20.1 (68.2)	23.0 (73.4)	24.2 (75.6)	23.7 (74.7)	22.4 (72.3)	21.8 (71.2)	21.7 (71.1)	21.9 (71.4)	21.9 (71.4)	19.9 (67.8)	18.6 (65.5)	21.5 (70.7)
Record low °C (°F)	11.4 (52.5)	10.0 (50.0)	16.4 (61.5)	16.5 (61.7)	17.5 (63.5)	17.6 (63.7)	17.0 (62.6)	17.0 (62.6)	18.0 (64.4)	15.0 (59.0)	14.0 (57.2)	12.2 (54.0)	10.0 (50.0)
Average precipitation mm (inches)	0.0 (0.0)	0.2 (0.01)	6.9 (0.27)	19.9 (0.78)	86.1 (3.39)	103.4 (4.07)	146.8 (5.78)	163.4 (6.43)	124.4 (4.90)	75.6 (2.98)	4.9 (0.19)	0.0 (0.0)	731.6 (28.80)
Average precipitation days (≥ 0.1 mm)	0.0	0.1	1.0	2.1	7.0	10.0	13.9	14.9	10.9	7.3	0.8	0.0	68.0
Average relative humidity (%)	30	25	29	40	59	70	78	80	78	72	49	35	54
Mean monthly sunshine hours	294.5	263.2	260.4	261.0	229.4	168.0	151.9	170.5	177.0	223.2	282.0	297.6	2,778.7
Mean daily sunshine hours	9.5	9.4	8.4	8.7	7.4	5.6	4.9	5.5	5.9	7.2	9.4	9.6	7.6
Percentage possible sunshine	82	80	70	70	58	43	39	43	48	61	81	85	63

Source: NOAA[11]

Fig. 34: Annual climate data for Malaka 2025l
Source: @NOAA 2025


MAP 14: LAND COVER - MALAKAL
UN-Habitat 2025
UN-HABITAT
MALAKAL-WUNTAU_EAST
THOUROBOUNJ
PAMAL
HAI MATAR
LELO
ADUOT
White Nile
MALAKAL
OBEI
KWOGO
AWARAJWOK
KWACK
Legend
Places
Roads
Major Contour (2m)
Minor Contour (0.5m
Hai Matar
Working Boundary
Buildings
White Nile (River)
Topography (meters)
382 - 387
387.1 - 388
388.1 - 389
389.1 - 390
390.1 - 393

4.3 ENVIRONMENTAL FEATURES AND HAZARDS

4.3.2 HYDROGRAPHY

WATER BODIES

Rivers and Wetlands Malakal's landscape is fundamentally shaped by its proximity to the White Nile River and an extensive network of seasonal and permanent wetlands. These water systems influence not only ecology, but also settlement patterns, livelihoods, and housing forms.

1. The White Nile River - is the dominant and most defining water body in Malakal. It is both a lifeline and a risk. While it sustains livelihoods and trade, it also causes seasonal flooding, shaping how and where people build their homes.

Characteristics:
- Perennial (flows year-round)
- Broad and slow-moving in this region
- Subject to seasonal fluctuations, especially during the rainy season

Ecological relevance:

- **Primary source of water for domestic use**
- **Transportation corridor linking regions**
- **Supports fishing and small-scale agriculture**

2. Seasonal Floodplains - are vast seasonal floodplains, locally known as toic. Created when the Nile overflows during the rainy season.

Characteristics:
- Flat, low-lying grasslands
- Temporarily submerged during floods
- Highly fertile after water recedes

Ecologidcal relevance:

- **Dry season grazing for livestock**
- **Small-scale farming after floods**
- **Fishing grounds during inondation**

3. Wetlands and Swamps - are part of the broader ecological zone influenced by the Sudd wetlands, one of Africa's largest swamp systems.

Characteristics:
- Permanent and semi-permanent wetlands
- Dense vegetation (papyrus, reeds, grasses)
- Shallow, slow-moving or stagnant water
- While the core Sudd lies further south, its hydrological influence extends into Upper Nile State, including Malakal.

Ecological relevance:

- **Biodiversity hotspot**
- **Supports fisheries and birdlife**
- **Regulates regional water flows and climate**

These wetlands create a landscape of water and land interwoven, where boundaries are fluid and seasonal. This condition reinforces flexible, lightweight, and rebuildable housing typologies.

4. Tributaries and Small Channels are small watercourses and channels connected to the Nile system. These smaller water bodies contribute to localized flooding, affecting neighborhoods unevenly and complicating infrastructure development

Characteristics:
- Often dry in the dry season
- Fill during rains and flooding periods

Ecological relevance:

- **Seasonal streams**
- **Overflow channels from the Nile**
- **Local drainage paths**



Fig. 35: Entertainments in water bodies in Ex-Protection of Civilian Site, Malakal, South Sudan
Source: @UNHCR 2026



Fig. 36: Flood dameges on road network, Malakal, South Sudan
Source: @UNHCR 2026

4.3 ENVIRONMENTAL FEATURES AND HAZARDS

4.3.3 FLOOD VULNERABILITY

Malakal's location at the confluence of the White Nile and Sobat River, combined with its flat terrain, makes it acutely vulnerable to flooding. What was once a seasonal challenge has escalated into a full-scale environmental crisis, threatening infrastructure, livelihoods, and community safety. Importantly, the flooding is not driven by local rainfall but by reverse flows originating upstream in Ethiopia.

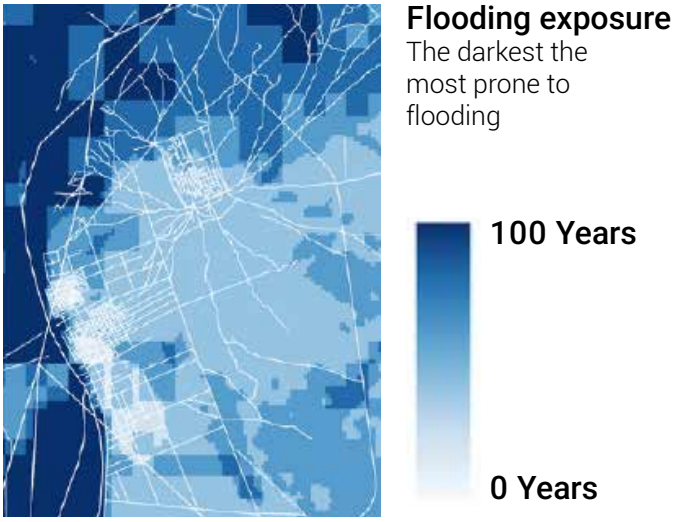
The Sobat River, fed by the Baro-Akobo Basin, contributes nearly half of the White Nile's flow. Surges in this basin trigger rising water levels and reverse flows downstream, overwhelming both natural and man-made defences.

From October 2025, the consequences were severe: six villages in Malakal County were submerged, forcing hundreds of residents to abandon their homes. Emergency relocation efforts were launched as water pressure overloaded local systems and rendered dikes ineffective. Boats, riverbanks, and settlements bore visible signs of rising waters, while repeated episodes of accumulation complicated recovery operations.

This hydrological dependency, combined with Malakal's climate cycle, explains the flood-driven displacement trend in 2025:

- **Dry season (Jan–Apr):** Minimal rainfall (0–20 mm) and extreme heat (up to 44°C) strained water access and livelihoods.
- **Rainy season (May–Sep):** Heavy rainfall (86–164 mm/month) coincided with rising Nile levels, triggering widespread flooding.
- **Peak flood season (Sep–Nov):** With precipitation still high in September (124 mm) and humidity elevated, displacement surged—from 170 148 individuals in September to 375 600 by mid-November.

FLOOD RISK ANALYSIS - 100 YEARS RETURN



UN-Habitat has developed a Vulnerability Flood Risk Assessment for Malakal using ArcGIS tool. The analysis consisted of overlapping several critical spatial layers such as elevation, soil profile, rainfall, vegetation, river profile, and land cover.

By integrating these datasets, the assessment identified the areas prone to flooding under a 100-year return period scenario if no actions are taken to prevent and mitigate flood risk exposure.

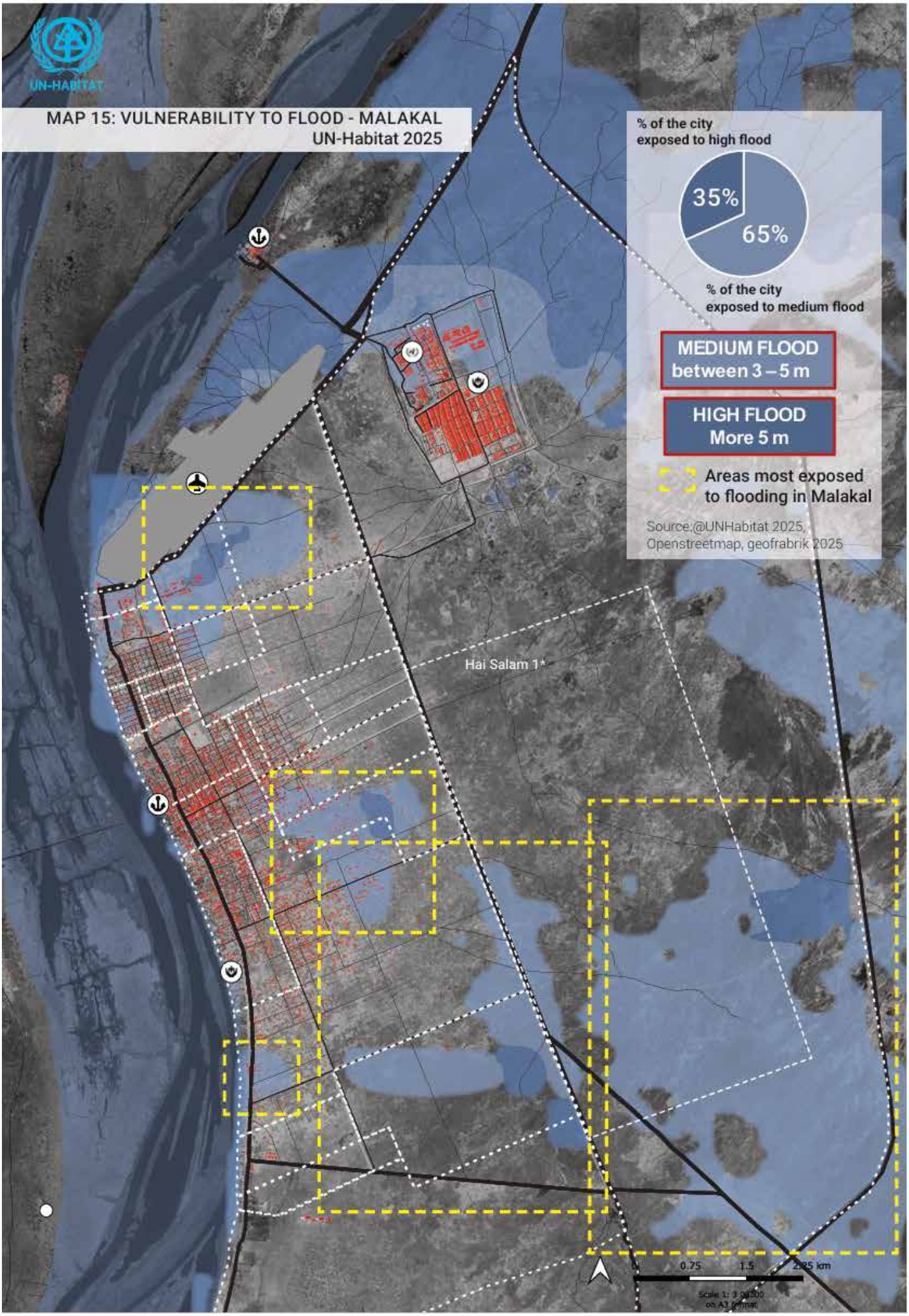
The results revealed that flood vulnerability is spread across the town, affecting both urban cores and peripheral rural extensions. Northern reintegration zones near Hai Matar, the southern core neighborhoods, and the southwest rural areas emerged as particularly exposed**. Without mitigation, these zones face systemic flood risk, with potential damages to infrastructure, housing, and livelihoods.**

Implications for Urban Planning

Predictable flood cycle: Displacement spikes consistently align with rainfall peaks, underscoring the need for seasonal preparedness and resilient settlement planning.

Flood-prone IDP sites: With thousands concentrated in vulnerable areas, site selection and infrastructure reinforcement must descourage urbanization in areas at risks.

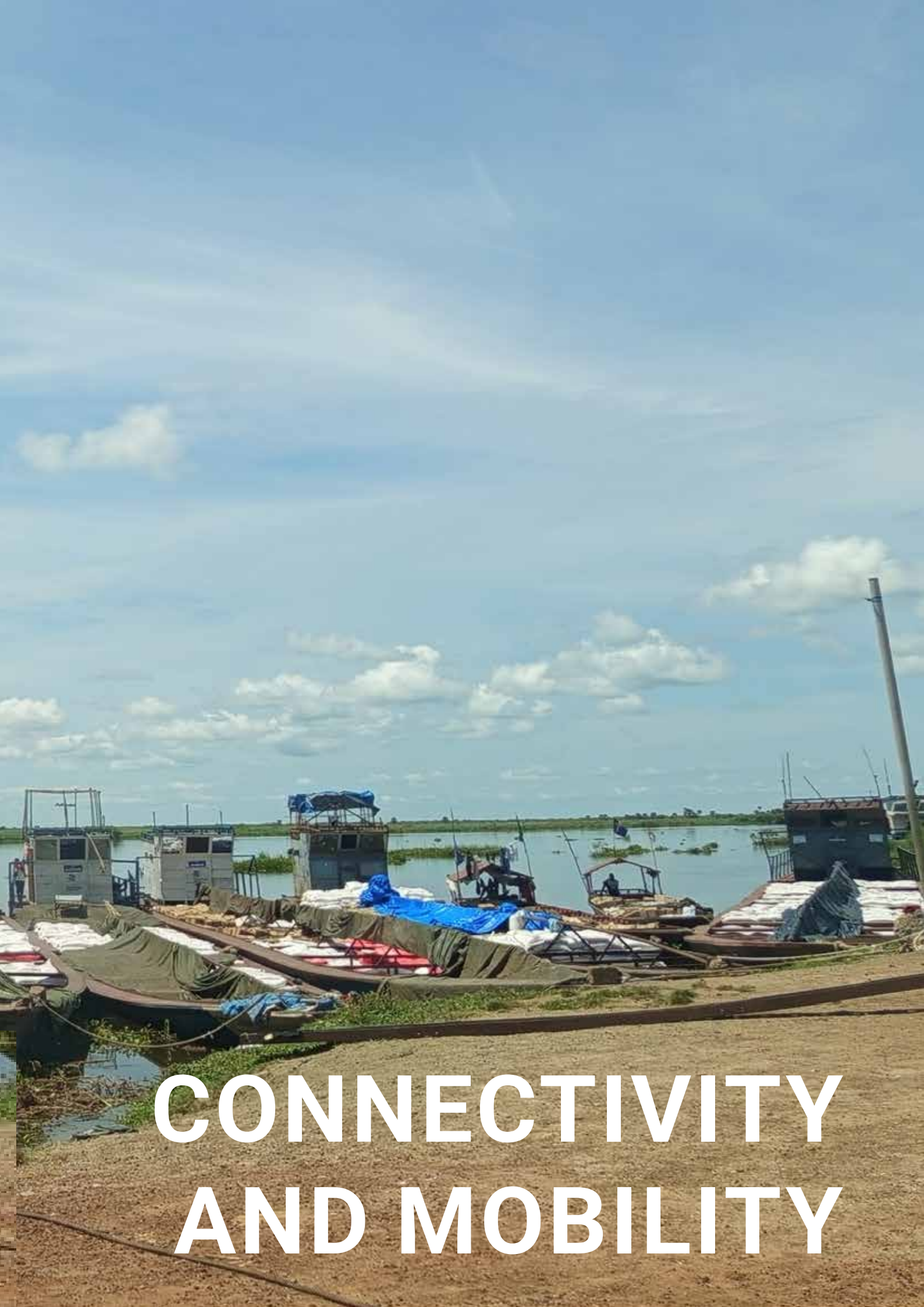
Fig. 37: Flooding return in 100 years in Malakal
Source: @UN-Habitat Flood risk analysis 2025


UN-HABITAT
MAP 15: VULNERABILITY TO FLOOD - MALAKAL
UN-Habitat 2025
% of the city
exposed to high flood
35%
65%
% of the city
exposed to medium flood
MEDIUM FLOOD
between 3 – 5 m
HIGH FLOOD
More 5 m
Areas most exposed
to flooding in Malakal
Source:@UNHabitat 2025,
Openstreetmap, geofrabrik 2025
Hai Salam 1*
0
0.75
1.5
2.25 km

04



Fig. 38: Malakal Central Port
Source: @UN-Habitat 2024



CONNECTIVITY AND MOBILITY

4.4 CONNECTIVITY AND MOBILITY

4.4.1 ROAD NETWORK

Malakal's location along the White Nile and its proximity to border routes has historically positioned the city as a gateway for trade and transit between Upper Nile, Jonglei, Unity states, and Sudan.

Today, Malakal remains a strategic transport hub, linking northern corridors toward Renk and Sudan with southern connections toward Juba.

Historically, a hierarchical road grid connected neighborhoods to radial corridors leading north to Renk and south toward Juba, enabling urban circulation and inter-state commerce.
This transport role is reinforced by an internal street hierarchy, still visible in OpenStreetMap directories, which show legacy routes such as Nagdiar Road, Nile Avenue, Sharia Arubaini, and the Malakal–Nasser Road.

The Sudan crisis has further strained Malakal's fragile transport system.

- **Large flows of displaced populations** congest the Renk–Malakal corridor, while
- **decades of conflict, recurrent flooding,** and limited investment have severely weakened the network.

These pressures have degraded the city's once well-organized grid of primary, secondary, and tertiary roads, constraining mobility, markets, and humanitarian access.

Most roads in Malakal are unpaved earthen tracks, which become muddy and nearly impassable during the rainy season**.**

Seasonal flooding isolates entire neighborhoods and humanitarian camps, forcing agencies to rely on boats for evacuations and supply deliveries.

Accessibility challenges hinder residents' mobility, disrupt humanitarian logistics, and exacerbate health risks due to stagnant water and poor drainage.

Hydro-climatic risk: Seasonal flooding, dyke breaches, and high-water tables damage carriageways and embankments, periodically severing the Malakal–Renk and feeder roads despite emergency works.

Maintenance & materials: Road bases lack durable sealing and proper drainage. Emergency grading provides temporary relief but requires sustained funding and routine cycles to prevent rapid deterioration.

Security & access: Population influxes, contested land, and protection risks along transit corridors complicate movement planning and increase operating costs for humanitarian and private transporters.

Institutional capacity & finance: Underfunded response plans and limited local budgets impede systematic rehabilitation, asset management, and climate-proofing of the network.

ROAD NETWORK ASSESSMENT

Highway Rebek - Malakal - Juba

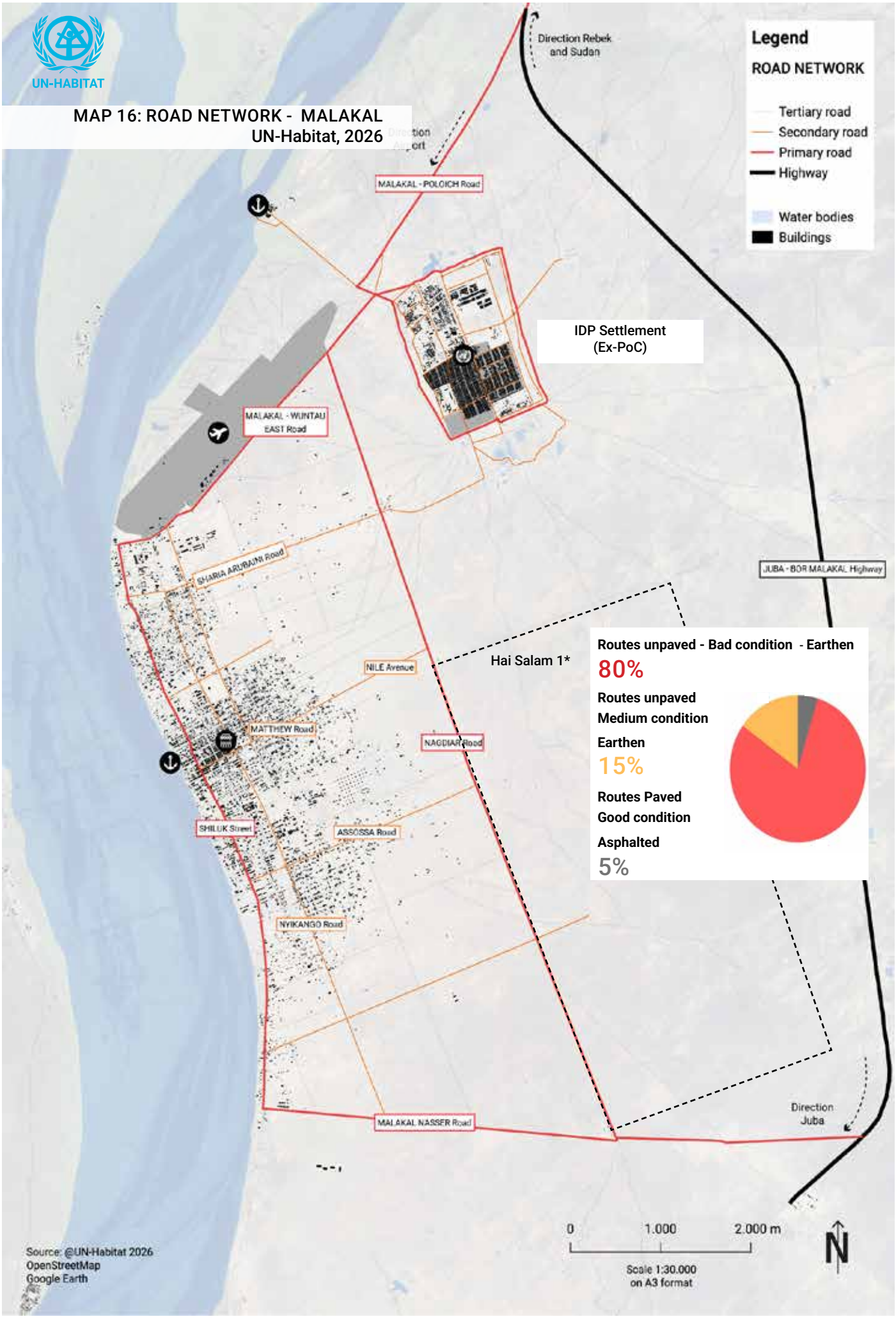
14.516 km

Primary Roads

36.116 km

Secondary Roads

43.234 km


UN-HABITAT
MAP 16: ROAD NETWORK - MALAKAL
UN-Habitat, 2026
Direction Rebek and Sudan
Legend
ROAD NETWORK
Tertiary road
Secondary road
Primary road
Highway
Water bodies
Buildings
MALAKAL - POLOICH Road
IDP Settlement (Ex-PoC)
MALAKAL - WUNTAU EAST Road
SHARIA ARUBAINI Road
JUBA - BOR MALAKAL Highway
Hai Salam 1*
NILE Avenue
MATTHEW Road
NAGDIAR Road
SHILUK Street
ASSOSSA Road
NYIKANGO Road
MALAKAL NASSER Road
Direction Juba
Routes unpaved - Bad condition - Earthen
80%
Routes unpaved
Medium condition
Earthen
15%
Routes Paved
Good condition
Asphalted
5%
0
1.000
2.000 m
Scale 1:30.000
on A3 format
N
Source: @UN-Habitat 2026
OpenStreetMap
Google Earth

4.4 CONNECTIVITY AND MOBILITY

4.4.2 TRANSPORT SYSTEM

Malakal functions as a critical staging node for UNMISS, WFP, and development and humanitarian partners, coordinating air, land, and river operations across Upper Nile and beyond. Its strategic location along the White Nile reinforces its role as a lifeline for trade, mobility, and humanitarian logistics in a region where reliable transport is often disrupted by conflict and flooding.

Malakal Port: The city's central port, rehabilitated in 2003, remains central to riverine transport but suffers from poor maintenance, space limitations, and the absence of proper jetties. Boats are forced to dock along the riverbank, worsening congestion and reducing operational efficiency. Despite these constraints, water transportation continues to play a crucial role in this landlocked region, with the White Nile serving as a vital artery for trade and humanitarian supply chains.

Malakal Airport: Located just north of the central business district near Upper Nile University, Malakal Airport is one of South Sudan's airports, although prior to the conflict served as international airoport together with the one in Juba. With a single asphalt runway measuring 2 000 meters, it has historically served as a staging point for United Nations operations and humanitarian missions. Alongside Juba International Airport, Malakal Airport provides critical connectivity for both emergency response and regional mobility.

UNMISS Facilities: Complementing public infrastructure, UNMISS maintains its own logistical facilities in Malakal, including port and airport assets. These installations strengthen the city's role as a humanitarian hub, ensuring that aid delivery, troop movements, and emergency evacuations remain possible even under challenging conditions

Despite the challenges on the Road network recent rehabilitation efforts have begun to restore connectivity. The Paloch–Malakal corridor (Malakal–Melut) and the Malakal–Akoka link, rehabilitated by UNMISS engineers, have improved access, reduced travel times, and supported life-saving humanitarian operations. These works demonstrate the potential of targeted investments to stabilize the network and enhance resilience. **Additionally, the rising of the humanitarian port next to Banmfu (Bangalesh Marine Force Unit) has supported the resilinece of this critical infrastructre to flooding.**

Together, Malakal's port, airport, and UNMISS facilities form the backbone of its transport system. Yet, persistent challenges—maintenance gaps, congestion, and limited investment—continue to undermine efficiency. Strengthening these infrastructures is essential to ensure reliable connectivity, reduce operational bottlenecks, and enhance resilience in the face of recurrent crises.

Moving forward:

- **Climate-proofing road infrastructure** with durable sealing, drainage systems, and embankment reinforcement.
- **Scaling up rehabilitation** of primary and secondary corridors to ensure year-round accessibility.
- **Integrating flood resilience measures** such as dikes, elevated carriageways, and improved drainage to reduce seasonal disruptions.
- **Strengthening institutional capacity** for asset management, financing, and long-term maintenance cycles.
- **Leveraging partnerships** between humanitarian actors, government, and development agencies to align emergency works with sustainable recovery.



Fig. 39: Malakal earthen road- good condition, South Sudan
Source: @UN-Habitat 2025

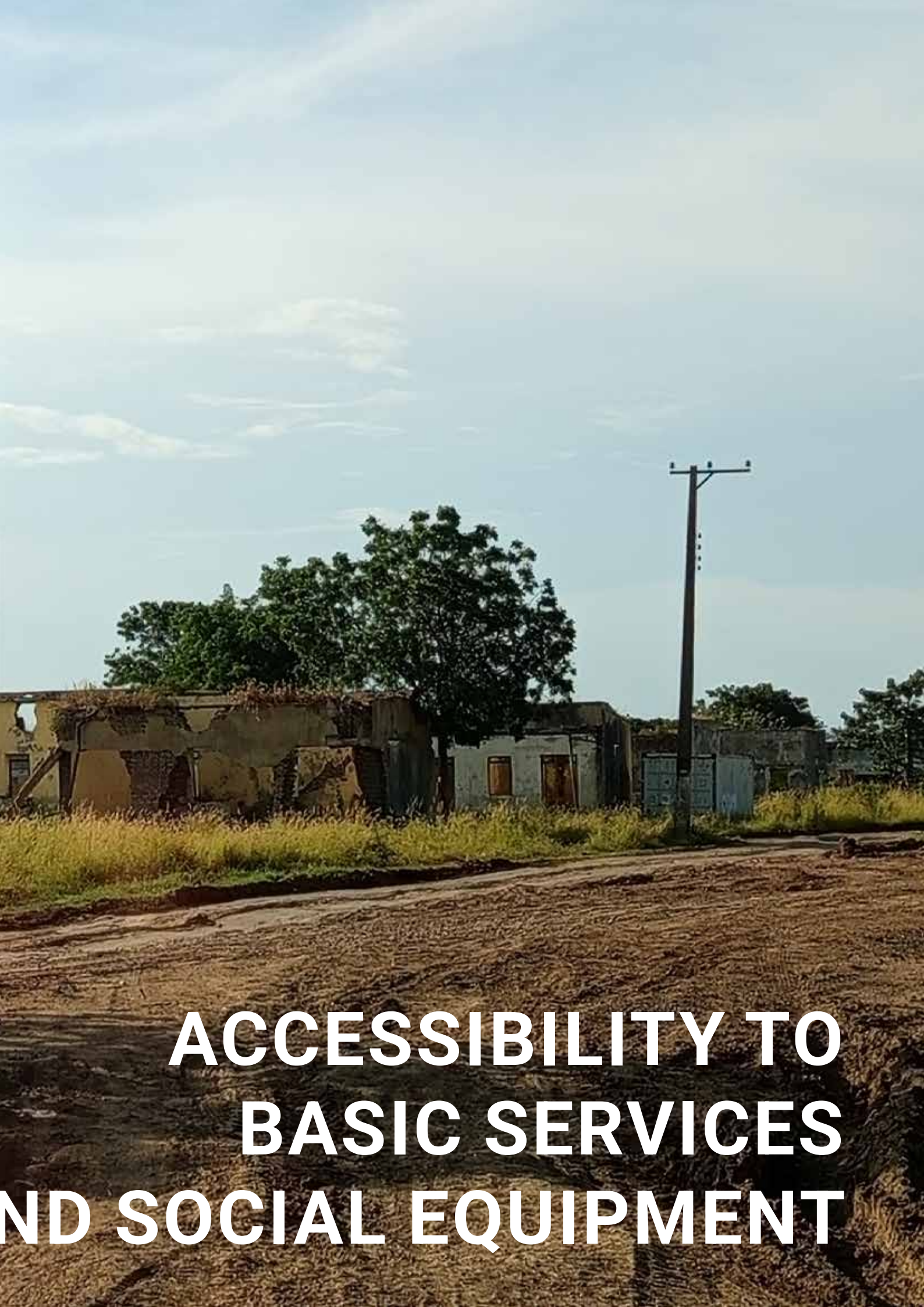


Fig. 40: Malakal Transport system example, South Sudan
Source: @UNHCR 2026

04



Fig. 41: Malakal road with not operational electricity network
Source: @UN-Habitat 2024



ACCESSIBILITY TO BASIC SERVICES ND SOCIAL EQUIPMENT

4.5 ACCESSIBILITY TO BASIC SERVICES

4.5.1 WATER AND ELECTRICITY NETWORK

Malakal faces significant challenges in the provision and distribution of basic services. Years of conflict, displacement, and recurrent flooding have severely disrupted infrastructure, leaving large portions of the city underserved. Essential services such as water supply, electricity, and waste management operate far below capacity, creating critical gaps in coverage and quality.

WATER SUPPLY

Malakal's water system has been severely compromised since the conflict. According to the South Sudan Urban Water Corporation (SSUWC), the town currently receives only 1.500 m³ of water daily, which represents just 10% of its original capacity.

This drastic reduction forces many residents to rely on untreated river water from the White Nile, exposing them to waterborne diseases and health risks. The limited supply also means that piped water coverage is minimal, and most households depend on manual collection or informal vendors.

In Malakal, the state of water provision reflects the entirely different situation as the city recovers from war and flooding. SSUWC considers Malakal's water network non-functional, whereas field research suggests that three of the operational points are from a piped system. In total there are only 26 water points recorded, of which 20 are operational. Other than the three piped water points, there are 10 storage tanks and 5 public standpoints or taps.

Limited access: Nearly half of Malakal's residents report that fetching water takes over 30 minutes, reflecting both scarcity and distance to sources.

Infrastructure strain: The influx of returnees from Sudan and demographic growth has placed additional pressure and demand on already fragile water and sanitation systems.

Reliance on humanitarian support: Much of the water supply is facilitated by humanitarian agencies, with piped water, boreholes and trucking serving displaced populations and sites.

Key challenges:

- **Past surveys:** including JICA's technical assessments) highlighted issues with water quality, poor drainage, and contamination risks, especially during floods.
- **Seasonal flooding** and poor road conditions disrupt water trucking and limit access to boreholes.
- **Health risks:** Stagnant water and inadequate drainage increase exposure to waterborne diseases.
- **Severe shortage:** Only 10% of original water capacity available. -
- **Infrastructure gaps:** Aging pipelines and lack of treatment facilities.

IOM has undertaken significant efforts to improve water distribution in Malakal, particularly in the reintegration areas with a water distribution system that serves the areas of Hai Matar and Hai Luakat and the ex-PoC. The agency also envisions a water distribution plan for the entire city, with the 'Urban Water Supply System Plan of Malakal 2035.

ELECTRICITY

Electricity provision in Malakal is fragile

The city's power grid does not cover all neighborhoods, leaving large areas in darkness. Even where panels and generators exist, many are non-functional due to poor maintenance and lack of spare parts. This unreliable supply affects as well safety and security.

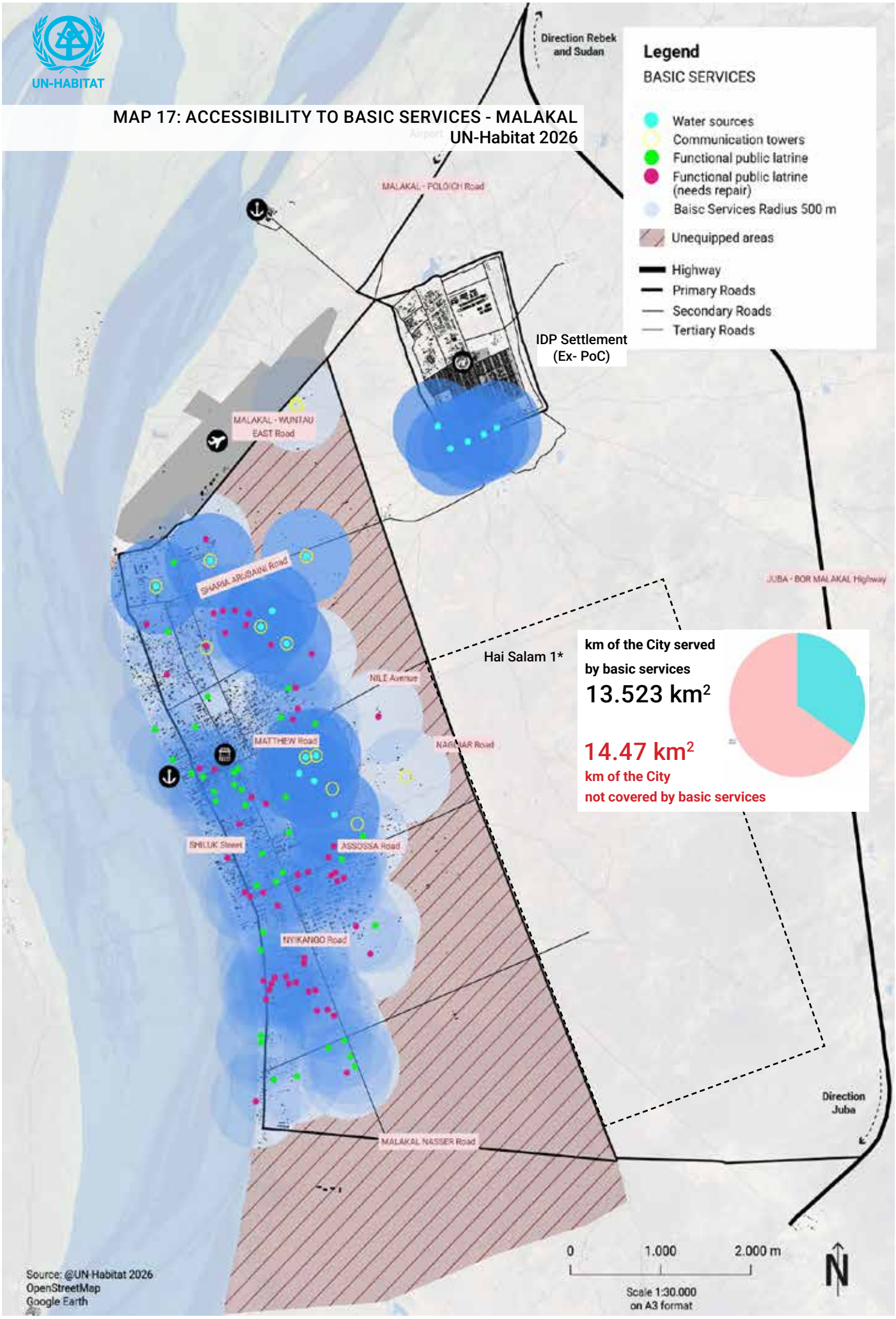
Key Challenges

- **Partial coverage -** Many areas remain off-grid
- **Frequent outages** - Panels and systems often fail

  Impact on services - Hospitals and schools struggle to operate without consistent power

UN-HABITAT

MAP 17: ACCESSIBILITY TO BASIC SERVICES - MALAKAL
UN-Habitat 2026



4.5 ACCESSIBILITY TO BASIC SERVICES

4.5.2 WASTE MANAGEMENT

In the city of Malakal, waste management has become one of the most pressing urban challenges. The city, already burdened by rapid growth and the influx of displaced people fleeing conflict, struggles to cope with the mounting pressures of solid and liquid waste.

Recurring floods only worsen the situation, spreading waste into residential areas and contaminating water sources. Malakal currently lacks a formal dumpsite, creating a major environmental and public health challenge. Most solid waste is burned in open spaces, releasing harmful smoke and increasing air pollution. This practice not only degrades air quality but also poses respiratory risks to resident. The International Organization for Migration (IOM) has proposed a project to establish a proper waste disposal site, but implementation remains pending.

Malakal has 193 recorded latrines, of which 84 are not functional. Of these, 71 percent are not functioning due to damage from conflict, and a further 23 percent are damaged due to flooding. Of the functional latrines, 61 percent were full or almost full, 63 percent do not have a lock and only 44 percent are segregated by gender. 65 percent are community or government owned (with government only making up 5 percent), and 21 percent are privately owned (REACH 2025).

Latrines are clustered in the city center and near the river, forcing residents on the outskirts to walk long distances for basic sanitation. Local informants consistently point to a reliance on NGOs for maintenance, underscoring the fragility of the system.

Consequences

- **High waste volumes:** Camps and humanitarian hubs in Malakal generate over 1,800 cubic metres of waste monthly, much of it biodegradable or recyclable.
- **Limited infrastructure:** Collection and disposal systems are weak, leading to open dumping and accumulation.
- **Health risks:** Waste accumulation contributes to water contamination, vector-borne diseases, and environmental degradation.

Looking forward, organizations like WasteAid and the International Organization for Migration (IOM) have proposed a project to establish a proper waste disposal site, but implementation remains pending. **Nature based solutions, such as wetlands and green buffers, could help filter runoff** and reduce flood-related contamination, while a formal dumpsite would provide the backbone of a safer, more resilient system.

Challenges on accessibility to urban basic services

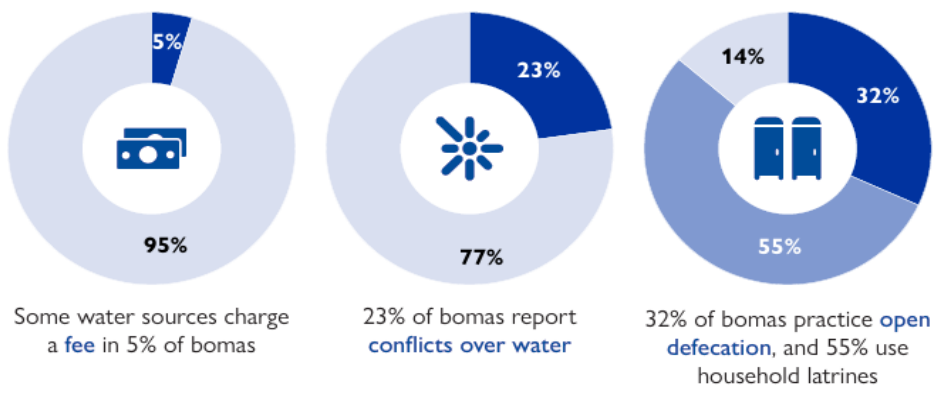


Fig. 42: Village Assessment Survey Malaka results basic services
Source: @IOM_Village Assessment Survey (VAS) Malakal South Sudan, January 2025



Fig. 43: Anarchic waste deposit in the ex-PoC, Malakal South Sudan
Source: @UN-Habitat 2024



Fig. 44: Waste sorting by DACs communities, Malakal South Sudan
Source: @UNHCR 2026

4.5 ACCESSIBILITY TO SOCIAL EQUIPMENTS

4.5.3 EDUCATIONAL FACILITIES

Before the outbreak of the conflict in 2013, Malakal had a relatively strong education system, with 69 educational facilities serving the city and surrounding areas, which 36 are government-owned and managed. However, these schools were central to community life, providing access to basic education for thousands of children. The conflict inflicted severe damages: many schools were destroyed, looted, or repurposed as shelters during the fighting.

Today, the situation remains fragile.

Only about half of these schools, roughly 26 (see list displayed), are operational, and even these face significant challenges such as overcrowding, lack of teaching materials, and inadequate sanitation facilities. Following the UN-Habitat principle of 15 minutes walking distance from a social equipment, large portions of the city remain underserved, with **more than 50% of Malakal's population lacking access to educational facilities within reasonable distance or capacity (UN-Habitat analysis 2025).**

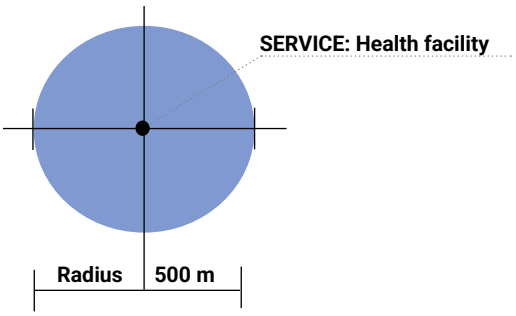
This gap has forced many children out of school, increasing risks of illiteracy and child labour. However, there are initiatives to reconstruct damaged but relevant educational facilities as:

- **Joshua Primary School** (recently rehabilitated by UNHCR in the project EU INTPA, October 2025).
- **Upper Nile University,** the main higher education institution in the area and has been rehabilitated for administrative functions.

Key features of the current education

- **Limited classroom** space leading to double-shift systems.
- **Shortage of qualified teachers,** many of whom fled during the conflict.
- **Damaged infrastructure,** with temporary learning spaces replacing permanent structures.

UN-HABITAT WALKING DISTANCE PRINCIPLE



WALKING DISTANCE 15 minutes

The 15-Minute City model emphasizes compact, accessible urban environments where residents can reach essential services within a short walk or bike ride. This is to ensure that daily needs, such as education, healthcare, and social activities, are available within a 500-meter radius, the most practical distance for active mobility.

Applying this principle to Malakal:

- **Urban Area Coverage:** Out of Malakal's total urban area of 29.281 km², only 6.271 km² is served by educational facilities within a 500-meter radius.
- **Gap in Access:** This leaves 23.010 km² means 78.6% of the urban area, outside the effective reach of educational services.

According to the IOM Village Assessment Survey (January 2025) only 26 schools out of 69 are currently functional, and all of these use English as the primary language of instruction, following the New South Sudan Curriculum.

Educational Facilities by Status/Type

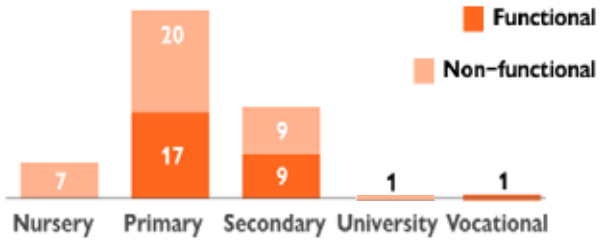
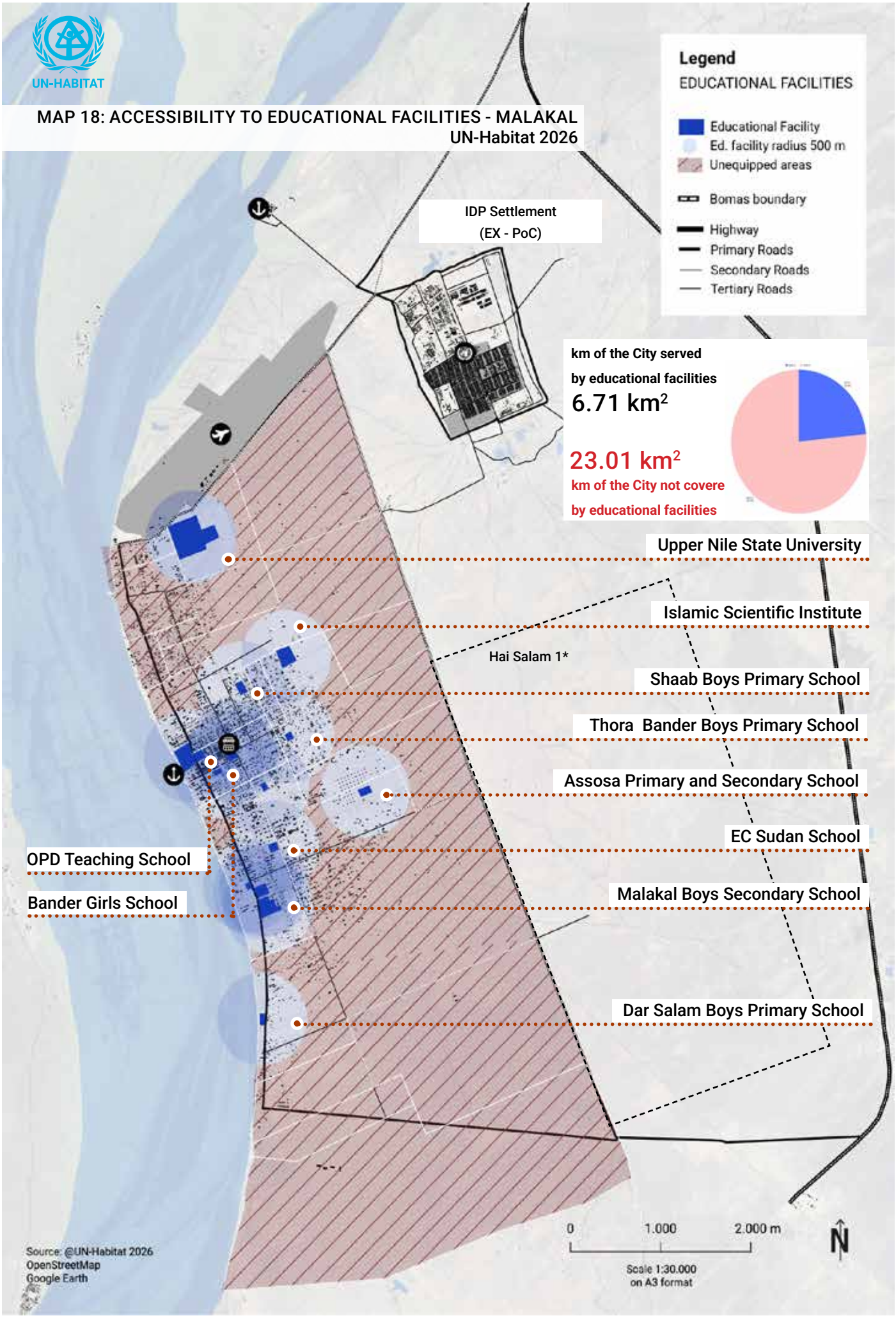


Fig. 45: Village Assessment Survey Malaka results, educational facilities

Source: @IOM_Village Assessment Survey (VAS) Malakal South Sudan, January 2025


UN-HABITAT
MAP 18: ACCESSIBILITY TO EDUCATIONAL FACILITIES - MALAKAL
UN-Habitat 2026
Legend
EDUCATIONAL FACILITIES
Educational Facility
Ed. facility radius 500 m
Unequipped areas
Bomas boundary
Highway
Primary Roads
Secondary Roads
Tertiary Roads
IDP Settlement
(EX - PoC)
km of the City served
by educational facilities
6.71 km2
23.01 km2
km of the City not covere
by educational facilities
Upper Nile State University
Islamic Scientific Institute
Hai Salam 1*
Shaab Boys Primary School
Thora Bander Boys Primary School
Assosa Primary and Secondary School
EC Sudan School
OPD Teaching School
Bander Girls School
Malakal Boys Secondary School
Dar Salam Boys Primary School
0
1.000
2.000 m
Scale 1:30.000
on A3 format
N
Source: @UN-Habitat 2026
OpenStreetMap
Google Earth

4.5 ACCESSIBILITY TO SOCIAL EQUIPMENTS

4.5.4 HEALTH FACILITIES

Health services in Malakal have faced similar setbacks. Across Upper Nile State, UNICEF reported 112 functional health facilities in 2023, with Malakal hosting a portion of these.

Before the conflict, the city had a network of clinics and a referral hospital serving as a regional health hub. Fighting and displacement disrupted this system, leaving many facilities damaged or abandoned. Currently, while some clinics and the main hospital have resumed operations, coverage remains inadequate.
Malakal's population lacks access to health facilities in terms of space and capacity, forcing residents to travel long distances or rely on humanitarian mobile clinics.

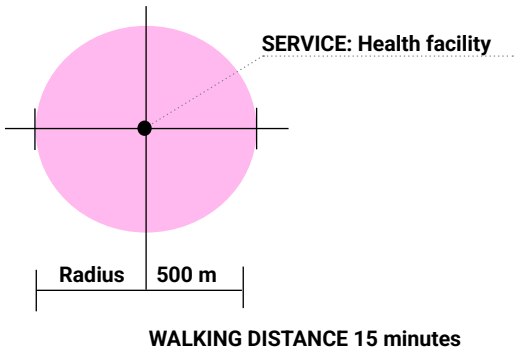
According to the assessment done by REACH 2024, on 11 health facilities in Malakal Town **over a third of the facilities were reportedly non-operational** due to damage that occurred during the conflict.

Functional health facilities

Health center (2)
Hospital (1)
Mobile clinic (3)
Referral hospital (1)

- Out of the 7 functioning facilities 5 were public, while 2 were handled privately.
- **Lack of power was reported at 4 of the 7 facilities.**
- **Only 2 public facilities were reported to have available water.**
- **Critical shortages of medicines** and equipment, especially for maternal and child health was reported in 3 facilities.
- **Dependence on humanitarian actors for emergency services and disease response.**

UN-HABITAT WALKING DISTANCE PRINCIPLE



The UN-Habitat 15-Minute City principle applied in Malakal for the distribution of health facilities, reveals that:

Urban Area Coverage: Out of Malakal's total urban area of 29.281 km², only 3.07 km² is served by educational facilities within a 500-meter radius.

Gap in Access: This leaves 26.11 km², or 89.2% of the urban area, outside the effective reach of educational services.

Generally, in the town overburdened facilities struggle to meet demand for host and displaced communities. In addition, according to the IOM Village Assessment Survey (January 2025), 80% of the 23 Bomas residents are not satisfied about the health facility provided in their boma.

Reasons for Dissatisfaction of health services

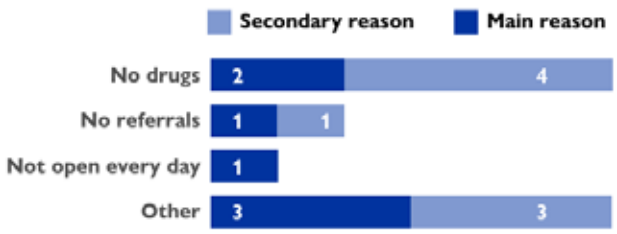
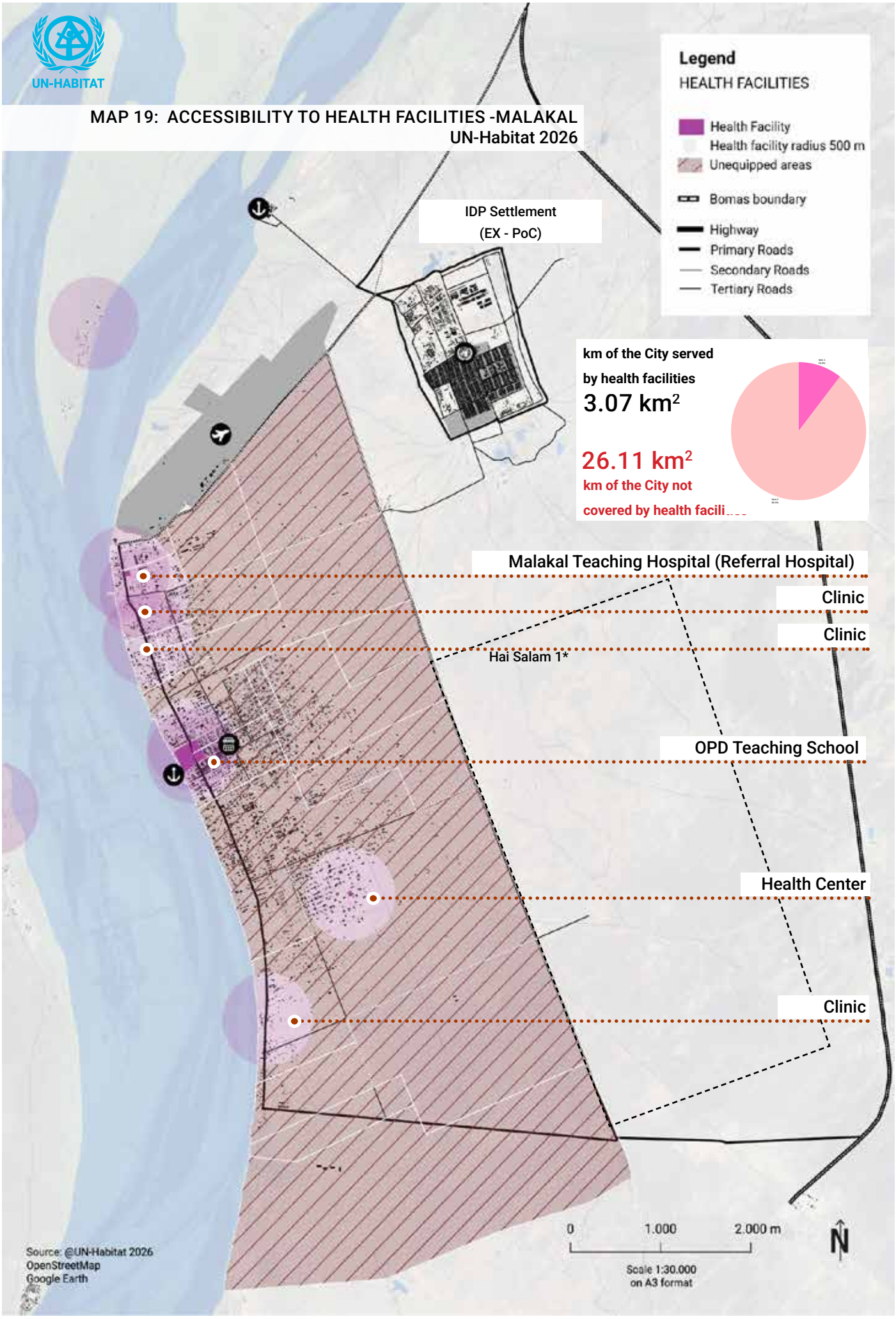


Fig. 46: Village Assessment Survey Malakal results, Health facilities
Source: IOM_Village Assessment Survey (VAS) Malakal South Sudan, January 2025

UN-HABITAT

MAP 19: ACCESSIBILITY TO HEALTH FACILITIES -MALAKAL
UN-Habitat 2026



4.5 ACCESSIBILITY TO PUBLIC SPACES

4.5.5 ECONOMIC HUBS AND URBAN LIFE

Malakal had long been more than a commercial and administrative hub, it was the cultural and social heart of Upper Nile State, with public spaces that shaped daily life. Even amid conflict and recurring floods, these areas continued to serve residents, displaced communities, and humanitarian actors.

1. Malakal Central Market

Situated by the White Nile, the market remained one of the city's busiest public spaces, where traders, fishermen, and consumers met. In dry seasons, UNOCHA-REACH maps confirmed its role as a key economic and social node. Floods, however, forced closures and displaced trade into overcrowded temporary sites. REACH's JMMI data (May 2024) showed functionality at 59.1, down from 83.1 in March 2023 largely due to affordability pressures: the MSSMEB had risen 121% and the food basket 124%.

Other Relevant Markets are

- **Hai Matar Market, realised in 2026 by IOM**
- **Malakal Fresh Fish Market, planned to be realised in 2026 from FAO**

2. Nile Beach

Close to the market, Nile Beach had been a cherished leisure spot for families and youth, offering boat rides, gatherings, and informal sports. Floods eroded the riverbank and washed debris ashore, limiting use for long periods. Still, its riverside setting represented a strong community anchor.

3. Malakal Stadium & Gathering Grounds

The Malakal Stadium—though modest in scale—serves as a venue for youth football matches, community events, and occasional public ceremonies. During conflict, it was repurposed as a site for temporary shelter and coordination. It has since resumed hosting local sports, helping mend community bonds. Still, its infrastructure, benches, perimeter walls, and field drainage needs refurbishing to reduce injury risk and ensure reliable functionality, especially after rains.

4. Religious and Civic Squares

Open-air spaces around St. Joseph's Cathedral and Fath El Rahman Mosque remained central for worship, dialogue, and festivals. Flood-damaged roads and sidewalks constrained access, disrupting civic and spiritual rhythms.

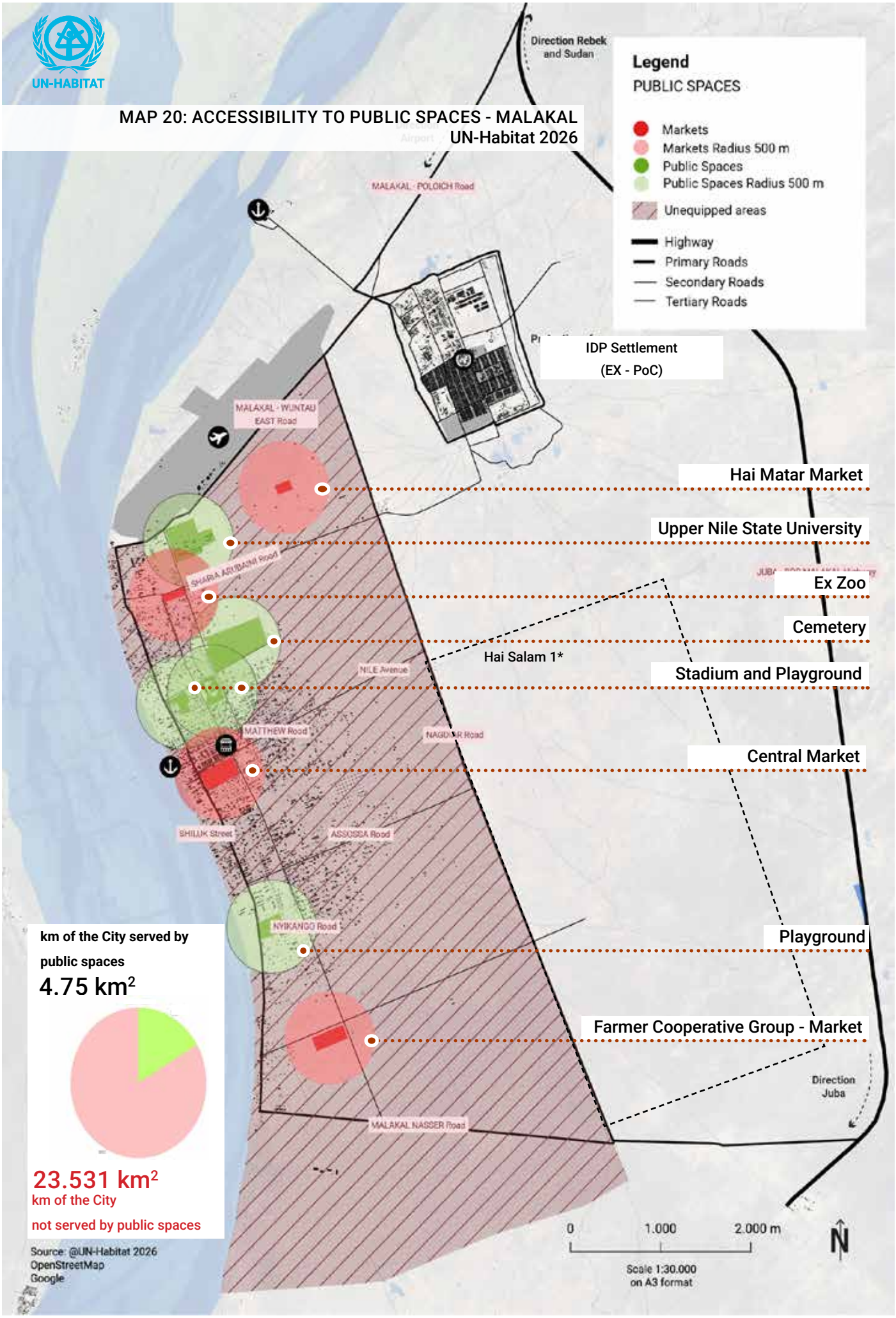
5. Zoo, University Grounds & Cultural Hubs

Before conflict, the zoo and Upper Nile University grounds served as green retreats for families and students. The zoo became less active, but the campus still held potential for revitalization, which could have sparked wider renewal of Malakal's public realm. Additionally, several Public Spaces have been planned inside the Protection of Civilian Site, such as a market, two churches and a playground. Hence with the degradation of the site also these spaces have been affected in urban health and sanitation mainly.

Key Challenges in Public Spaces in Malakal

Malakal's public spaces had once been central to social, cultural, and economic life, but they faced persistent obstacles that limited their reliability and long-term value. These challenges reflected both environmental pressures and infrastructure decline, while also highlighting the strategic importance of open areas during crises:

- **Flood vulnerability:** Most spaces lay in flood-prone zones, limiting usability.
- **Infrastructure decay:** Damaged walkways, drainage, and seating reduced safety and appeal.
- **Under-served populations:** Over half the city lacked adequate public facilities, leaving many neighborhoods without accessible gathering areas.
- **Humanitarian role:** Markets and stadiums were often converted into emergency shelters or coordination points, underscoring their strategic importance.


UN-HABITAT
MAP 20: ACCESSIBILITY TO PUBLIC SPACES - MALAKAL
UN-Habitat 2026
Direction Rebek and Sudan
Legend
PUBLIC SPACES
Markets
Markets Radius 500 m
Public Spaces
Public Spaces Radius 500 m
Unequipped areas
Highway
Primary Roads
Secondary Roads
Tertiary Roads
IDP Settlement
(EX - PoC)
MALAKAL - POLOICH Road
MALAKAL - WUNTAU EAST Road
SHARA AZUBAINI Road
NILE Avenue
MATTHEW Road
NAGDUR Road
SHILUK Street
ASSOSSA Road
NYIKANGO Road
MALAKAL NASSER Road
Hai Matar Market
Upper Nile State University
Ex Zoo
Cemetery
Hai Salam 1*
Stadium and Playground
Central Market
Playground
Farmer Cooperative Group - Market
Direction Juba
km of the City served by public spaces
4.75 km2
23.531 km2
km of the City
not served by public spaces
Source: @UN-Habitat 2026
OpenStreetMap
Google
0
1.000
2.000 m
Scale 1:30.000
on A3 format
N

4.6 LOCAL URBAN ECONOMY

4.6.1 MUNICIPAL FINANCIAL OVERVIEW

Precise financial figures for Malakal are difficult to obtain because city-level GDP, revenue, and budget data are not regularly published in South Sudan.Because there is no official Malakal GDP, analysts typically estimate economic output from population and regional activity:

Estimated local economy: US $150 million to US $400 million annually (broad indicative range based on agriculture, trade, aid spending, and oil-service activity).

Major sectors

- **Trade and logistics via White Nile river port.**
- **Agriculture and livestock.**
- **Oil-services linked to Upper Nile oil fields.**
- **Humanitarian and NGO expenditures.**

Key Revenue Sources

1. River-port trade and transport services.
2. Agricultural production and livestock markets.
3. Government administration as the capital of Upper Nile State.
4. Oil-sector supply chains serving nearby producing regions.
5. Humanitarian operations and donor-funded projects.

Between December 2025 and January 2026, IOM's Transition and Recovery Unit (TRU) carried out a Labour Market Assessment (LMA) in Malakal Town, Upper Nile State, building on data collected in 2024 under a regional initiative responding to the Sudan crisis. The updated findings are intended to guide IOM's livelihood and enterprise-focused interventions in Greater Malakal, while identifying opportunities for expansion.

Although Malakal County's market is gradually expanding, it continues to face structural challenges, including limited product diversity, high unemployment, skills gaps, and restricted liquidity. Agriculture-related activities and small shops remain the primary sources of income, underscoring the urgent need for skills development in administration, agriculture, construction, renovation, automotive services, and machinery.

The consumer survey revealed several notable trends: households reported difficulties in accessing food items locally, with most adhering strictly to minimum expenditure baskets and aligning spending closely with income levels. While market access generally posed no major risks, vulnerable groups expressed concerns. Despite growth, the market still offers limited variety.

The job seeker survey highlighted particularly high unemployment rates in Malakal city. Findings showed that vocational and technical education is strongly correlated with higher employment outcomes. However, many job seekers rely on a single income source, and vocationally trained individuals often struggle to establish businesses without access to start-up support.



Fig. 45: Fath El Rahman Mosque, Malakal, South Sudan
Source: @UN-Habitat 2024

4.7 OVERALL SOCIO-SPATIAL DIAGNOSTIC

In December 2025, UN-Habitat and UNHCR convened a Validation of the Analysis Workshop in Malakal, applying a SWOT Analysis framework to guide the socio-spatial assessment.

This structured approach—examining

- **Strengths,**
- **Weaknesses,**
- **Opportunities, and**
- **Threats**

was conducted in a participatory manner, ensuring that community voices and institutional partners jointly shaped the findings. **The process not only provided a balanced understanding of internal challenges and external opportunities but also reinforced ownership and accountability among stakeholders.**

The workshop brought together a diverse set of actors: community representatives from Hai Matar, humanitarian partners including UNMISS, UNMAS, IOM, and others, as well as local authorities from the Department of Urbanism of the Ministry of Housing, Land and Public Utilities of Upper Nile State.

This exercise built upon the October 2024 workshop, where UN-Habitat and UNHCR's preliminary spatial analysis was shared, validated, and enriched by participants.

The key challenges identified include:

- **Exposure to flooding and other natural hazard**
- **Insufficient road network and weak infrastructure, limiting accessibility**
- **Security concerns, linked to the lack of reliable energy supply**
- **Poor living conditions in the former Protection of Civilian site, due to inadequate sanitation and limited water access**

By validating these findings through a participatory SWOT process, the workshop created a shared evidence base for future investment and resilience-building. For donors, this represents a critical opportunity: targeted interventions in infrastructure, energy, and basic services can directly address vulnerabilities while unlocking the potential for sustainable urban recovery.



Fig. 46: Participatory exercise during visioning Workshop, Malakal, South Sudan

Source: @UN-Habitat 2025

SWOT ANALYSIS

TOPIC	STRENGTHS	WEAKNESS	OPPORTUNITIES	THREATS
URBAN GROWTH & DEMOGRAPHICS	High proportion of youth population	Climate-induced displacement and conflict-driven migration High population growth pressures services and infrastructure Lack of updated city census data	Harness demographic potential through youth employment programs Planned urban expansion and reintegration initiatives	Uncontrolled urban sprawl Rising pressure on housing and basic services Social tensions arising from displacement
CLIMATE HAZARDS & ENVIRONMENT	Presence of natural ecosystems suitable for Nature-Based Solutions Growing awareness of climate adaptation needs	Absence of flood risk response and protection systems Rising White Nile River levels Inadequate drainage systems Extensive settlement in flood-prone areas	Invest in resilient infrastructure Mainstream climate adaptation into urban planning Promote Nature-Based Solutions	Increased flood damage Public health crises Loss of livelihoods resulting from climate shocks
INFRASTRUCTURE & CONNECTIVITY	Strategic road improvement initiatives underway Potential to connect markets and communities	Large proportion of unpaved and poorly equipped roads Limited connectivity between bomas Predominance of informal transport systems	Road network improvement projects (World Bank initiative) Integrated transport planning Infrastructure investments to stimulate local trade and economic growth	Project implementation delays High maintenance costs Risk of unequal access if infrastructure is poorly planned
LAND USE & SETTLEMENT PATTERNS	Significant land availability for future development and expansion	Weak land-use planning and regulatory frameworks High proportion of undeveloped land (61% in 2026) Residential decline (18%)	Housing reconstruction and urban renewal Land-use restructuring Reclamation of abandoned land for productive use	Land disputes Encroachment into flood-prone areas Continued abandonment if reintegration efforts fail
BASIC SERVICES & SOCIAL INFRASTRUCTURE	Existing donor and community support mechanisms Ongoing urban water supply initiatives	Unequal service distribution across bomas Insufficient schools and health facilities Poor sanitation and weak waste management Limited access to safe drinking water	Expansion of water supply systems (IOM initiatives) Urban Water Supply System Plan of Malakal 2035 Donor-supported education and health infrastructure Community-based service delivery models	Widening service delivery gaps Disease outbreaks Increasing inequality between neighborhoods and bomas
ECONOMIC DEVELOPMENT	Existing informal economy provides livelihood opportunities Potential workforce due to youthful population	High unemployment and limited livelihood opportunities Weak formal economy and dependence on informal activities	Development of green jobs and small enterprises Strengthening local markets and formal economic sectors	Persistent poverty Continued dominance of the informal economy Youth frustration and social instability

Fig. 47: Socio-Spatial Diagnostic Overview Table

Source: @UN-Habitat 2026

4.7 OVERALL SOCIO-SPATIAL DIAGNOSTIC

To complement this, a map including Area where to discourage urban development and current spatial - chhallenges was developed.

The map also identifies areas where urban development should be discouraged, such as flood-prone zones, land close to the White Nile, and agricultural areas requiring preservation.

The inclusive methodology ensures that proposed solutions are not only technically sound but also socially legitimate, paving the way for impactful, community - driven development outcomes.

This spatial guidance will inform future development proposals, ensuring that planning processes address the critical challenges while also leveraging opportunities for sustainable urban growth.





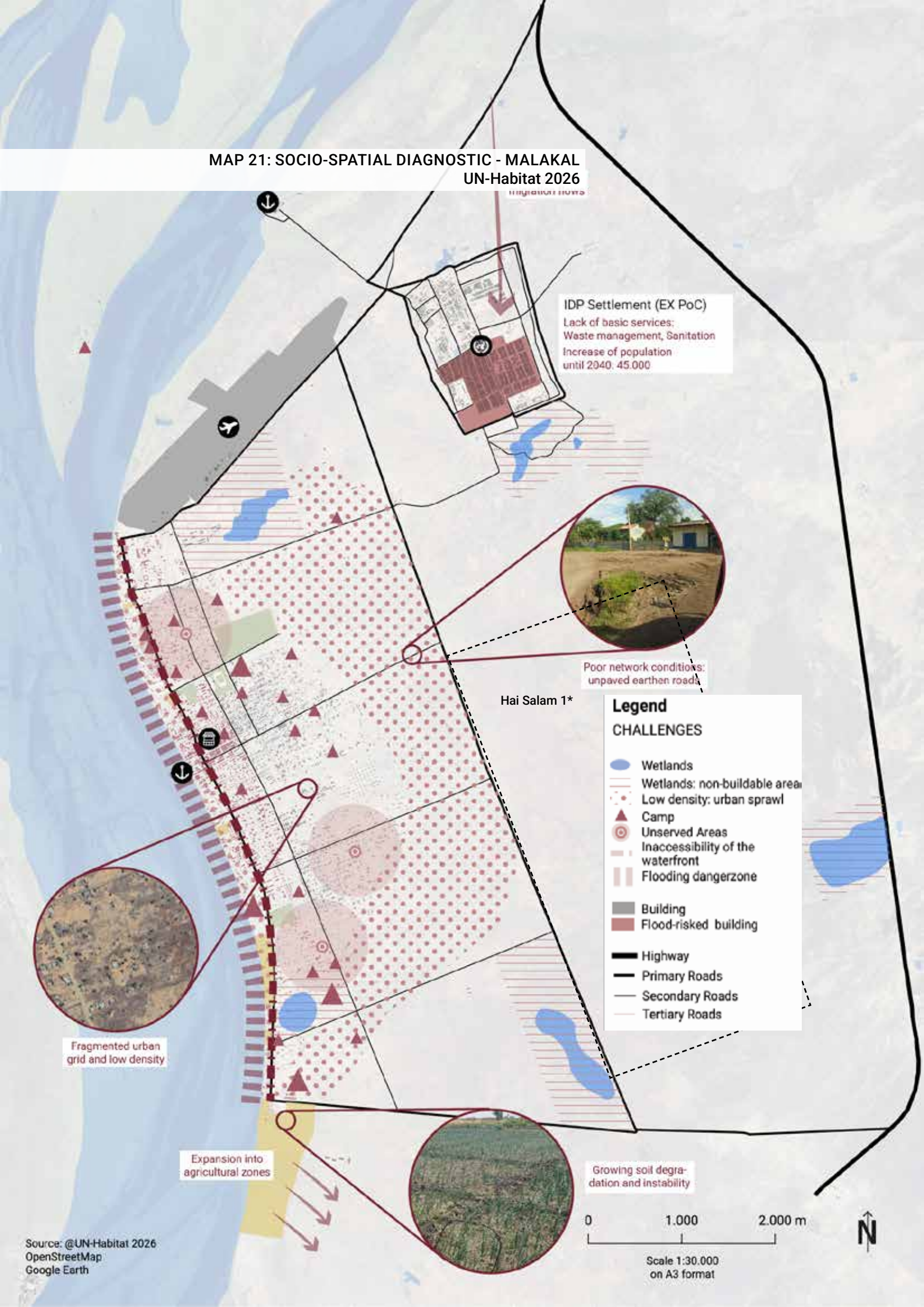
Fig. 48: Participatory exercise during visioning Workshop, Malakal, South Sudan
Source: @UN-Habitat 2025

RECOMMENDATIONS

TOPIC	REOMMENDATIONS
URBAN GROWTH & DEMOGRAPHICS	Urban Population Database Youth Employment Strategy Planned Urban Expansion Reintegration and Social Cohesion Programs Inclusive Urban Governance
CLIMATE HAZARDS & ENVIRONMENT	Flood Risk Management Plan Urban Drainage Infrastructure Protection of Flood-Prone Areas Nature-Based Solutions Climate Adaptation Mainstreaming
INFRASTRUCTURE & CONNECTIVITY	Road Network Upgrading Integrated Transport System Rural-Urban Connectivity Infrastructure Maintenance Program Inclusive Infrastructure Planning
LAND USE & SETTLEMENT PATTERNS	City Master Plan Land Administration Strengthening Urban Renewal & Redevelopment Abandoned Land Reclamation Hazard-Aware Development Control
BASIC SERVICES & SOCIAL INFRASTRUCTURE	Water Supply Expansion Sanitation and Waste Management Improvement Health Infrastructure Strengthening Educational Facility Expansion Community-Based Service Delivery
ECONOMIC DEVELOPMENT	Local Economic Development Strategy SME and Entrepreneurship Support Green Jobs Promotion Informal Economy Formalization Local Market Strengthening Youth Employment Programs

Fig. 49: Socio-Spatial Reccomandation Table
Source: @UN-Habitat 2026

MAP 21: SOCIO-SPATIAL DIAGNOSTIC - MALAKAL
UN-Habitat 2026



Source: @UN-Habitat 2026
OpenStreetMap
Google Earth

05

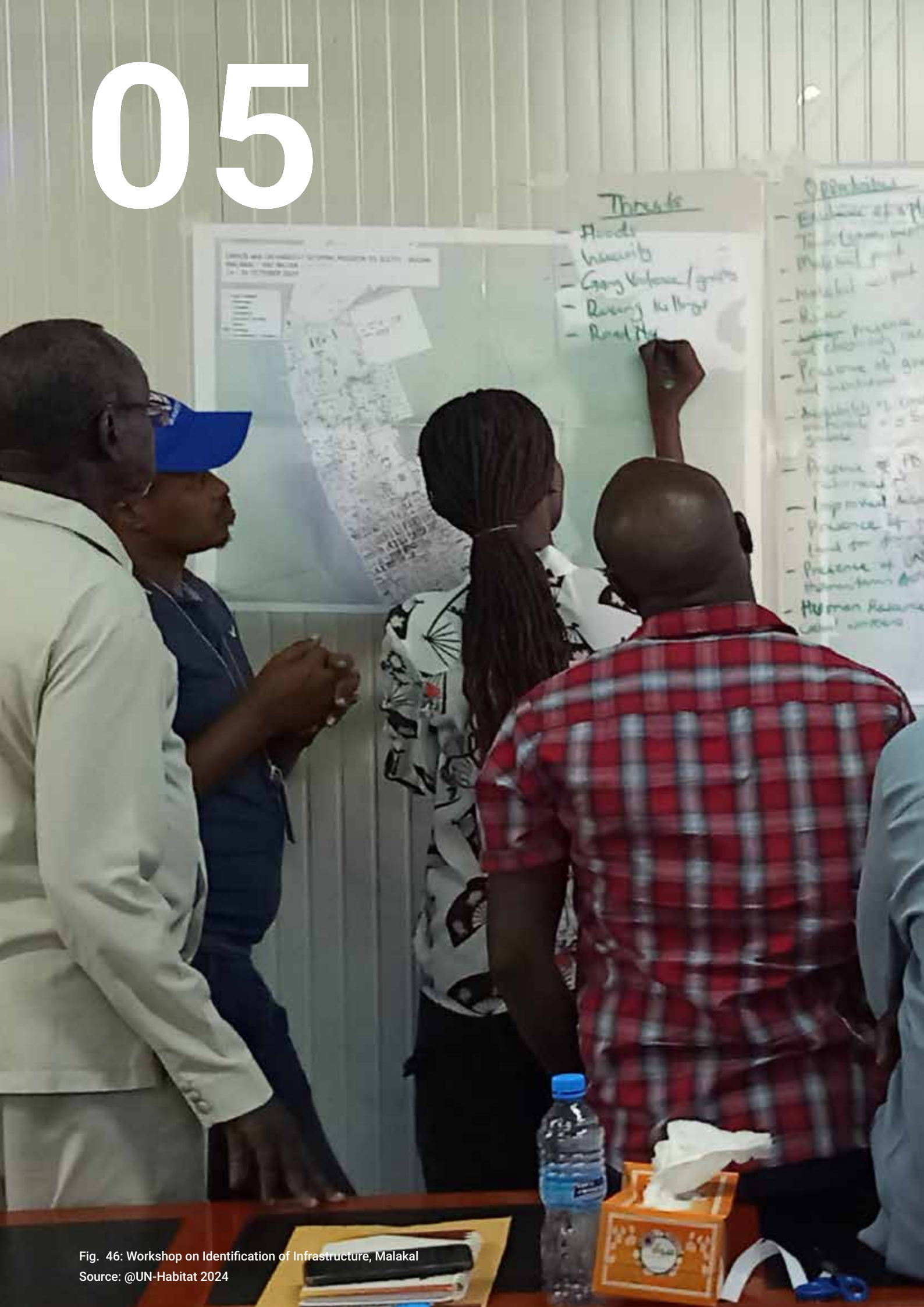


Fig. 46: Workshop on Identification of Infrastructure, Malakal
Source: @UN-Habitat 2024



STRATEGIC DEVELOPMENT

5.1 VISIONING PLANNING PROCESS

INTEGRATED STRATEGIC URBAN PLAN BOUNDARY

The identification of the boundary for the Malakal Integrated Urban Strategic Plan was a decisive step preceding the formulation of the Urban Vision. This process was jointly developed with UNHCR country offices in Malakal and Juba, the Upper Nile State Ministry of Land, Housing and Public Utilities (MLHPU) echnical representatives, and validated through workshops with development humanitarian partners and representative of Diplaced affected communities.

Four distinct areas were identifed

1. ADMINISTRATIVE BOUNDARIES - MALAKAL CITY

2. AREAS CLEARED WITHIN MALAKAL CITY - UNMAS

3. RETURN AND REINTEGRATION AREAS - UPPER NILE STATE GOVERNMENT

4. MALAKAL INTEGRATED STRATEGIC PLAN BOUNDARY

These boundaries have been discussed extensively during bilateral meetings with the MHLPU, and validated through site visits to ensure accessibility of the proposed areas for future urban development.

Several reintegration areas have already been cleared of unexploded ordnance and environmental hazards, while clearance operations continue in other locations to ensure safe and sustainable settlement.

The completion of the clearance operations provide the foundation for safe resettlement, urban expansion, infrastructure development, and long-term recovery in Malakal, enabling affected communities to rebuild their lives in a secure and sustainable environment.

Following, the Vision Area boundary the process focused on formulating a collective

Urban Vision for Malakal

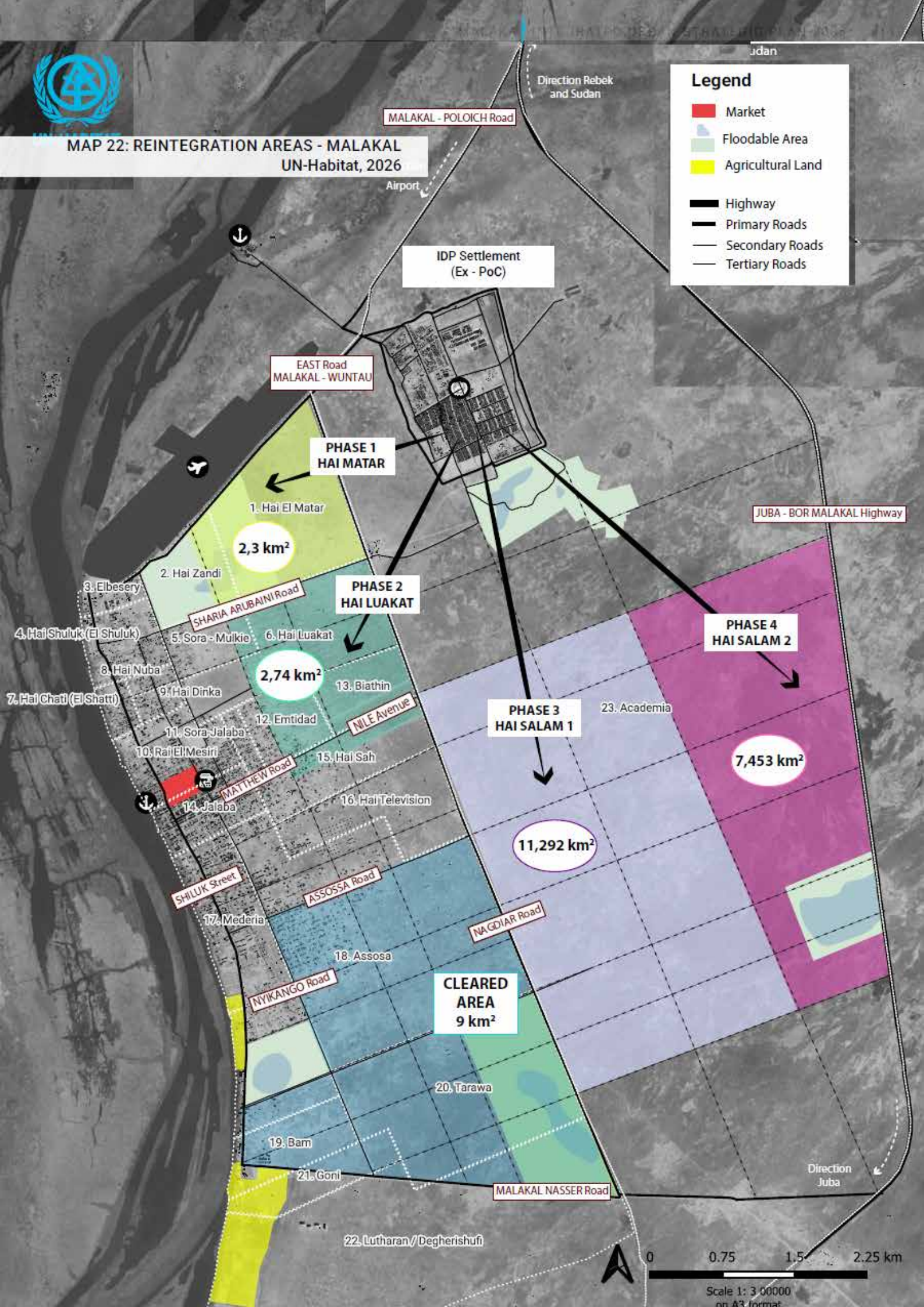
An Urban Vision serves as a strategic roadmap, defining the desired spatial, social, economic, and environmental future of a city over a 10–15 year horizon.

Malakal's Urban Vision looks ahead to 2035

It reflects the long term aspirations of national and state governments, Displaced affected and Host communities, and local stakeholders, **into a broader urban narrative that connects local priorities with city wide and State - Regional and National frameworks.**

From this point forward, the Urban Vision and the Action Plan will refer to the boundary identified for the Malakal Integrated Settlement Plan, ensuring that urban development is concentrated in safe, cleared zones and aligned with long-term resilience and inclusivity objective.

.


MAP 22: REINTEGRATION AREAS - MALAKAL
UN-Habitat, 2026
Legend
Market
Floodable Area
Agricultural Land
Highway
Primary Roads
Secondary Roads
Tertiary Roads
Direction Rebek and Sudan
MALAKAL - POLOICH Road
Airport
IDP Settlement (Ex - PoC)
EAST Road MALAKAL - WUNTAU
PHASE 1 HAI MATAR
1. Hai El Matar
2,3 km²
2. Hai Zandi
3. Elbesery
SHARIA ARUBAINI Road
PHASE 2 HAI LUAKAT
4. Hai Shuluk (El Shuluk)
5. Sora - Mulkie
6. Hai Luakat
2,74 km²
8. Hai Nuba
9. Hai Dinka
7. Hai Chati (El Shatti)
13. Biathin
12. Emtidad
NILE Avenue
11. Sora Jalaba
10. Rai El Mesiri
15. Hai Sah
MATTHEW Road
14. Jalaba
16. Hai Television
JUBA - BOR MALAKAL Highway
PHASE 4 HAI SALAM 2
PHASE 3 HAI SALAM 1
23. Academia
7,453 km²
11,292 km²
SHILUK Street
ASSOSSA Road
17. Mederia
NAGDIAR Road
18. Assosa
NYIKANGO Road
CLEARED AREA 9 km²
20. Tarawa
19. Bam
21. Goni
MALAKAL NASSER Road
Direction Juba
22. Lutharan / Degherishufi
0
0.75
1.5
2.25 km
Scale 1: 3 00000
on A3 format

5.1 VISIONING PLANNING PROCESS

1. MALAKAL ADMINISTRATIVE BOUNDARIES | UPPER NILE STATE GOVERNMENT

Covering the 23 bomas that constitute Malakal

1. Hai Matar
2.Hai Zandi
3.Elbesery
4.Hai Shilluk
5.Sora - Mulkia
6.Luakat
7.Hai Dinka
8.Hai Nuba
9.Rai 1
10.El Mesiri
11.Hai Chati
12.Biathin
13.Emtidad
14.Hai Sah
15.Hai Television
16.Sora-Jalaba
17.Jalaba
18. Assosa
19.Mederia
20.Goni
21.Bam
22.Tarawa Dengherishufi
23.Hai Salam 1

2. AREAS CLEARED WITHIN MALAKAL CITY | UNMAS

Since April 2023, the United Nations Mine Action Service, has been carrying out demining and land clearance activities in Malakal to ensure safety and security prior to any urban interventions.

This clearance is a compulsory prerequisite for the Malakal Strategic Plan, providing guidance on the safe use of land. Areas designated by the State Government have already been cleared, while activities in other sites assigned by the Ministry of Housing, Land and Public Utilities (MHLPU) are pending confirmation.

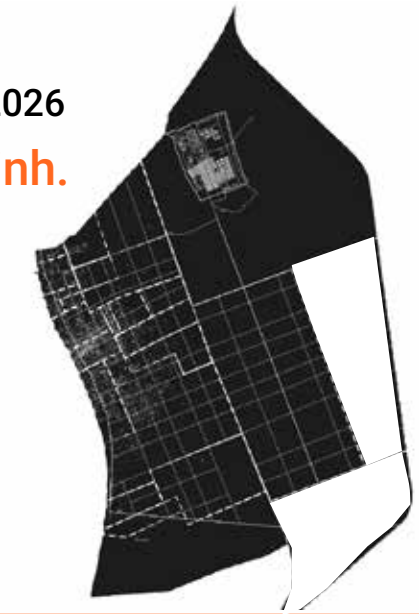
The clearance of the southern part of Malakal, which had also been contaminated, is nearing completion. **The total area cleared in Southern Malakal will amount to 9 km².**

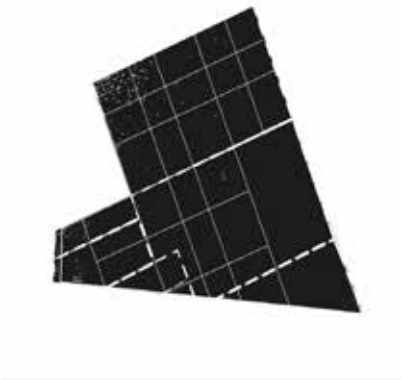
Total Municipal area 2026

40.88 km²

Population 2026

233 412 inh.
(MHLPU 2026)





3. RETURN AND REINTEGRATION AREAS | UPPER NILE STATE GOVERNMENT

Four sites have been identified by the State Ministry of Land, Housing and Public Utilities of Upper Nile State for the reintegration of approximately 45,000 IDPs from the former Protection of Civilians site. Thi is being implemented through an Area-Based Coordination model, led by the State Governor, the Relief and Rehabilitation Commission (RRC), and the Area-Based Coordinator, with technical support from UNHCR and UN-Habitat.

Hai Matar _ 2.3 km²: For IDPs holding pre-conflict land ownership titles. Clearance finalized by UNMAS in early 2023.

Hai Luakat _ 2.74 km²: For IDPs holding pre-conflict land ownership titles. Clearance finalized by UNMAS in April 2025.

Hai Salam 1 _ 11.29 km²: For IDPs holding pre-conflict land ownership titles.
Clearance has not yet started.

Hai Salam 2 _ 7.45 km²: For IDPs without prior land ownership rights. Clearance has not yet started.Clearance has not yet started.

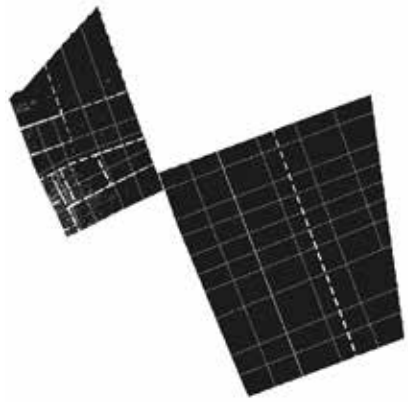


Fig. 51: Reintegration Areas and area planning
Source: @UN-Habitat 2025

4. MALAKAL INTEGRATED STRATEGIC PLAN BOUNDARY | UN-HABITAT

UN-Habitat has carefully assessed the different boundaries influencing the future development of Malakal in order to define the perimeter of the Integrated Strategic Plan for 2035. This work encompasses the administrative boundaries that include host communities residing in the town, the areas designated by the State Government for the reintegration of (IDPs) with varying land tenure statuses, as well as the future expansion zone of Hai Salam 2.

Malakal City + Hai Salam 2 =
40.88 km² + 7.45 km²

The population considered within this boundary includes the current number of IDPs from the former (PoC) site, projected population growth of 2035, and ideal calculated densities.

Population 2026 projection (4%) + IDPs Ex PoC
233 412 inh. (4%) + 39 800 IDPs =
332 000 inh + 39 800 IDPs = 371 800 inh

Total area Malakal Integrated Strategic Urban Plan boundary 2035

48.42 km²

Population 2035

371 800 Inh.



5.2 DEVELOPMENT SCENARIO

Given Malakal's fragile socio-urban context, defining a single trajectory of future development is inherently uncertain.

Population fluctuation—driven by displacement, repatriation, and demographic growth—emerges as the critical variable shaping urban dynamics and socio-economic outcomes.
To anticipate risks and opportunities, a chain of plausibility Development Scenario, reviewing potential events and their cascading impacts. This method allows informed assumptions on key variables and supports the identification of strategic alternatives aligned with the city's vision.

Scenario development is a strategic planning tool used to explore how different future conditions might unfold based on current trends, decisions, and external factors. It helps planners and decision-makers anticipate challenges, opportunities, and risks by constructing narratives of the future.

Scenario Framework - Three scenarios have been developed, grounded on the previous socio-spatial analysis and visioning exercises:

1. **Business as Usual (No Intervention)**
2. **Adverse Development (Conflict Spillover + No Intervention)**
3. **Optimal Development (Integrated Plan Implemented)**

In urban and regional planning, the scenarios score key variables across Urban Dynamics and Socio-Economic Outcomes, including:

- **Population growth**
- **Economic trends**
- **Conflict spillover**
- **Environmental pressures**
- **Policy interventions**

Each scenario serves as a structured framework to test strategies, guide investment priorities, and strengthen resilience against uncertainty.

Scenarios typically include the "Business as Usual" scenario which visualizes the future if no significant measures are taken, and the "Optimal" Scenario outlining what should be done instead to achieve the aspirational Malakal urban vision formulated in the previous step.
By comparing multiple scenarios—such as Business as Usual, Optimal Development, and Adverse Conditions—stakeholders can visualize the consequences of action versus inaction and align planning efforts toward the most sustainable and inclusive path.For the sake of clarity, we have summarized the outcomes of the three scenarios. By evaluating how these variables interact, the scenarios highlight both risks and opportunities, ultimately pointing to the Optimal Development pathway as the most favorable pathway for Malakal's development by 2035.

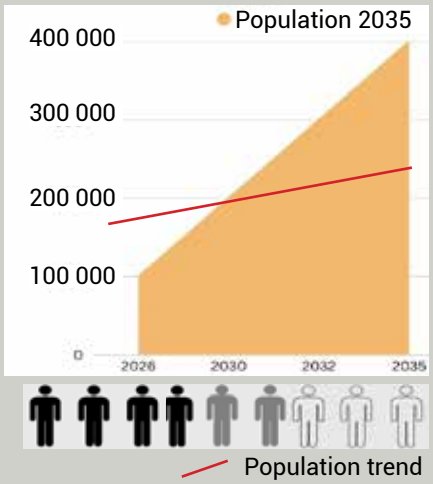
The Optimal Development scenario, once validated, becomes the base for the Malakal Integrated Strategic Plan and following the Action Plan which indicates how various sectors can support this transition, specifies the needed actions, and calls for the implementation of necessary projects in both the short, medium, and long term.

BUSINESS AS USUAL

Population Projection:
~332 000–350 000 (baseline only natural growth at 4%).

Urban Dynamics:
Continued rapid demographic growth without adequate planning.
Expansion of informal settlements in flood-prone zones.
Infrastructure gaps persist (roads, drainage, sanitation).

Social & Economic Outcomes:
High unemployment, reliance on informal economy.
Unequal access to services across bomas.
Weak governance capacity, fragmented donor interventions.



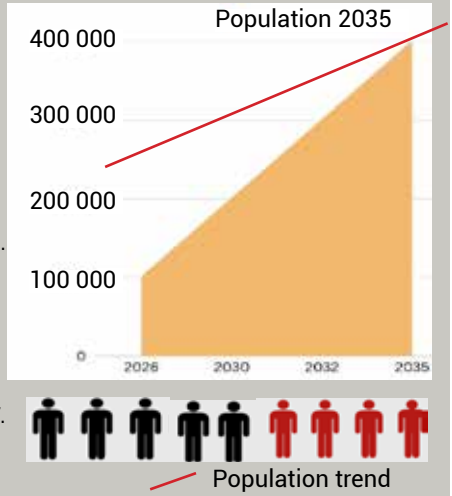
Implication: Malakal remains vulnerable, with humanitarian dependency and limited resilience.

ADVERSE DEVELOPMENT (CONFLICT SPILLOVER + NO INTERVENTION)

Population Projection:
Exceed 400 000 due to forced displacement from conflicts.

Urban Dynamics:
Massive influx of IDPs overwhelms housing and services.
Open land further abandoned or occupied by temporary shelters.
Infrastructure collapse (roads, drainage, sanitation) under pressure.

Social & Economic Outcomes:
Unemployment, food insecurity, and informal survival strategies.
Tensions between host communities and displaced populations.
Governance paralysis, donor fatigue, and risk of renewed instability.



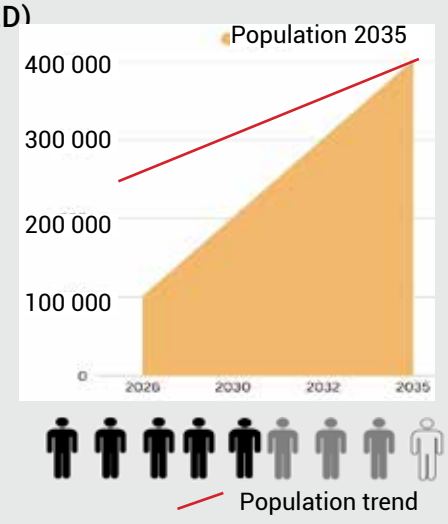
Implication: Malakal becomes a humanitarian crisis hub, with fragile systems unable to cope.

OPTIMAL DEVELOPMENT (INTEGRATED PLAN IMPLEMENTED)

Population Projection:
Approximately 400 000 (growth + reintegration of 39 800 IDPs).

Urban Dynamics:
The Strategic Plan guides expansion, housing reconstruction, and land-use restructuring.
Climate-resilient infrastructure implemented.
Balanced distribution of schools, health facilities, water systems.

Social & Economic Outcomes:
Youth employment through vocational training and green jobs.
Strengthened local markets and formal economy.
Governance capacity enhanced via multi-agency collaboration.



Implication: Malakal becomes a resilient secondary city, capable of absorbing demographic pressures and displacement shocks while fostering sustainable growth.

Fig. 52: Development Scenarios
Source: @UN-Habitat 2026

5.3 STRATEGIC URBAN VISION OF MALAKAL 2035

In December 2025, UN-Habitat and UNHCR led the Strategic Visioning Workshops involving representatives from the Upper Nile State Ministry of Housing, Land and Public Utilities, humanitarian and development partners, and displaced community leaders.
These workshops created an open and inclusive space for dialogue, where participants examined current urban conditions, acknowledged existing assets, and articulated their aspirations for the future of Malakal. Through collaborative mapping, group discussions, and collective problem-solving, stakeholders were able to define

Five interconnected development strategies:

1. Compact City - Managing Demographic Growth and Migration while improving housing, land tenure, and the quality of the urban fabric.

2. Resilient and Sustainable City – Climate Resilience and Natural Resource Valorization to protect from environmental hazards, climate shocks, while ensuring the valorisation of natural resources.

3. Connected City – Mobility and Connectivity Improvement through a road hierarchy and more reliable transport systems.

4. Inclusive City – Equitable Access to Services and Facilities guaranteeing equitable access to water, electricity, education, health, and public spaces, ensuring social cohesion.

5. Vibrant City – Local Economy and Livelihoods Enhancement where markets, agriculture, and local enterprises drive economic opportunities and strengthened livelihoods.

From this shared set of development priorities, participants agreed on the following

Urban Vision Statement for Malakal

By 2035, Malakal will thrive as a RESILIENT and ECONOMICALLY VIBRANT city, EQUIPPED with essential ACCESSIBLE services and empowered through INCLUSIVE COMMUNITY engagement and peacebuilding

ALIGNEMENT WITH THE SUSTAINABLE DEVELOPMENT GOALS

To ensure a sustainable and inclusive development approach, the recommendations proposed also promote awareness and outreach initiatives consistent with the New Urban Agenda 20230, notably the Sustainable Development Goals (SDGs), ensuring coherence with global development priorities.

SUSTAINABLE DEVELOPMENT GOALS (SDGS)

SDG 1 - NO POVERTY
SDG 2 - ZERO HUNGER
SDG 3 - GOOD HEALTH AND WELL-BEING
SDG 4 - QUALITY EDUCATION
SDG 5 - GENDER EQUALITY
SDG 6 - CLEAN WATER AND SANITATION
SDG 7 - AFFORDABLE AND CLEAN ENERGY
SDG 8 - DECENT WORK AND ECONOMIC GROWTH
SDG 9 - INDUSTRY, INNOVATION AND INFRASTRUCTURE
SDG 10 - REDUCED INEQUALITY
SDG 11 – SAFE AND INCLUSIVE UMAN SETTLEMENTS
SDG 12 - RESPONSIBLE CONSUMPTION & PRODUCTION
SDG 13 - CLIMATE ACTION
SDG 14 - LIFE BELOW WATER
SDG 15 - LIFE ON LAND
SDG 16 - PEACE, JUSTICE AND STRONG INSTITUTIONS
SDG 17 - PARTNERSHIPS FOR THE GOALS

SUSTAINABLE DEVELOPMENT GOALS (SDGs)



ALIGNMENT WITH NATIONAL DURABLE SOLUTIONS FRAMEWORK

To ensure that the strategic directions proposed by UN-Habitat—comprising key sectoral recommendations and interventions—were well grounded in National Planning frameworks, an additional process of alignment was undertaken. This involved harmonizing goals and content with national and state-level Durable Solutions frameworks, and relevant national planning regulations.

SOUTH SUDAN DURABLE SOLUTIONS STRATEGY AND PLAN OF ACTION FOR REFUGEES, INTERNALLY DISPLACED PERSONS, RETURNEES AND HOST COMMUNITIES

The Government's Solutions Strategy in South Sudan (2021 and updated in 2023) outlines the following strategic objectives:

- **Create secure and safe environment** for achieving durable solutions;
- **Provide basic services** to support and sustain durable solutions;
- **Support integration** of refugees, IDPs, returnees and host communities including livelihoods;
- **Strengthen government** institutional capacities and relations; and
- **Bolster government** ownership and capacity, partnership arrangements and coordination mechanisms.

THE UPPER NILE STATE, SOUTH SUDAN AREA-BASED DURABLE SOLUTIONS ROADMAP

Build on existing Government led durable solutions for displaced persons and returnees in Upper Nile State (UNS), show tangible results in Malakal and selected locations, build confidence among stakeholders and expand to other areas within the State. Accordingly the Roadmap reflects an agreement between the State Government of Upper Nile and humanitarian, development and peace actors to support the below durable activities for displaced and affected communities:

(1) Establishing safe and sustainable settlements for IDPs and returnees on Government identified and/or non-disputed lands;

(2) Reclaiming individual plots/land for IDPs and returnees title holders via Government processes and linking to support systems to reestablish themselves;

(3) Strengthening area-based support services and livelihoods for vulnerable returnees from the Sudan crisis to enable them to reestablish themselves in their return destination as well as support for the voluntary return of other IDPs;

(4) Strengthening basic/public services infrastructure within Malakal and other key return locations to enhance return conditions including enhancing; security, rule of law, water supply, education, healthcare and livelihoods;

(5) Expanding peace and community cohesion activities, strengthening community based and Government-led projects that aim to minimize conflict between communities and seeking to prevent risk of any further displacement.

5.3 STRATEGIC URBAN VISION OF MALAKAL 2035

By 2035, Malakal will thrive as a RESILIENT and ECONOMICALLY VIBRANT city, EQUIPPED with essential ACCESSIBLE services and empowered through INCLUSIVE COMMUNITY engagement and peacebuilding

1. Compact City - Managing Demographic Growth and Migration

The Compact City strategy promotes efficient land use, targeted densification, and guided urban expansion. By improving land tenure systems, upgrading housing quality, and reinforcing the urban fabric, it seeks to reduce unplanned sprawl and create safer, more organized neighborhoods. This approach aims to decongest the Malakal ex-PoC while consolidating an urban structure that will accommodate future demographic growth.

2. Resilient and Sustainable City – Climate Resilience and Natural Resource Valorization

This Sustainable City enhances climate resilience by mapping hazard prone areas, establishing protective buffers, and advancing sustainable environmental management. Strengthening water systems, preserving wetlands, restoring vegetation, and mitigating environmental risks will secure long term ecological stability. Natural resources will be managed as assets, ensuring resilience and sustainability remain central to Malakal's development.

3. Connected City – Mobility and Connectivity Improvement

The Connected City envisions a functional road hierarchy supported by reliable, inclusive transport systems. Improved access routes, public transport hubs, and multimodal lines will enhance mobility within the city and strengthen regional linkages. This will facilitate trade, expand opportunities, and foster social cohesion.

4. Inclusive City – Equitable Access to Services and Facilities

The Inclusive City strategy reduces disparities by expanding and upgrading essential services—water, electricity, education, health, and public spaces—and ensuring their equitable distribution. Investments in social infrastructure and land use planning will reinforce the social fabric and improve quality of life. It envisions a Malakal where all residents, can access the resources and opportunities they need to thrive.

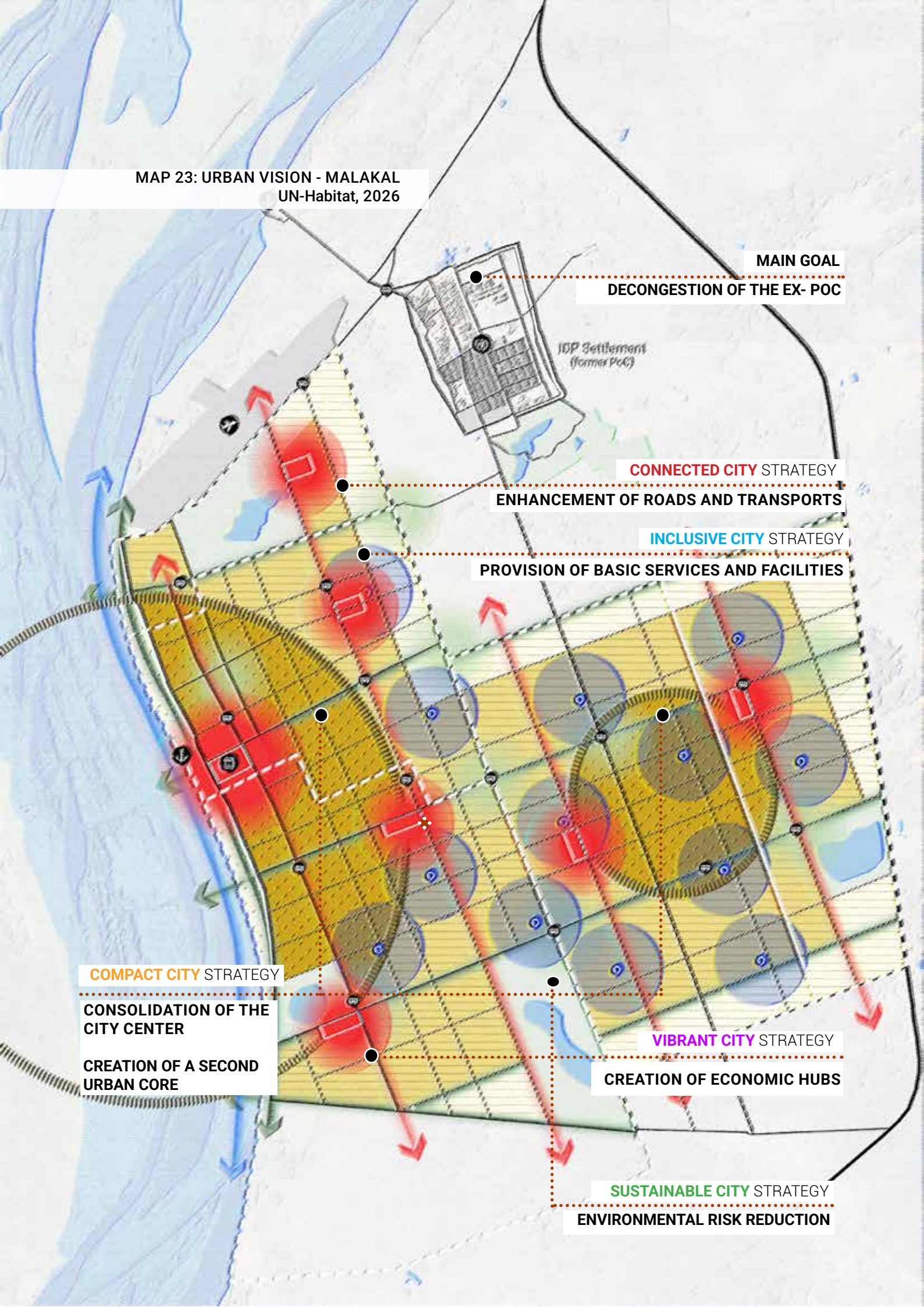
5. Vibrant City – Local Economy and Livelihoods Enhancement

By improving market infrastructure, supporting small and medium enterprises, and reinforcing agricultural value chains, the Vibrant City strategy fosters entrepreneurship, job creation, and income growth. Economic revitalization is vital for Malakal's recovery and stability particularly for youth, women, and vulnerable households.

Overview

Together, these five strategies form a coherent roadmap toward Malakal 2035—a vision shaped not by external assumptions but by the voices, experiences, and hopes of its residents. The approach is integrated, people-centered, and forward-looking, ensuring that each strategic pillar reinforces the others. By embracing compact growth, climate resilience, connectivity, inclusivity, and economic vitality, Malakal is charting a path toward a future that is sustainable, equitable, and full of opportunity.

MAP 23: URBAN VISION - MALAKAL
UN-Habitat, 2026



5.4 DEVELOPMENT STRATEGIES

5.4.1 COMPACT CITY

DEMOGRAPHIC GROWTH AND MIGRATION DYNAMICS MITIGATION

Guide population growth through a structured urban grid that directs expansion toward the city, alleviates pressure on DACs sites, and ensures planned, orderly development.

MAIN CHALLENGE

- **Informal settlements** are increasingly expanding into previously undeveloped and environmentally sensitive areas.
- **Malakal's urban structure is characterized by low population density** and extensive urban sprawl, a trend that has progressively intensified over recent decades.
- **In the absence of effective urban planning** tools and regulatory frameworks, growth has predominantly followed a horizontal pattern, extending the city's boundaries rather than strengthening its internal structure.

OBJECTIVE

This approach seeks to gradually shape the city into a structured urban environment where growth is both welcomed and effectively absorbed. It aims to guide Malakal toward a more organized, compact, and balanced urban form capable of relieving population pressure within the former Protection of Civilians (PoC) displacement site, channeling demographic growth into the formal city structure, and ensuring that future expansion follows a coherent, planned, and manageable spatial framework.

RECCOMANDATIONS

The defined boundary regulating the planned growth of Malakal incorporates the existing urban fabric, while also including unbuilt land to the north, south, and east to accommodate future city expansion and service provision.

KEY INTERVENTIONS (PROJECTIONS 2035)

1. Re-integration of the former PoC
Decongestion and phased integration

2. Consolidation of the City Center
Densification and Infill

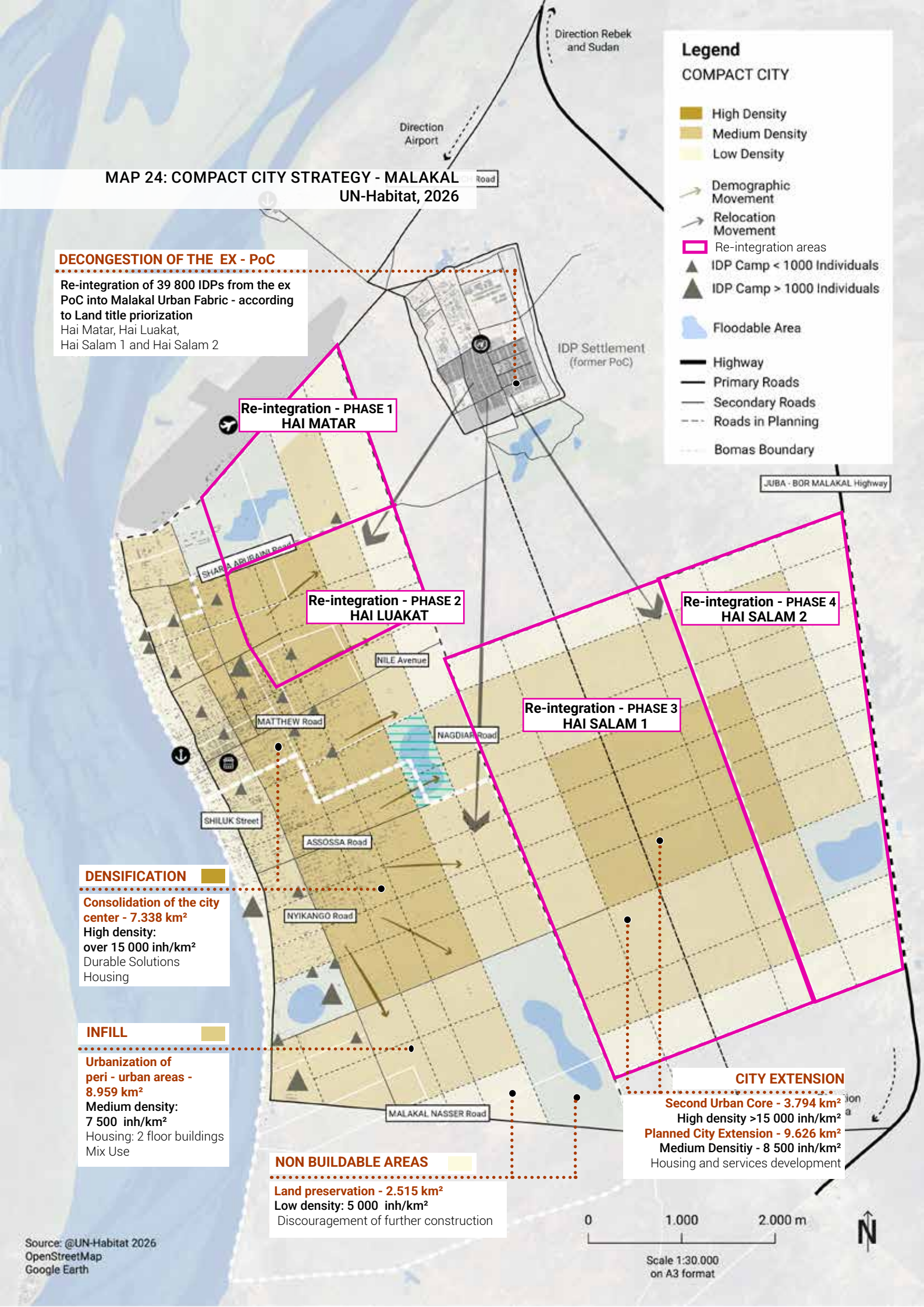
- City center Area - 7.338 km^2
- Population - 110 070 inh.
- **High density >15 000 inh./km^2**

3. Urbanization of the Peri – Urban Area
Planned City Extension

- Peri - Urban Area - 8.959 km^2
- Population - 67 192 inh
- **Medium density - 7 500 inh./km^2**

4. Risk reduction in areas at risk
Low urbanization – land preservation
Vulnerable Areas Identification

- Borders of the City - 2.515 km^2
- Population - 12 575 inh.
- **Low density - 5 000 inh./km^2**


MAP 24: COMPACT CITY STRATEGY - MALAKAL
UN-Habitat, 2026
Direction Rebek and Sudan
Direction Airport
Legend
COMPACT CITY
High Density
Medium Density
Low Density
Demographic Movement
Relocation Movement
Re-integration areas
IDP Camp < 1000 Individuals
IDP Camp > 1000 Individuals
Floodable Area
Highway
Primary Roads
Secondary Roads
Roads in Planning
Bomas Boundary
DECONGESTION OF THE EX - PoC
Re-integration of 39 800 IDPs from the ex PoC into Malakal Urban Fabric - according to Land title priorization
Hai Matar, Hai Luakat,
Hai Salam 1 and Hai Salam 2
IDP Settlement (former PoC)
Re-integration - PHASE 1
HAI MATAR
Re-integration - PHASE 2
HAI LUAKAT
Re-integration - PHASE 3
HAI SALAM 1
Re-integration - PHASE 4
HAI SALAM 2
JUBA - BOR MALAKAL Highway
NILE Avenue
MATTHEW Road
NAGDIAR Road
SHILUK Street
ASSOSSA Road
NYIKANGO Road
MALAKAL NASSER Road
DENSIFICATION
Consolidation of the city center - 7.338 km²
High density:
over 15 000 inh/km²
Durable Solutions
Housing
INFILL
Urbanization of peri - urban areas - 8.959 km²
Medium density:
7 500 inh/km²
Housing: 2 floor buildings
Mix Use
NON BUILDABLE AREAS
Land preservation - 2.515 km²
Low density: 5 000 inh/km²
Discouragement of further construction
CITY EXTENSION
Second Urban Core - 3.794 km²
High density >15 000 inh/km²
Planned City Extension - 9.626 km²
Medium Densitiy - 8 500 inh/km²
Housing and services development
0
1.000
2.000 m
Scale 1:30.000
on A3 format
N
Source: @UN-Habitat 2026
OpenStreetMap
Google Earth

5.4 DEVELOPMENT STRATEGIES

5.4.1 COMPACT CITY

DEMOGRAPHIC GROWTH AND MIGRATION DYNAMICS MITIGATION

Guide population growth through a structured urban grid that directs expansion toward the city, alleviates pressure on DACs sites, and ensures planned, orderly development.

SOUTH SUDAN DURABLE SOLUTIONS STRATEGY AND PLAN OF ACTION FOR REFUGEES, INTERNALLY DISPLACED PERSONS, RETURNEES AND HOST COMMUNITIES

- Create secure and safe environment for achieving durable solutions;
- Support integration of refugees, IDPs, returnees and host communities including livelihoods;
- Strengthen government institutional capacities and relations; and
- Bolster Government ownership and capacity, partnership arrangements and coordination mechanisms.

THE UPPER NILE STATE, SOUTH SUDAN AREA-BASED DURABLE SOLUTIONS ROADMAP

(1) Establishing safe and sustainable settlements for IDPs and returnees on Government identified and/or non-disputed lands;

(2) Reclaiming individual plots/land for IDPs and returnees title holders via Government processes and linking to support systems to reestablish themselves;

DRAFT NATIONAL LAND POLICY (2023)

IMPACTS

The compact city strategy applied in Malakal will promote an optimal urban density distributed across a clear gradient—from the city center and emerging urban cores to main roads and peripheral areas. This approach will consolidate development within already built-up zones while activating vacant and underutilized land within the existing urban fabric.

By fostering a dense and well-organized urban structure, the strategy will reduce overall resource consumption and improve access to essential infrastructure and public services, particularly public transport. It will also lower the financial and operational burden on municipal authorities by decreasing the costs associated with service delivery, maintenance, and infrastructure expansion. At the same time, it will generate positive outcomes for the local economy, strengthen environmental sustainability, and support more cohesive and inclusive social dynamics.

Furthermore, the reintegration of internally displaced persons (IDPs) from the former Protection of Civilians (PoC) site will be carried out in an organized and structured manner. This process will align with formal land tenure systems, ensuring clarity of land rights and responsibilities. It will prevent unplanned and settlement patterns, reduce the risk of mismatches with cadastral records, and ensure consistency with existing land ownership frameworks, ultimately supporting orderly urban development.

EFFICIENT LAND MANAGEMENT AND STRUCTURED URBAN FABRIC



Fig. 53: Example of Urban Development Interventions
Source: @UN-Habitat 2026

5.4 DEVELOPMENT STRATEGIES

5.4.1 COMPACT CITY

DEMOGRAPHIC GROWTH AND MIGRATION DYNAMICS MITIGATION

UN-HABITAT PRINCIPLE OF URBAN DENSITY		
Density Category	**Inhabitants per km²**	**Key Characteristics**
High Density	> 15 000 inh/km²	Compact urban form, efficient land use, strong public transport viability, reduced sprawl.
Medium Density	7 500 – 15 000 inh/km²	Balanced growth, mix of housing types, moderate infrastructure demand.
Low Density	5 000 – 7 500 inh/km²	Suburban/peri-urban character, more land per household, higher infrastructure costs per capita.

PROPOSAL OF URBAN DENSITY MALAKAL				
Density Category	**Inhabitants per km²**	**Location**	**Area**	**Population**
High Density	> 15 000 inh/km²	Urban Core - City center	7.338 km²	110 070
	> 15 000 inh/km	Urban Core - Hai Salam 1	3.794 km²	56 910
Medium Density	7 500	Peri Urban Areas	8.959 km²	67 192
	8 500	Extension Area Hai Salam 1 and Hai Salam 2	9.626 km²	81 821
Low Density	5 000	Borders of the Town	2.515 km²	12 575
	6 000	Borders of Hai Salam 1 and Hai Salam 2	4.959 km²	29 754

PROPOSAL OF HOUSING UNITS		
Area	**Housing Plots per Upper Nile State Government - Durable Solutions**	
Hai Matar	**2 733 residential plots**	PHASE 1 - IDPs with Land Title
Hai Luakat	**1 837 residential plots**	PHASE 2 - IDPs with Land Title
Hai Salam 1	**12 516 residential plots**	PHASE 3 - IDPs with Land Title
Hai Salam 2	**5 005 residential plots**	PHASE 4 - IDPs with no Land Title
Area	**Additional Housing Plots UN-Habitat proposal**	
High Density	**8 153 residential plots (900 m²)**	Urban Core - City center
	4 216 residential plots (900 m²)	Urban Core - Hai Salam 1
Medium Density	**22 398 residential plots (400 m²)**	Peri Urban Areas
	24 065 residential plots (400 m²)	Extension Area Hai Salam 1 and Hai Salam 2
Low Density	**6 288 residential plots (400 m²)**	Borders of the Town
	12 398 residential plots (400 m²)	Borders of Hai Salam 1 and Hai Salam 2

Fig.56: Proposal of needed shelters and density
Source: @UN-Habitat 2025, Minister of Land, Housing and Public Utilities, Upper Nile State

DECONGESTION STRATEGY - IDPs REINTEGRATION IN THE URBAN FABRIC

Assess camp conditions and population: Evaluate overcrowding, services, and vulnerabilities;

Calculate service requirements: Estimate needs for schools, health facilities, water, sanitation, housing, and livelihoods based

Identify reintegration areas: Select suitable urban zones within the city, ensuring access to services within a 5-minute walking catchment (≈500 meters).

HIGH AND MEDIUM DENSITY - DENSIFICATION, INFILL, PLANNED CITY EXTENSION

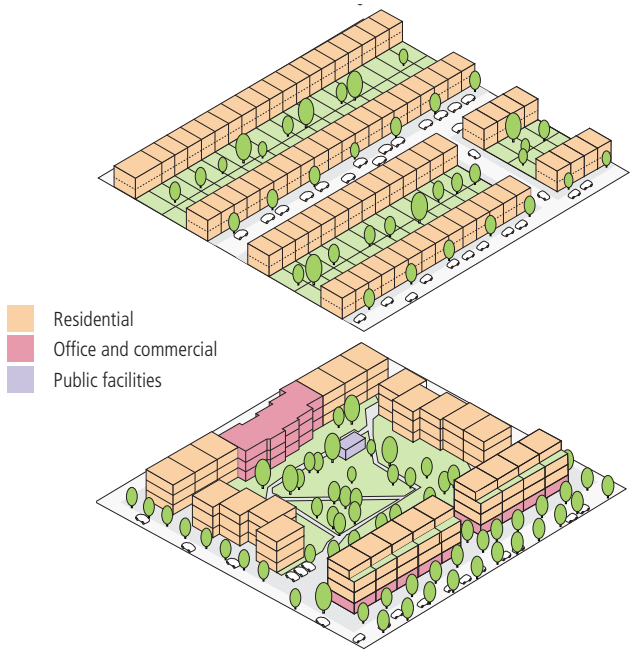
Map Land Ownership - Distinguish public vs. private parcels within the city.

Identify Vacant Land - Pinpoint unused or underutilized plots within the city.

Check Service Access - Assess proximity to basic services (water, electricity, roads, schools, health facilities).

Evaluate Strategic Location - Highlight vacant spaces connected to key infrastructure or within planned development zones.

Promote Durable Housing and Mixed use - Develop housing solutions integrated with services and facilities within the same unit.

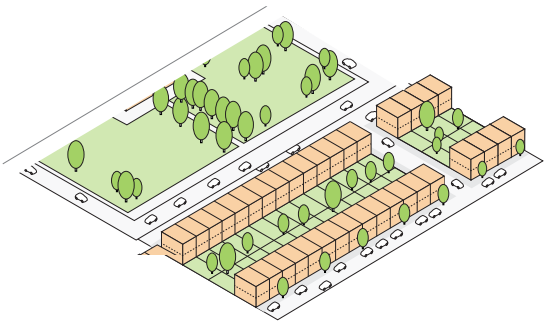


LOW DENSITY - PROTECTION OF ENVIRONMENT AND AREAS AT RISK

Deploy decentralized, resilient services: Use small-scale, flexible facilities (mobile clinics, satellite schools, water kiosks)

Integrate nature-based solutions: green buffers, wetlands, and tree planting to reduce risk exposure.

Discourage unsafe construction: and Enforce zoning and building codes aligned with urban and environmental planning frameworks.





5.4 DEVELOPMENT STRATEGIES

5.4.2 RESILIENT AND SUSTAINABLE CITY

CLIMATE RESILIENCE AND NATURAL RESOURCES VALORIZATION

Strengthen resilience to natural hazards through flood preparedness, effective water and waste management, and the sustainable use and enhancement of natural resources.

MAIN CHALLENGES

- **The city's predominantly flat terrain,** approximately 393 m above sea level, limits natural drainage, increasing vulnerability to waterlogging and flooding.
- **Unregulated urban growth into flood-prone** and ecologically fragile zones significantly heightening exposure of residents.

OBJECTIVE

The vision of a Resilient and Sustainable City is to develop locally rooted strategies to mitigate and adapt to climate change and natural hazards. While waste management systems and flood-risk mitigation techniques are designed to be ecologically friendly, the approach emphasizes valorisation of natural resources to guide Malakal toward sustainable urban resilience.

RECCOMANDATIONS

Flood Mitigation and Water Management

Natural Buffer Zones: Establish buffer areas in highly flood-prone sites, consisting of a 500-meter radius of natural barriers - hedges, trees to absorb floodwater, and stone reinforcements.

White Nile and Riverbank Regeneration: Transform the eastern riverfront into a pedestrian-friendly promenade with public facilities, recreational spaces rehabilitating the riverbank to prevent erosion and flood damage.

KEY INTERVENTIONS

1. Construction of Dams - improves water storage capacity, strengthening resilience against droughts and seasonal variability.

2. Technical Engineering solutions to flood defense systems.

3. Nature-based Solutions to manage floods - hedges, trees to absorb floodwater, and stone reinforcements.

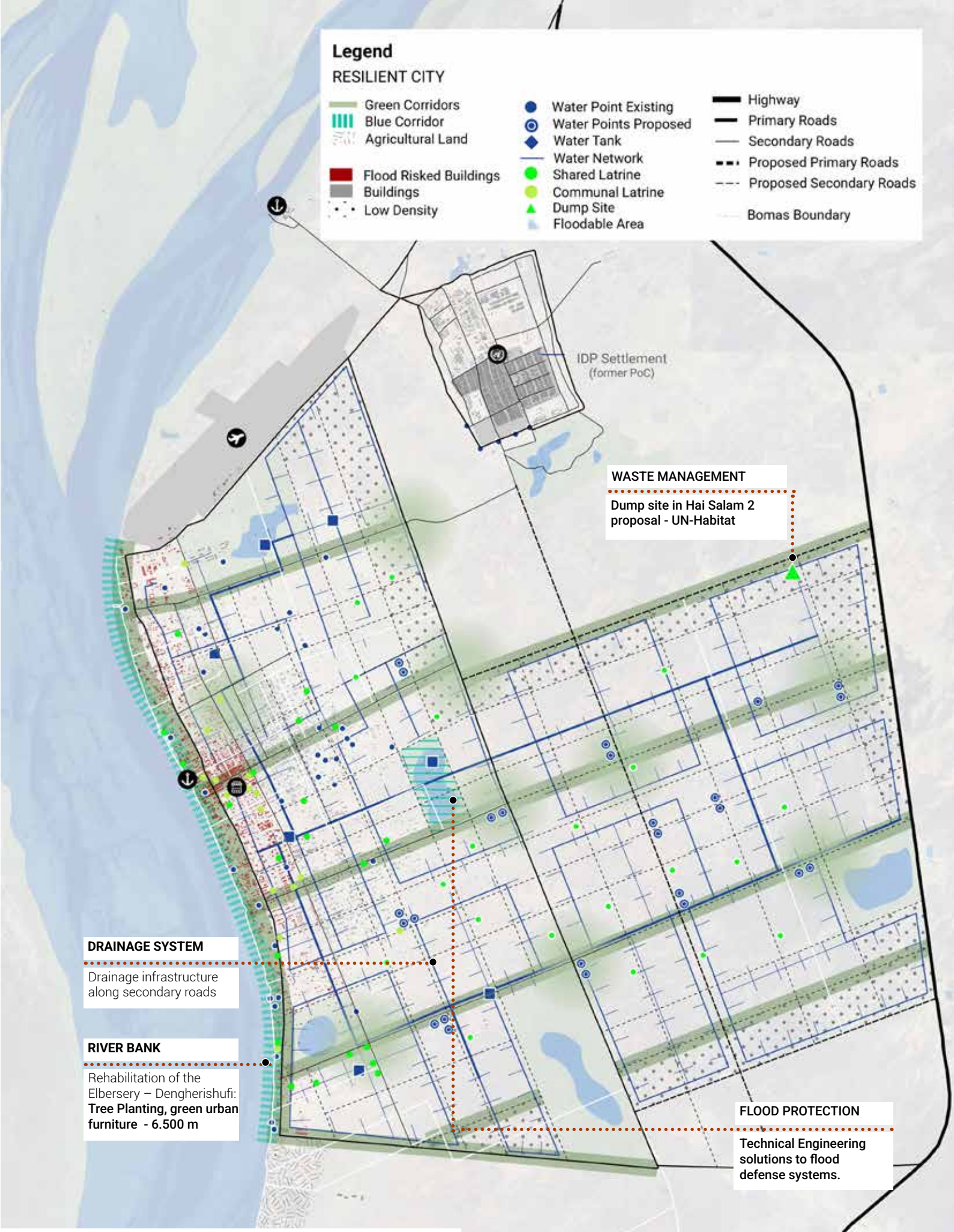
- **Rehabilitate riverbanks** and irrigation canals.
- **Establish a comprehensive drainage** system integrated within road networks.

4. Natural Resources Valorisation - Malakal benefits from abundant green areas, fertile agricultural land, and water bodies supported by the White Nile.

- **Land suitability mapping:** Use GIS and soil analysis to identify areas with optimal fertility and minimal flood risk (southern part of Malakal).
- **Controlled expansion zones:** Formalize agricultural land extension through zoning regulations to prevent encroachment on wetlands or flood-prone areas.
- **Agroforestry integration**: Combine crop cultivation with tree planting to improve soil health and reduce erosion.
- **Watershed management** projects to protect agricultural lands.

5. Governance

- **Environmental Planning Policies** will be applied and developed and integrated in urban planning documents.
- **Green Job Creation** will be promoted through activities such as tree planting and waste recycling, linking resilience with livelihoods.



MAP 25: RESILIENT CITY STRATEGY - MALAKAL
UN-Habitat, 2026

Source: @UN-Habitat 2026
OpenStreetMap
Google Earth

5.4 DEVELOPMENT STRATEGIES

5.4.2 RESILIENT AND SUSTAINABLE CITY

CLIMATE RESILIENCE AND NATURAL RESOURCES VALORIZATION

Strengthen resilience to natural hazards through flood preparedness, effective water and waste management, and the sustainable use and enhancement of natural resources.

SOUTH SUDAN DURABLE SOLUTIONS STRATEGY AND PLAN OF ACTION FOR REFUGEES, INTERNALLY DISPLACED PERSONS, RETURNEES AND HOST COMMUNITIES

- Create secure and safe environment for achieving durable solutions;
- Support integration of refugees, IDPs, returnees and host communities including livelihoods;
- Strengthen government institutional capacities and relations; and
- Bolster Government ownership and capacity, partnership arrangements and coordination mechanisms.

THE UPPER NILE STATE, SOUTH SUDAN AREA-BASED DURABLE SOLUTIONS ROADMAP

(1) Establishing safe and sustainable settlements for IDPs and returnees on Government identified and/or non-disputed lands;

IMPACTS

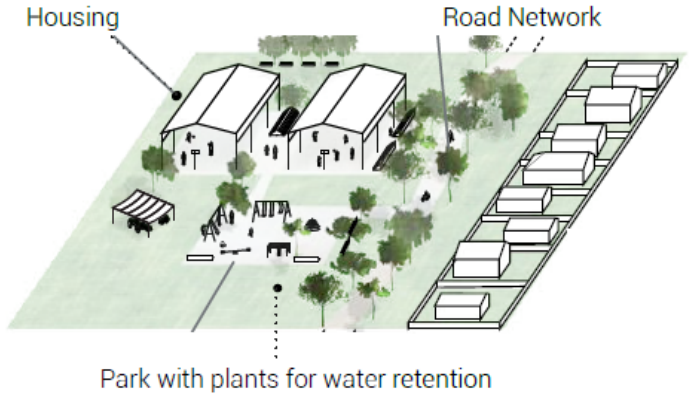
Natural habitats will be preserved through protective belts, reinforcing biodiversity and ecological resilience. Complementing these efforts, community awareness campaigns will equip residents with knowledge and practical strategies to manage flood risks effectively.

Improved roads integrated with canal-side drainage will reduce flooding disruptions and maintain accessibility. At the same time, a strengthened waste management system—featuring sorting, collection points, and a designated dump site—will improve sanitation and protect waterways.

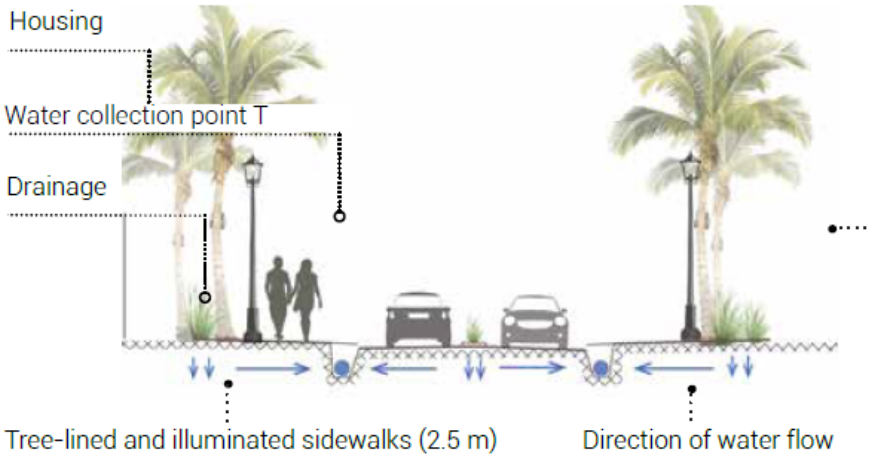
Buffer zones will guide lower-density development to safeguard fragile ecosystems

NATURAL BASED SOLUTIOS TO MITIGATE FLOODING_ EXAMPLES

1. URBAN PARKS WITH FLOOD ABSORPION



2. DRAINAGE SYSTEM ON THE ROAD NETWORK - FLOOD MITIGATION



3. RIVER BANK PROMENADE

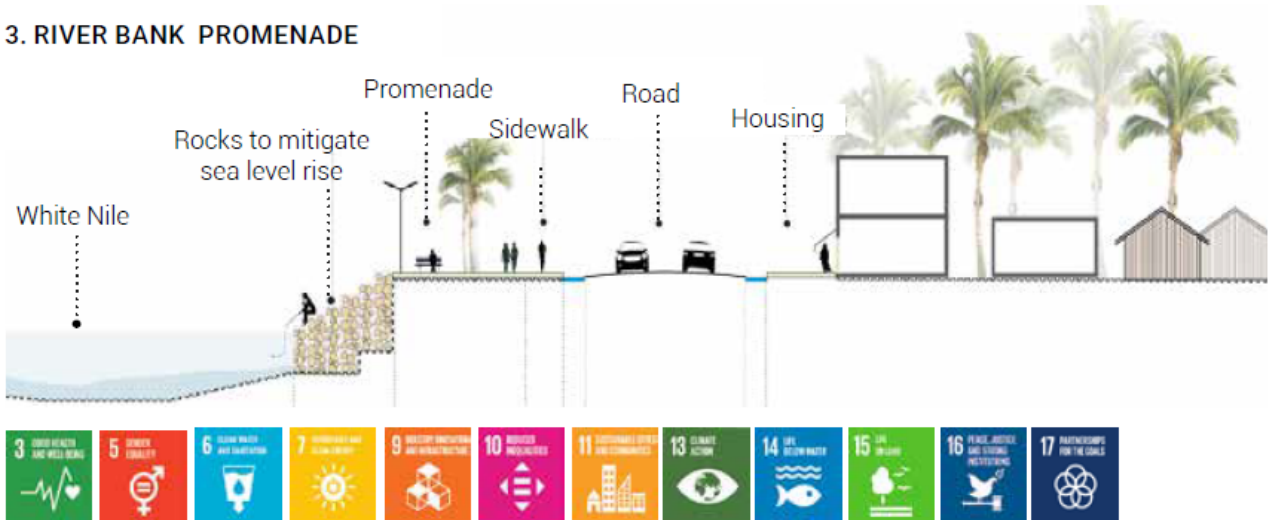


Fig. 56: Examples of Natural based solutions and cliamte resilience interventions
Source: @UN-Habitat 2025

5.4 DEVELOPMENT STRATEGIES

5.4.3 CONNECTED CITY

INTEGRATED MOBILITY AND ACCESSIBILITY

Develop a cohesive transport network to reduce congestion and improve accessibility. combining efficient roads, reliable public transport, and non-motorized mobility.

MAIN CHALLENGES

- **Only 27.3% of the city's total area is served** by paved roads, while 73.7% consists of unplanned earthen road networks in poor condition.
- **Most roads remain unpaved,** becoming muddy and difficult to navigate during the rainy season, significantly disrupting accessibility and mobility.
- **Public transport is largely unregulated,** making it difficult to identify designated stops or access reliable services connecting neighborhoods and key public locations.

OBJECTIVE

The Connected City seeks to establish an integrated and inclusive mobility system that enhances connectivity across the entire urban area of Malakal. By strengthening infrastructure, organizing public transport, and improving last-mile access, the strategy ensures safe, reliable, and continuous movement for all residents, supporting economic and social activity while promoting sustainable urban mobility.

RECCOMANDATIONS

For Malakal: currently, roads cover only 23.7% of the total area; this proposal increases secondary and primary roads up to that to 56.3%.

UN-Habitat planning principle: Roads are essential public spaces that play a critical role in urban functionality and accessibility. **To ensure an effective and well-connected city structure, roads should account for at least 30% of the total land area, with a minimum density of 18 km** of road length per square kilometre. Overall, between 20% and 30% of urban land should be allocated to roads and parking.

KEY INTERVENTIONS

1. Road Network Extension

- **Development of a primary road** connecting the Ex-PoC to Hai Salam 1 and Hai Salam 2
- **Connection North-South**

Develop a network of secondary roads in Hai Salam 1 and Hai Salam 2

- **Extend the network of secondary roads in all the city**

2. Road Network Improvement

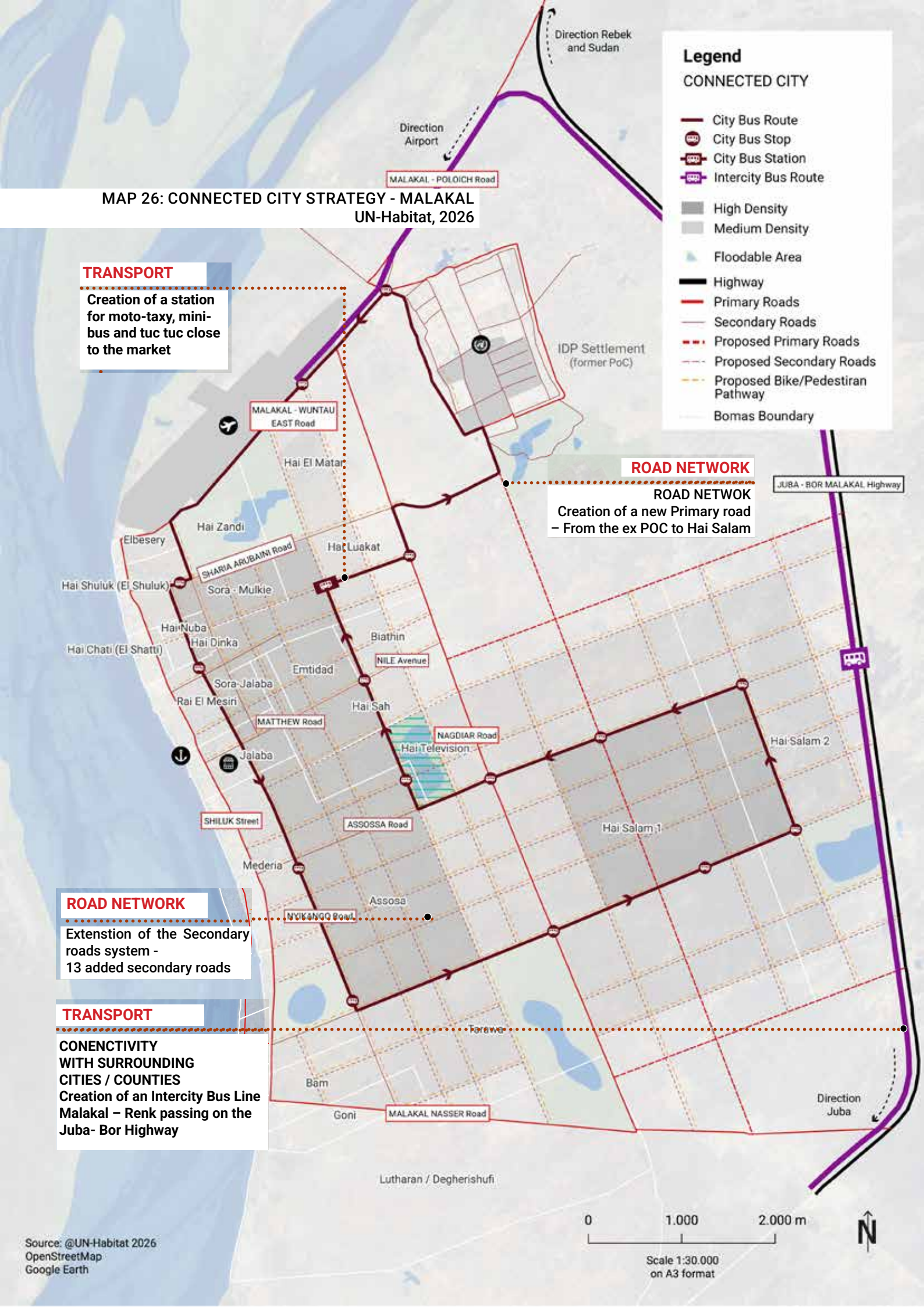
- **Installation of public lighting** along the primary roads and main secondary roads.
- **Paving of tertiary roads** to improve walkability inside and among bomas and connections between tertiary and secondary roads.

3. Transport System

The proposal envisions the development of a formalized and structured transport system, integrating soft mobility options such as cycling and walkability with motorized transports: matatus, three-wheelers, and motorcycle taxis. These should operate along designated routes providing access to key public spaces i.e. markets, parks, community hubs.

4. Promote non-motorized transport by improving infrastructure for pedestrians and cyclists: paved pathways along primary and secondary roads

- **Intercity Transport -** Connect the city to other states, with the development of interregional bus line passing on the highway Juba- Bor.
- **Local Transport -** Establish a central public transport hub/station in Hai Luakat, complemented by a circular network of located stops throughout the city with transfer station near the Airport.



MAP 26: CONNECTED CITY STRATEGY - MALAKAL
UN-Habitat, 2026

5.4 DEVELOPMENT STRATEGIES

5.4.3 CONNECTED CITY

INTEGRATED MOBILITY AND ACCESSIBILITY

Develop a cohesive transport network to reduce congestion and improve accessibility. combining efficient roads, reliable public transport, and non-motorized mobility.

SOUTH SUDAN DURABLE SOLUTIONS STRATEGY AND PLAN OF ACTION FOR REFUGEES, INTERNALLY DISPLACED PERSONS, RETURNEES AND HOST COMMUNITIES

• **Create secure and safe** environment for achieving durable solutions;

• **Bolster Government ownership** and capacity, partnership arrangements and coordination mechanisms.

THE UPPER NILE STATE, SOUTH SUDAN AREA-BASED DURABLE SOLUTIONS ROADMAP

(1) Establishing safe and sustainable settlements for IDPs and returnees on Government identified and/or non-disputed lands;

(4) Strengthening basic/public services infrastructure within Malakal and other key return locations to enhance return conditions including enhancing; security, rule of law, water supply, education, healthcare and livelihoods;

IMPACTS

A well-planned and upgraded road network—featuring paved surfaces, adequate drainage systems, and integrated street infrastructure—will significantly enhance mobility across Malakal while also addressing recurrent flooding challenges. Improved road conditions will ensure year-round accessibility, allowing for reliable connections between different bomas and strengthening links between the city and surrounding states.

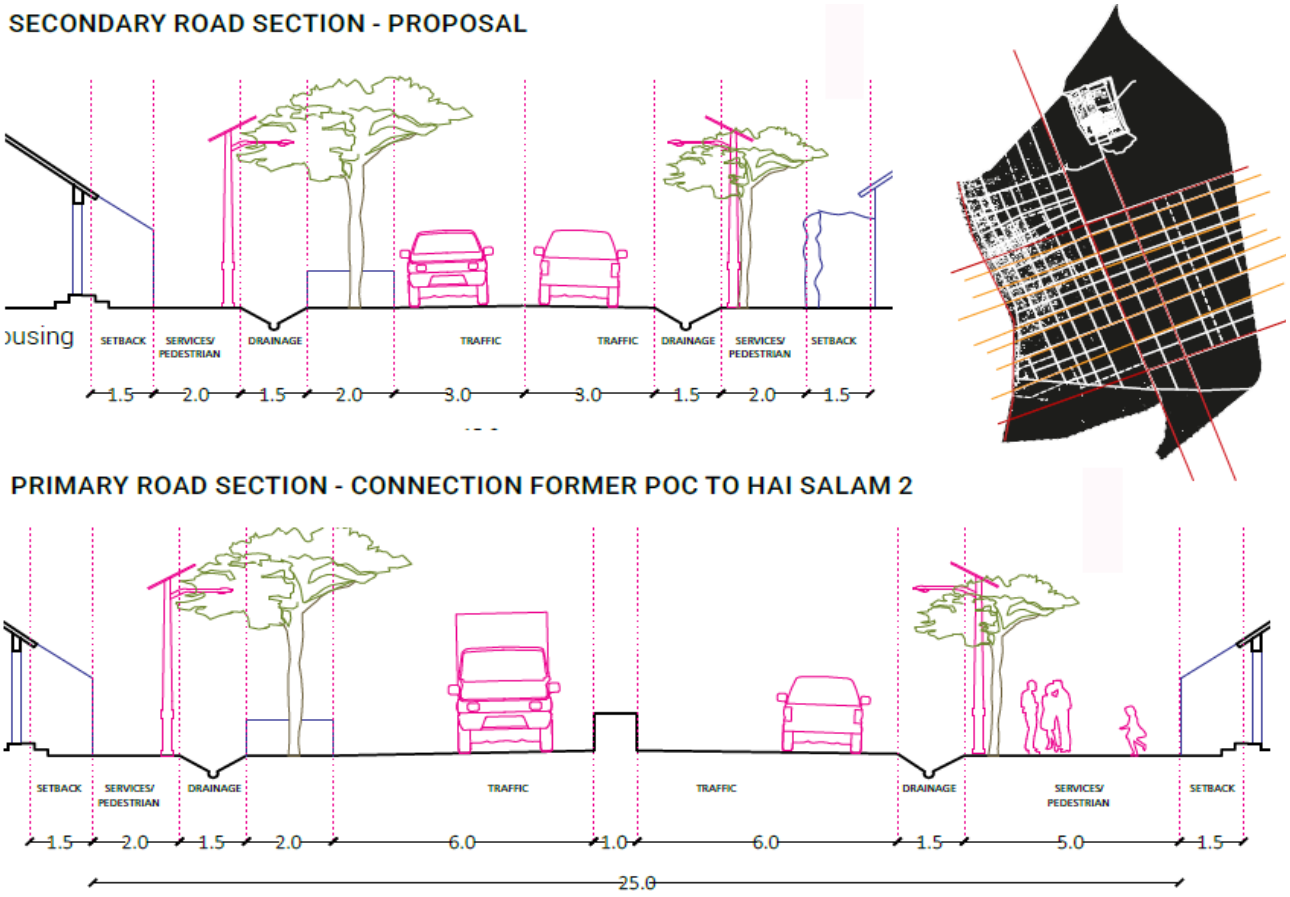
The availability of multiple route options within a more efficient and interconnected street network will enable residents to move easily between key zones of the city. At the same time, the introduction of a structured and diversified transport system—including formalized public transport routes and organized transport nodes—will improve access to major public spaces, such as markets and service hubs.

Additionally, the improvement of the main road connecting Malakal to Juba and other parts of South Sudan will be supported by the introduction of an intercity bus system, with designated stops within Malakal and along major corridors.

Together, these interventions will increase overall accessibility, support economic activity, and create a more resilient and inclusive urban mobility system for Malakal.



IMPROVED ROAD NETWOK



ROAD NETWORK - SPATIAL ANALYSIS 2026			
Road category	**km**	**% of total city area**	**Key Characteristics**
Primary Roads	36.116 km	**0.88 %** average 10m wide	Only two roads, medium conition and abscence of drainage
Secondary Roads	43.234 km	**1.06 %** average 10m wide	Partially paved, majority Earthen. Medium Bad conditions. Abscence of system of drainage
Tertiary Roads	62 km	**1.52 %** average 10m wide	Totally Earthen in bad conditions. Vulnerable to flooding. Abscence of system of

ROAD NETWORK - PROPOSAL 2035			
Road category	**km**	**% of total city area**	**Key Characteristics**
Primary Roads	408.8 km	**10 %** average 10m wide	Good condition. Paved and equipped of drainage and public lighting
Secondary Roads	817.6k km	**20 %** average 10m wide	Good condition. Paved and equipped of drainage and public lighting
Tertiary Roads	1226.4 km	**30 %** average 10m wide	Medium condition. Paved

Fig. 57: Proposal of extended road network hierarchy
Source: @UN-Habitat 2026

5.4 DEVELOPMENT STRATEGIES

5.4.4 INCLUSIVE CITY

EQUITABLE ACCESS TO BASIC SERVICES AND FACILITIES

Ensure fair and adequate access to essential social - public facilities, supporting inclusive and balanced accessibility to basic services and and peacefull cohexistance.

MAIN CHALLENGE

- **Water & sanitation:** Nearly two-thirds of Malakal's population lacks access to safe drinking water and proper latrines. Most water points, supported by Humanitarian agencies, are often non-functional, forcing residents to rely on river water or untreated groundwater from the riverbank.

- **Lighting & safety:** Public lighting is largely absent, increasing insecurity - especially for women.

- **Education:** About 20% of residents live more than 1 km from a school. Of the 46 schools that existed before 2013, only around half (23) are currently operational.

- **Health:** Access to healthcare is limited. Many peri-urban areas depend on Malakal State Hospital, accessible within more than 30 minutes walking from the city center. It is overstretched, serving more than 500 patients from Malakal and surrounding counties.

OBJECTIVE

The Inclusive City aims to ensure that basic services and social facilities are resilient, accessible, and equitably distributed across Malakal. This includes critical infrastructure such as water, electricity, and sanitation, as well as health and education infrastructure.

KEY INTERVENTIONS

1. Health and Educational Facilities - In line with UN-Habitat planning principles, all residents of Malakal will have access to essential services within a 15-minute walking distance (approx. 500 meters radius) from their neighborhoods.

2. Health Facilities -distributed within a 500-meter radius to guarantee timely access to healthcare services improving public health outcomes.

3. Educational Facilities - Schools will be strategically located within a 500-meter radius of residential areas to ensure accessibility, increase enrollment rates, and reduce barriers to primary education.

4. Critical Infrastructure and Basic Services - Basic urban services will be equitably distributed across the city, with a focus on underserved and expanding areas. This will include:

- Drinking Water Supply
- Sanitation and Waste Management
- Public Lighting and Electricity

5. Water Supply - The improvement of water infrastructure will build on ongoing initiatives led by the International Organization for Migration (IOM) working in Malakal:

- **Water Supply System** project in Hai Matar
- Development of an **Urban Water Supply System for Malakal (target 2027),** to meet the needs of approximately 300 000 residents

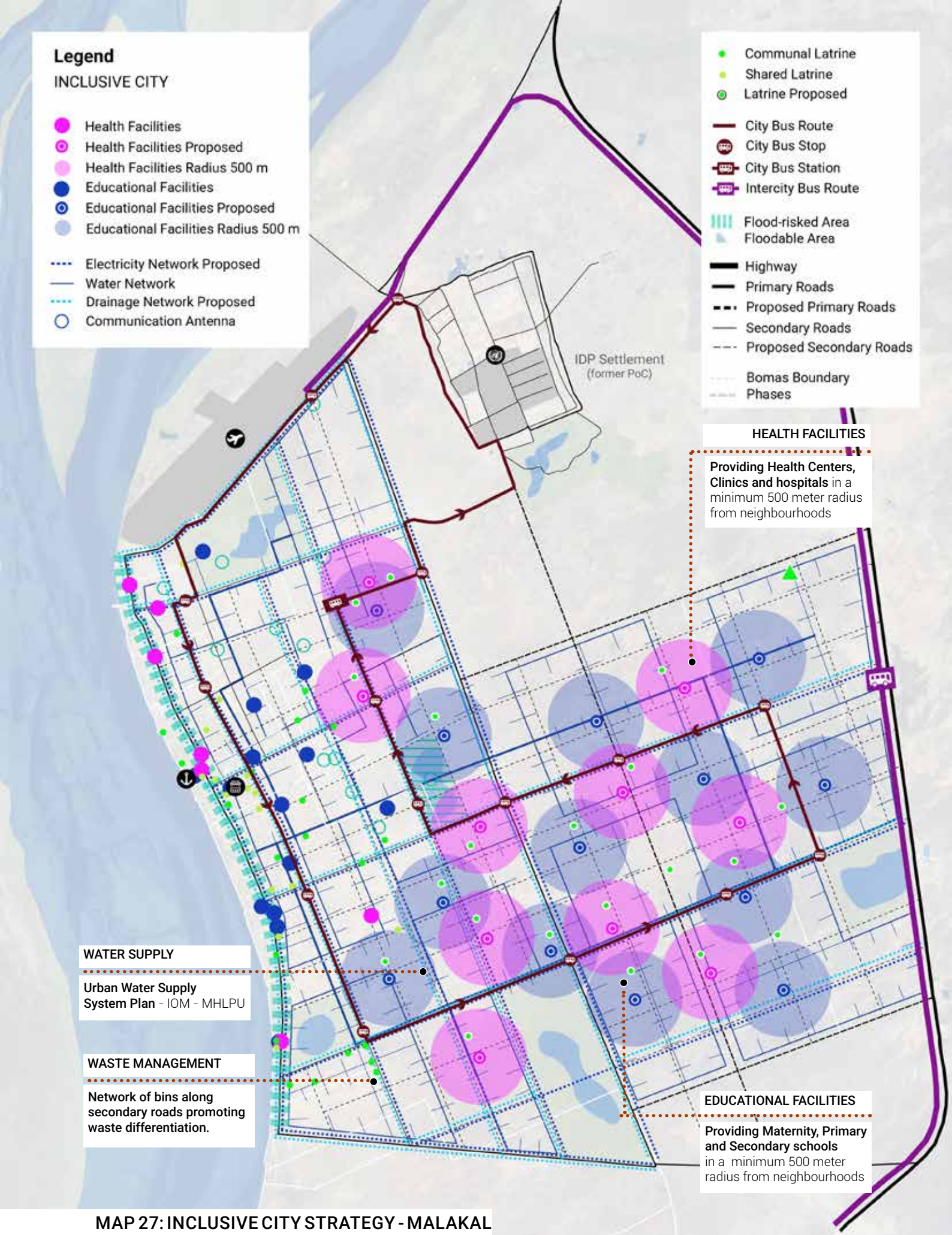
6. Waste Management - A comprehensive waste management system will be established:

- Construction and upgrading of latrines
- Development of solid waste collection and disposal systems
- Designation of dumping and treatment sites

7. Electricity and Public Lighting - Solar-powered public lighting systems will be installed along streets and public spaces

- Renewable energy solutions will be prioritized to reduce dependence on non-sustainable energy sources.

8. Internet Connectivity - Designated areas will be allocated for generators, and water sources, all of which contribuiting to provide the city of coverage for network.



MAP 27: INCLUSIVE CITY STRATEGY - MALAKAL

UN-Habitat, 2026

Source: @UN-Habitat 2026
OpenStreetMap
Google Earth

5.4 DEVELOPMENT STRATEGIES

5.4.4 INCLUSIVE CITY

EQUITABLE ACCESS TO BASIC SERVICES AND FACILITIES

Ensure fair and adequate access to essential social - public facilities, supporting inclusive and balanced accessibility to basic services and peacefull cohexistance.

WASTE MANAGEMENT

This intervention harmonizes with IOM's planned waste management project in Malakal, while expanding its scope to include differentiated bin networks, formalized disposal infrastructure, and pollution mitigation. **It ensures that sanitation and waste systems supports urban health.**

Locate Public Latrines

- **Ensure latrines are positioned near sanitation facilities** and spread across city extensions.
- **Place latrines adjacent to sanitation hubs** (health posts, water points).

Install Waste Bin Network

- **Create a network of bins along secondary roads promoting**-waste differentiation.
- Position bins at regular intervals along secondary roads.
- Introduce color-coded bins for organic, **recyclable, and residual waste.**
- **Train communities** on sorting practices.

Formalize Dump Site

- Designate the existing informal site between Hai Salam 1 and Hai Salam 2 as an **official disposal area.**
- Upgrade the site with controlled access and fencing.
- **Connect to main road for efficient collection.**

UN-HABITAT WALKING DISTANCE PRINCIPLE

In the 15-Minute City model, the distance to facilities varies according to their type and intended users, with a principle of hierarchical distribution.

Planning is guided by the catchment coverage principle, which establishes a minimum of 15 minutes walking distance (≈500 meters) for facilities such as primary schools, local markets, and neighborhood clinics.

For facilities that can also be reached by motorized transport—such as health centers, retail markets, secondary schools, universities, and hospitals—the catchment expands to between 2 000 and 5 000 meters radius, corresponding to 30 to 45 minutes walking distance.
This approach ensures walking-distance access, equity, and quality standards in delivery.

Empirical studies using GPS traces and Points of Interest (POI) data confirm that strengthening local accessibility reduces car dependency, lowers CO2 emissions, and enhances overall urban liveability. By aligning facility distribution with walking and cycling catchments, cities promote equity, resilience, and healthier lifestyles.

Administrative Facilities - The placement of administrative services is determined by security and accessibility considerations. Foe example ,prisons are located outside the city core to minimize risks and avoid land-use conflicts.

Banks and post offices are concentrated in the central urban core, ensuring ease of access for the majority of residents while reinforcing institutional visibility.

ENHANCED LIVELIHOOD AND ACCESSIBILITY

SOUTH SUDAN DURABLE SOLUTIONS STRATEGY AND PLAN OF ACTION FOR REFUGEES, INTERNALLY DISPLACED PERSONS, RETURNEES ANHOST COMMUNITIES

• Create secure and safe environment for achieving durable solutions;

• Provide basic services to support and sustain durable solutions;

• Support integration of refugees, IDPs, returnees and host communities including livelihoods;

• Strengthen government institutional capacities and relations; and

• Bolster Government ownership and capacity, partnership arrangements and coordination mechanisms.

THE UPPER NILE STATE, SOUTH SUDAN AREA-BASED DURABLE SOLUTIONS ROADMAP

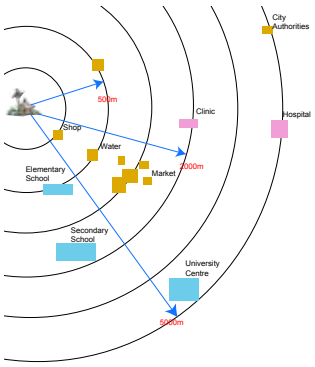
(1) Establishing safe and sustainable settlements for IDPs and returnees on Government identified and/or non-disputed lands;

(3) Strengthening area-based support services and livelihoods for vulnerable returnees from the Sudan crisis to enable them to reestablish themselves in their return destination as well as support for the voluntary return of other IDPs;

(4) Strengthening basic/public services infrastructure within Malakal and other key return locations to enhance return conditions including enhancing; security, rule of law, water supply, education, healthcare and livelihoods;

(5) Expanding peace and community cohesion activities, strengthening community based and Government-led projects that aim to minimize conflict between communities and seeking to prevent risk of any further displacement.

IMPACTS



Ensuring equitable access to basic services across Malakal will expand the provision of water, sanitation, energy, and waste management systems to underserved and peripheral areas, thereby improving overall living conditions. The equitable provision of these services will also support both host and refugee communities, fostering inclusivity, resilience, and balanced urban development.

Expanding and upgrading health facilities in both urban and peri-urban areas will distribute service delivery more evenly and reduce the heavy burden currently placed on overstretched facilities. This will enable health services to respond more effectively to community needs, ensuring that more residents receive timely, accessible, and adequate care. In parallel, improving the availability and proximity of educational facilities will promote long-term social development by increasing school enrolment, addressing illiteracy.

Investments in sustainable solutions—such as solar energy and water pans—will enhance energy reliability. It will generate wide-ranging community benefits by reducing dependence on firewood, limiting environmental degradation, and supporting climate-resilient infrastructure.

Strengthening community awareness of waste management will further encourage environmentally responsible practices, contributing to cleaner and healthier living environments.

Fig. 58: UN-Habitat Walking distance Radius principle
Source: @UN-Habitat 2026

5.4 DEVELOPMENT STRATEGIES

5.4.4 INCLUSIVE CITY

EQUITABLE ACCESS TO BASIC SERVICES AND FACILITIES

Ensure fair and adequate access to essential social - public facilities, supporting inclusive and balanced accessibility to basic services and peacefull cohexistance.

EDUCATIONAL FACILITIES

According to UN Data, each family in South Sudan has an average of 5 children. The target population for this secondary city is 371 800 people by 2035. This demographic profile is very young, with more than half of the population under 18 years old.

- Families average 5 children
- Around 60–65% of the population are children and youth

Age group distribution

Maternity / Pre-primary (ages 3–5) approximately 10% ≈ 37 700 children

Primary (ages 6–13) approximately 25–30% ≈ 95 000 – 113 000 children

Secondary (ages 14–17) approximately 10–12% ≈ 38 000 – 45 000 youth

Based on South Sudan's National General Education Policy (2017–2027) and the General Education Sector Plan (2023–2027). Republic of South Sudan Ministry of General Education.

School capacity standards

- Maternity schools: 250 pupils per school
- Primary schools: 500 pupils per school
- Secondary schools: 700 pupils per school

DISTANCES FROM EDUCATIONAL FACILITIES

In the 15-Minute City framework, the distance to facilities varies according to their type and intended users, particularly for educational services, which follow a principle of hierarchical distribution.
This approach guarantees walking-distance access, equity, and quality standards in the delivery of education. Planning is guided by the catchment coverage principle, which sets a maximum of 15 minutes walking distance (≈500 meters) for primary schools, ensuring that children can reach them safely and conveniently within their neighborhoods.

Maternity / Primary schools: Located within 500 meters of neighborhoods (≈15 minutes walking), ensuring accessibility for children and families.

Secondary schools: Can be positioned up to 2 000 meters away (≈30 minutes walking), reflecting the mobility of older students.

Tertiary or vocational institutions: Serving adults, these may be placed within a 5 000-meter radius (≈45 minutes walking), often accessible by motorized transport.

These policies emphasize universal access, equity, and quality, making your planning aligned with national regulations.

EDUCATIONAL FACILITY COVERAGE - SPATIAL ANALYSIS 2026		
Category	**units**	**status**
Maternity School	7	Operational
Primary School	17	Operational
Secondary School	9	Operational

UN-Habitat EDUCATIONAL FACILITIES - PROPOSAL 2035		
units	**age**	**capacity - children**
150	ages 3 – 5	200 – 300 pupils per school
210	ages 6 – 13	500 pupils per school
60	ages 14 – 17	700 pupils per school.

ENHANCED LIVELIHOOD AND ACCESSIBILITY

HEALTH FACILITIES

For a city of 371 800 people, applying both WHO guidelines and the South Sudan Ministry of Health (BPHNS) standards gives us a clear picture of how many health facilities are needed.

A mixed model of health facilities provision is often adopted: a **network of health centers, for community-level access, Clinics for more comprehensive services, and hospitals for specialized and referral care.**

Planning health coverage for a city of this size requires balancing international norms with national standards.

According to the WHO

- One primary health care unit should serve between 10 000 – 20 000 people.
- This means the city would need roughly 19 – 38 clinics or health centers.

South Sudan's Basic Package of Health and Nutrition Services (BPHNS) provides more detailed tiers:

- Primary Health Care Unit (PHCU) serves 5 000–10 000 people.
For 371 800 residents, this translates to 38–75 PHCUs.

- Primary Health Care Center (PHCC) serves 15 000–30 000 people, requiring about 13 – 25 PHCCs. For planning purposes, a number of 50 health center is feasible.

- County Hospital covers 100 000 – 300 000 people, so the city would need at least 1–3 hospitals to ensure referral-level care.

DISTANCES FROM HEALTH FACILITIES

This layered approach ensures that the population in 2035 has equitable access to essential health services, while also aligning with both global standards and South Sudan's national framework.

The same principle applies to health facilities: Health Care Units and centers, planned within a 15-minute walking distance, guaranteeing immediate neighborhood access.

Clinics and hospitals: Positioned at progressively wider radii, as they are typically reached by vehicles. Hospitals, like universities, can be located up to 5 000 meters away (≈45 minutes walking or accessible by motorized transport).

HEALTH FACILITY COVERAGE - SPATIAL ANALYSIS 2026		
Category	**units**	**status**
Health Center	2	Partially operational
Clinic	3	Partially operational
Hospital	1	Operational

UN-Habitat HEALTH FACILITIES - PROPOSAL 2035		
Category	**units**	**capacity individuals**
Health Centers	50	5 000 – 10 000
Clinics	17	15 000 – 30 000
Hospitals	2	100 000 – 300 000

Fig. 59: Educational and Helath facilities proposal
Source: @UN-Habitat 2026

5.4 DEVELOPMENT STRATEGIES

5.4.5 VIBRANT CITY

LOCAL ECONOMY AND LIVELIHOOD ENHANCEMENT

Enhance economic opportunities and social interaction by activating public spaces, supporting local livelihoods, and fostering dynamic, community-centred environments.

MAIN CHALLENGE

- Malakal Town currently depends on a limited number of formal markets, which constrains economic diversification, reduces tax registration, and limits municipal revenue generation.
- Agricultural activities are unevenly distributed, mainly concentrated in the southern areas along the White Nile River.
- Hence, urban agriculture remains largely unregulated and is accessible to only a small segment of the population, restricting its broader economic and food security potential.
.
- The lack of well-designed public spaces decreases opportunities for social interaction and integration between host and refugee communities.

OBJECTIVE

The Vibrant City strengthens local economies and livelihoods by creating inclusive public and commercial and recreational spaces that foster interaction, while ensuring equitable access to economic opportunities for both host and refugee populations through improved infrastructure: urban sanitation, connectivity, municipal finance revenue.

RECCOMANDATION

Two functional axes are at th e base of economic: red commercial axes and perpendicular axes of green corridors that falls into the white Nile to enhance environmental component while supporting commerce and connectivity. These interventions aim to create a strong connection between public life, economic activity, and urban infrastructure, ensuring that both host and refugee communities benefit from shared spaces and improved access to services.

KEY INTERVENTIONS

UN-Habitat Planning Principles: minim distance to public facilities In line with UN-Habitat planning principles, all residents of Malakal will have access to essential services within a 15-minute walking distance (approximately 500 meters radius) from their neighborhoods. To ensure an effective coverage of areas accessible to all residents, public spaces should account for at least 30% of the total land area.

Commercial Public Spaces

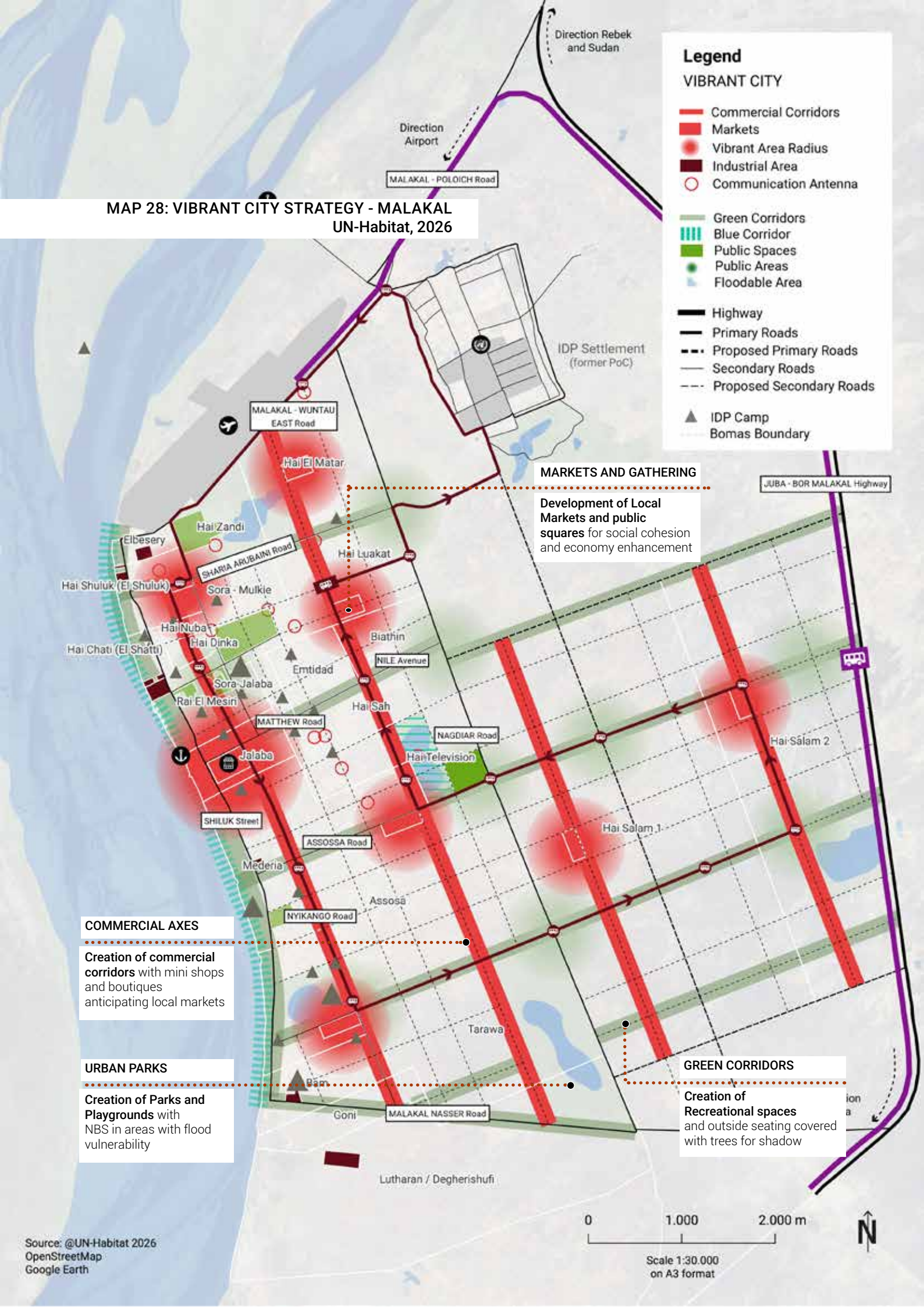
- Establish commercial corridors along secondary perpendicular roads.
- Develop a network of permanent markets along commercial axes.

Recreational and Cultural Heritage Public Spaces

- Develop a network of public spaces around floodable areas: water urban parks and playgrounds.
- Design gender oriented spaces: women, families and youth.
- Install Tree Planting along secondary roads to tackle lack of shadows.
- Develop a network of public squares to foster community gatherings.
- Identify and valorise Heritage places or memorial areas within the city.

Basic Services

- Ensure waste management facilities into public commercial and Recreational facilities.
- Ensure lighting in public spaces along secondary roads.



MAP 28: VIBRANT CITY STRATEGY - MALAKAL
UN-Habitat, 2026

5.4 DEVELOPMENT STRATEGIES

5.4.5 VIBRANT CITY

LOCAL ECONOMY AND LIVELIHOOD ENHANCEMENT

Enhance economic opportunities and social interaction by activating public spaces, supporting local livelihoods, and fostering dynamic, community-centred environments.

SOUTH SUDAN DURABLE SOLUTIONS STRATEGY AND PLAN OF ACTION FOR REFUGEES, INTERNALLY DISPLACED PERSONS, RETURNEES ANHOST COMMUNITIES

• Create secure and safe environment for achieving durable solutions;

• Provide basic services to support and sustain durable solutions;

• Support integration of refugees, IDPs, returnees and host communities including livelihoods;

• Strengthen government institutional capacities and relations; and

• Bolster Government ownership and capacity, partnership arrangements and coordination mechanisms.

THE UPPER NILE STATE, SOUTH SUDAN AREA-BASED DURABLE SOLUTIONS ROADMAP

(1) Establishing safe and sustainable settlements for IDPs and returnees on Government identified and/or non-disputed lands;

(3) Strengthening area-based support services and livelihoods for vulnerable returnees from the Sudan crisis to enable them to reestablish themselves in their return destination as well as support for the voluntary return of other IDPs;

(4) Strengthening basic/public services infrastructure within Malakal and other key return locations to enhance return conditions including enhancing; security, rule of law, water supply, education, healthcare and livelihoods;

(5) Expanding peace and community cohesion activities, strengthening community based and Government-led projects that aim to minimize conflict between communities and seeking to prevent risk of any further displacement.

IMPACTS

Ensuring equitable access to basic services across Malakal will expand the provision of water, sanitation, energy, and waste management systems to underserved and peripheral areas, thereby improving overall living conditions. This approach will help reduce social and spatial inequalities, ease competition over limited resources, and strengthen social cohesion across the city. The equitable provision of these services will also support both host and refugee communities, fostering inclusivity, resilience, and balanced urban development.

Expanding and upgrading health facilities in both urban and peri-urban areas will distribute service delivery more evenly and reduce the heavy burden currently placed on overstretched facilities. This will enable health services to respond more effectively to community needs, ensuring that more residents receive timely, accessible, and adequate care. In parallel, improving the availability and proximity of educational facilities will promote long-term social development by increasing school enrollmentenrolment, addressing illiteracy, and strengthening the foundation for a more educated and resilient population.

At the same time, investments in sustainable solutions—such as solar energy and water pans—will enhance energy reliability. These measures will generate wide-ranging community benefits by reducing dependence on firewood, limiting environmental degradation, and supporting climate-resilient infrastructure.

Strengthening community awareness of waste management will further encourage environmentally responsible practices, contributing to cleaner and healthier living environments.

COMMUNITY GATHERING AND LOCAL ECONOMIC ACTIVITIES

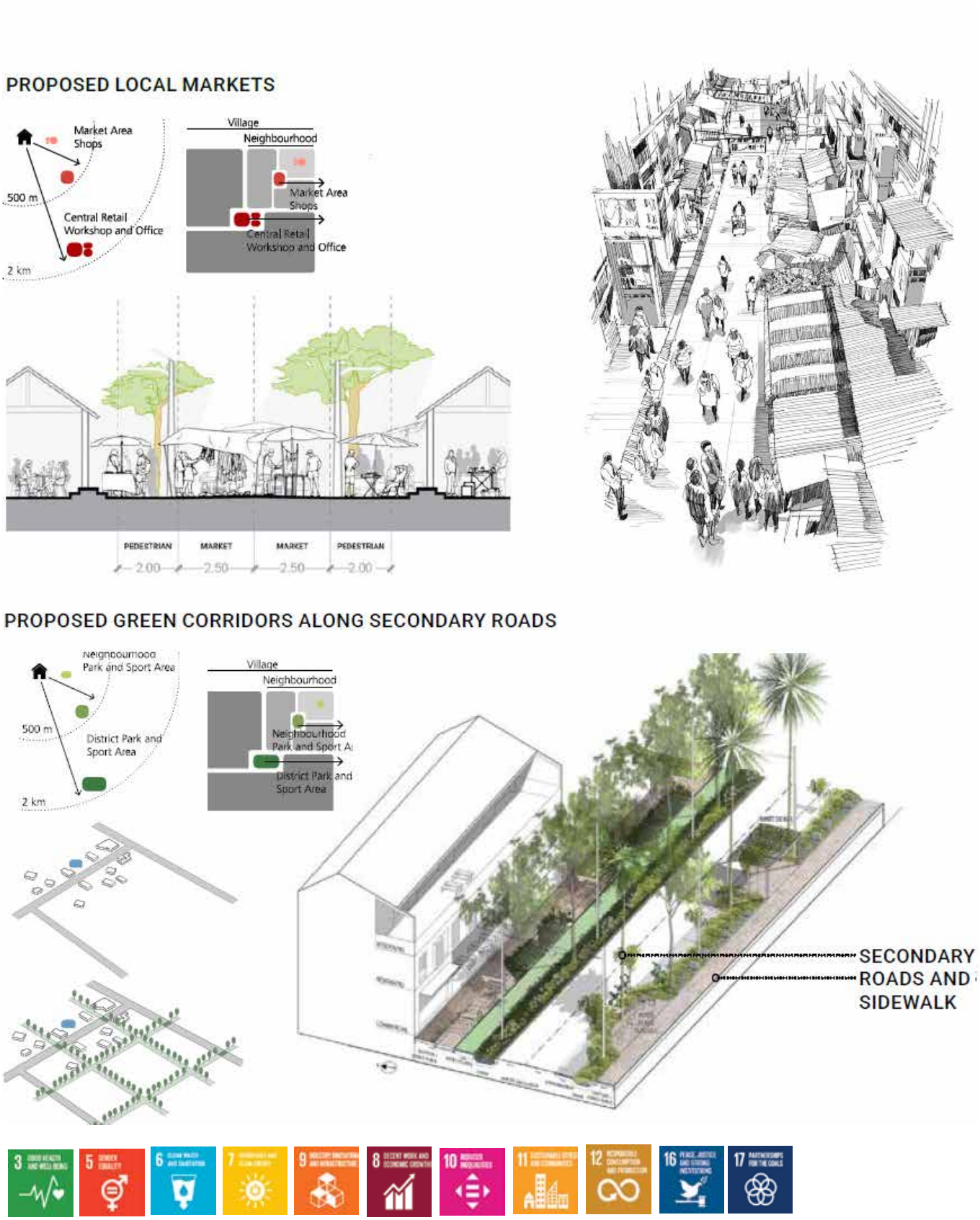


Fig. 60: Example of public spaces interventions within the city
Source: @UN-Habitat 2026

5.5 MALAKAL INTEGRATED URBAN STRATEGIC PLAN 2035

The Malakal Integrated Urban Strategic Plan is the result of the juxtaposition and integration of these five detailed strategies, which together create a coherent and unified framework for the city's sustainable development.
It will respond to a a population of 371 800 individuals in an area of 40.88 km^2, in ten years time, 2035.

The Plan will structure around the development of two complementary urban cores.

- **The first will consolidate and revitalize Malakal Old Town** as the historic and commercial heart of the city.

- **The second will emerge in Hai Salam 1 and Hai Salam 2, in a second moment, when the clearance of the land will be completed.** This will serve as a new administrative and urban expansion hub designed to accommodate future population growth and urban development needs.

These two cores will be connected and supported by a well-organized and efficient transport system, enabling seamless mobility across all bomas. This network will strengthen connectivity between residential areas, public facilities, and key urban nodes, ensuring accessibility for all residents.

The Plan will be supported by detailed calculations of service needs to meet both current and future population demands.

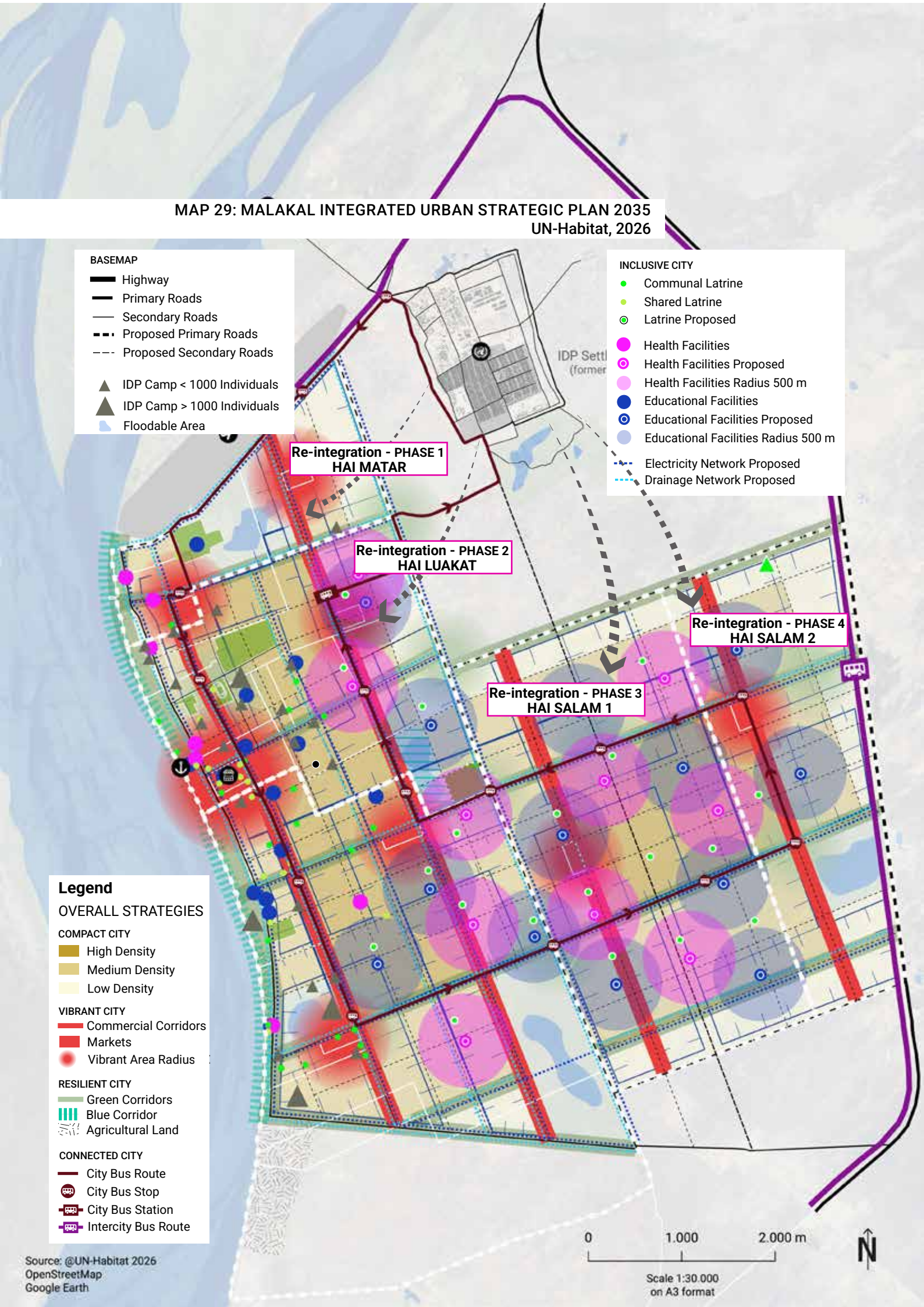
The number of educational facilities is primary schools 210 and 60 for secondary schools.

The number of health centers is 50 and 17 clinics has been determined to ensure adequate coverage across the city, following the defined accessibility standards.

The water distribution system has already been designed to meet the needs of approximately 300 000 residents in the city of Malakal,by the project of IOM. While the extension of the water network in the areas of Hai Salam 1 / Hai Salam 2, it has been included in the stratefy developed by UN-Habitat duplicating the engeneering approach adopted by the Water Plan of IOM.

In parallel, the provision of sanitation facilities, including latrines and a comprehensive waste management system, will be scaled to respond to the projected population of inhabitants over the next 10 years.

This planned and balanced distribution of services and public spaces across Malakal will promote equity and inclusivity, ensuring that both host communities and displaced populations are equally served. **By doing so, the Plan will foster peaceful coexistence, social cohesion, and shared access to essential urban services, contributing to a more stable and integrated urban environment.**


MAP 29: MALAKAL INTEGRATED URBAN STRATEGIC PLAN 2035
UN-Habitat, 2026
BASEMAP
Highway
Primary Roads
Secondary Roads
Proposed Primary Roads
Proposed Secondary Roads
IDP Camp < 1000 Individuals
IDP Camp > 1000 Individuals
Floodable Area
INCLUSIVE CITY
Communal Latrine
Shared Latrine
Latrine Proposed
Health Facilities
Health Facilities Proposed
Health Facilities Radius 500 m
Educational Facilities
Educational Facilities Proposed
Educational Facilities Radius 500 m
Electricity Network Proposed
Drainage Network Proposed
Re-integration - PHASE 1
HAI MATAR
Re-integration - PHASE 2
HAI LUAKAT
Re-integration - PHASE 3
HAI SALAM 1
Re-integration - PHASE 4
HAI SALAM 2
Legend
OVERALL STRATEGIES
COMPACT CITY
High Density
Medium Density
Low Density
VIBRANT CITY
Commercial Corridors
Markets
Vibrant Area Radius
RESILIENT CITY
Green Corridors
Blue Corridor
Agricultural Land
CONNECTED CITY
City Bus Route
City Bus Stop
City Bus Station
Intercity Bus Route
Source: @UN-Habitat 2026
OpenStreetMap
Google Earth
0
1.000
2.000 m
Scale 1:30.000
on A3 format
N

06



Fig. 61: Community led waste clean up-day, Malakal, South Sudan
Source: @UNHCR 2026



IMPLEMENTATION

06 IMPLEMENTATION

6.1 PROPOSED LAND USE PLAN 2035

Malakal's Strategic Urban Plan overall strategy provides a clear framework to guide the city's growth while supporting the long-term reintegration of displaced populations and recovery of vulnerable host communities. The strategy focuses on key aspects of urban transformation, including

- **efficient land use,**
- **adequate housing,**
- **flood and climate risk management,**
- **improved connectivity, and**
- **equitable access to essential services.**

To achieve these goals, **a balanced New Land Use Plan will integrate residential areas, agricultural zones, and economic centres among others,** ensuring the fair distribution of resources and opportunities across the city.

The proposed land use strategy seeks to transform Malakal into an inclusive, resilient, and well-serviced urban center.
It focuses on:

- Optimizing residential areas;
- Integrating displacement-affected communities into the urban fabric;
- Improving living conditions for vulnerable host communities; and
- Protecting valuable agricultural land to promote efficient land use and resource conservation.

The strategy introduces mixed-use bomas, commercial centers, public spaces and community hubs that will stimulate economic growth, reduce urban sprawl, and create a more inclusive city.

It also promotes environmental sustainability through the preservation of green spaces, climate-resilient planning measures, the adoption of renewable energy solutions, and the development of sustainable transportation systems.
Together, these interventions will strengthen urban resilience and improve the overall quality of life for residents.

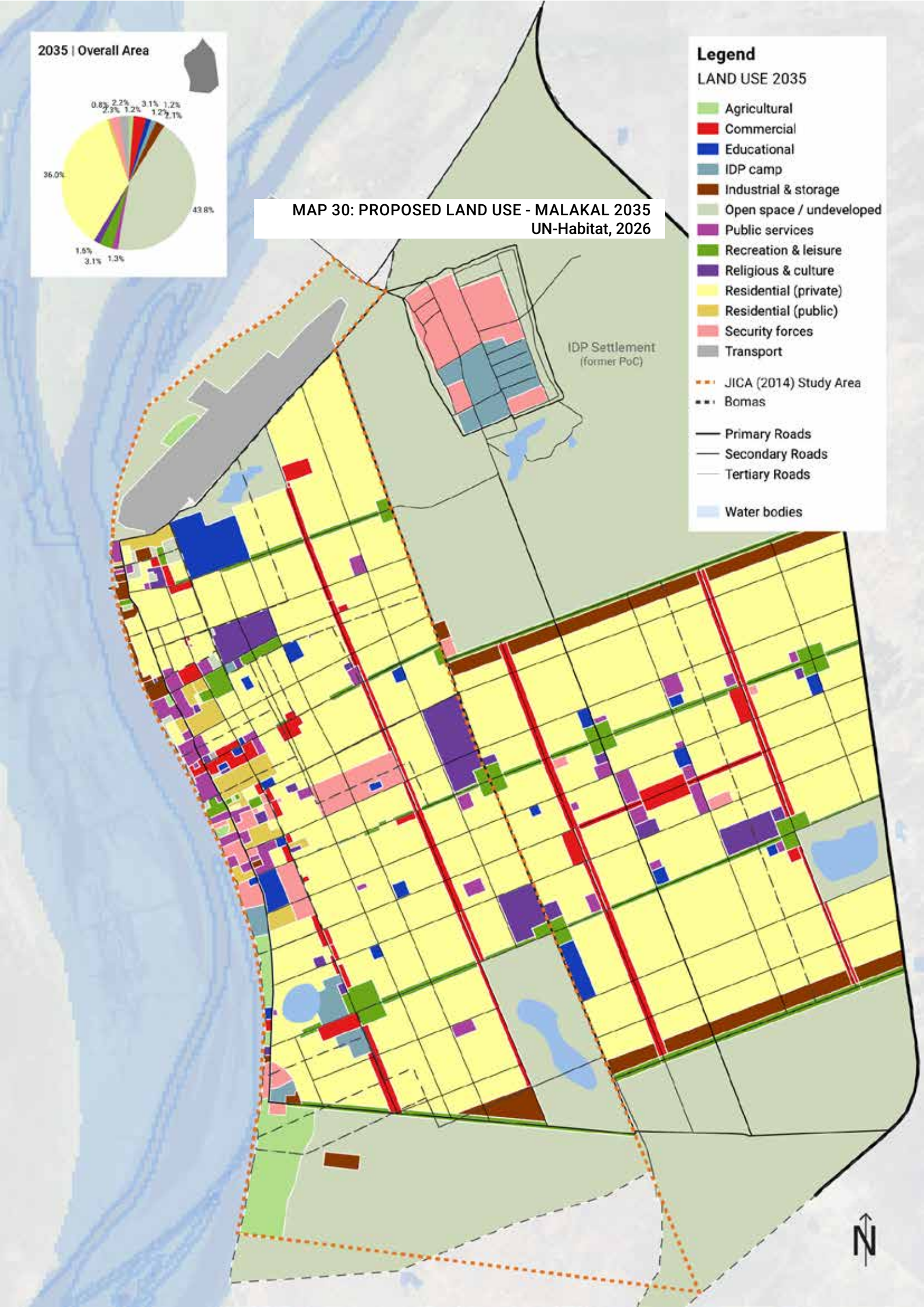
Comparison between Land Use in 2026 and 2035

Open Space and Undeveloped Land (2026)
In 2014, open space and undeveloped land represented approximately 25% of total land use. By 2026, this share had increased significantly to 61%, reflecting widespread abandonment of urban areas and the long-term impacts of conflict, displacement, and limited reconstruction efforts.

Open Space and Undeveloped Land (2035)
A key objective of the proposed land use plan is the gradual reduction of unutilized and vacant land through planned urban expansion and redevelopment.
Decrease from 61% in 2026 to 43.8% in 2035
Vacant areas will be progressively transformed into residential neighborhoods, commercial and mixed-use districts, public facilities, community spaces, and economic activity zones. **This approach will strengthen urban functionality, and promote more efficient and sustainable land use patterns in the city.**

Residential Areas (2026)
Private residential land use experienced the most significant decline, decreasing from 41% in 2014 to only 18% in 2026. The extensive destruction of housing remains visible throughout the urban fabric, and residential development has not yet recovered despite continued settlement pressure and population growth.

IDP Settlements
Internally Displaced Persons (IDP) areas emerged as a distinct land use category, accounting for approximately 1% of total land use. This category was absent from the earlier JICA study and reflects the changing humanitarian context of Malakal and the challenges associated with prolonged displacement.



MAP 30: PROPOSED LAND USE - MALAKAL 2035
UN-Habitat, 2026

06 IMPLEMENTATION

6.1 PROPOSED LAND USE PLAN 2035

Land Use - Residential Areas (2035)

The plan envisaged an increase of residential areas, out of all land from 7.6% in 2026 to 36.0% in 2035.

The proposed land use plan places residential development at the center of Malakal's urban recovery and growth strategy. It aims to provide a diverse range of housing options that respond to the needs of different social groups, including families, youth, elderly people, displaced and affected communities (DACs), and host populations. The objective is to accommodate future population growth while ensuring affordable, safe, and resilient housing opportunities within well-serviced neighborhoods.

High-Density - Compact residential developments of one to two storeys will be promoted in central urban areas to maximize land efficiency, support higher population densities, and strengthen access to services, employment opportunities, and public infrastructure.

Medium-Density - residential neighborhoods will be developed primarily in peri-urban areas. These areas will provide more spacious housing options integrated with green spaces, community facilities, and public services. The design will offer a balanced living environment that is suitable for families and residents seeking quieter residential settings.

Low-Density - residential zones will be designated in environmentally sensitive areas where intensive development is not appropriate. Heavy residential construction will be discouraged in locations exposed to flood risks, environmental constraints, or proximity to natural ecosystems.

These areas will promote sustainable, climate-sensitive, and risk-informed urban development while preserving valuable environmental assets.

Integration of Displaced Communities - Residents currently living in former POC site will be gradually integrated into designated governmental residential areas through well-planned neighborhoods connected to the city's infrastructure network, public services, and livelihood opportunities.

Other Land Uses categories (2026) - including agriculture, commerce, education, industry and storage, public services, recreation, religious and cultural facilities, security installations, and transportation infrastructure, **remain present but occupy relatively small proportions of the urban area, ranging between 0.5% and 5%.**

Other Land Uses categories (2035) - The proposed land use plan substantially strengthens the role of non-residential land uses, increasing their share from 9.65% to 20.2% of the urban area by 2035. **This expansion reflects Malakal's transition from a city primarily focused on humanitarian response and recovery to a more diversified, productive, and economically vibrant urban center.**

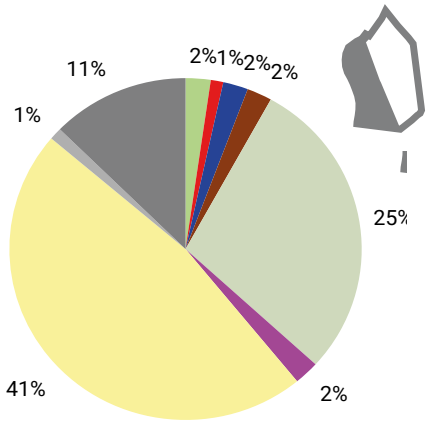
A key component of this strategy is the development of Hai Salam 1 and Hai Salam 2 as a major secondary urban hub, helping to alleviate pressure on Malakal's historic urban core while supporting future urban expansion.

Envisioned as a mixed-use growth center, the area will host important administrative institutions and high-impact public services, including a new hospital, primary and secondary schools, and a designated site for a future university campus. In parallel, a large central market will be established to serve as a major commercial and agricultural, providing a collection and distribution point for products from surrounding agricultural areas.

This will strengthen urban-rural linkages, improve market access for farmers, stimulate local agricultural production, create employment opportunities, and support economic diversification.

COMPARISON OF LAND USE PLAN 2014 - 2035

LAND USE PLAN - JICA 2014

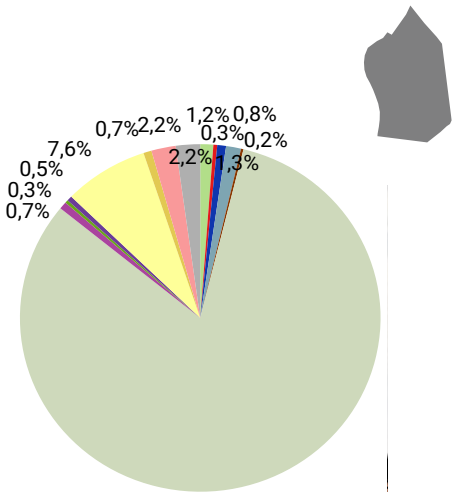


Legend

- Agricultural
- Commercial
- Educational
- IDP camp
- Industrial & storage
- Open space / undeveloped
- Public services
- Recreation & leisure
- Religious & culture
- Residential (private)
- Residential (public)
- Security forces
- Transport
- Roads

The comparison is based on the study area of the JICA (2014) study (see land use map). As this study area no longer corresponds to Malakal's urban and planning area, it is no longer used for other representations and calculations.

LAND USE PLAN - UN-HABITAT 2026



LAND USE PLAN - UN-HABITAT 2035

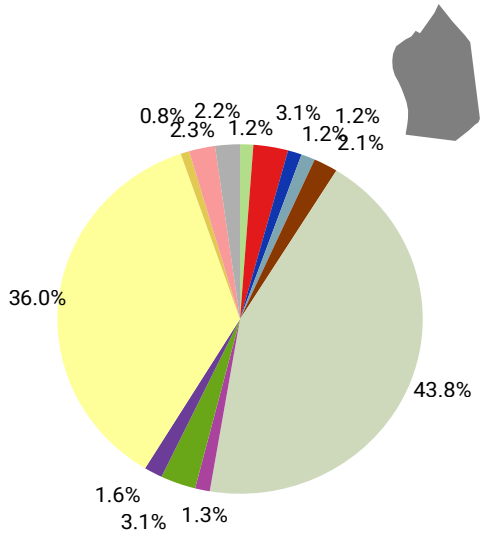


Fig.62 : Comparison between different Malakal Land Use _ JICA 2014 and UN-Habitat 2026 and 2035
Source: UN-Habitat 2026

06 IMPLEMENTATION

6.2 PRIORITY AREAS FOR FUTURE INVESTMENTS

To achieve sustainable, inclusive, and resilient urban development by 2035, the Integrated Plan for Malakal, defines the strategic priority areas that require targeted investments.

The main urban sectors identified are:

1. **Housing – HLP and tenure documentation**
2. **Environment – Risk Reduction, Valorisation**
3. **Basic Urban Services – Water Supply, Waste Management, Electricity, E Network**
4. **Infrastructure – Transport, Road Network, Mobility**
5. **Social Equipment – Health, Education**
6. **Economic, Social, and Recreational Facilities**

These sectors encompass a portfolio of development projects to be implemented over the next decade and beyond. Their purpose is to ensure the realization of the city's vision while supporting vulnerable communities, strengthening resilience, and enhancing the overall well-being and quality of life of Malakal's residents.

IDENTIFICATION OF DEVELOPMENT PROJECTS

Hence, the Plan turns strategic recommendations into practical projects and policies that can be implemented in a specific timeframe. Their implementation requires coordinated actions among key stakeholders capable and responsible of driving spatial, economic, and social transformation in the city.

The identification of development projects was grounded in a comprehensive preliminary assessment, which included:

- **Field visits and on-site observations**
- **Geospatial data collection and analysis**
- **Comparisons with historical land-use patterns**

This process enabled a systematic and evidence-based evaluation of urban infrastructure, structured around the following key dimensions:

1. Condition Assessment of Existing Infrastructure - Evaluation of the current state of infrastructure to determine needs for rehabilitation, upgrading, or reconstruction.
Example: Joshua Primary School, subsequently rehabilitated by UNHCR 2025.

2. Identification of Gaps and Missing Infrastructure - Assessment of critical infrastructure that has been fully damaged or lost because of conflict, requiring complete reconstruction.
Example: Upper Nile State, University of Malakal.

3. Capacity Assessment of Existing Facilities - Analysis of existing facilities whose capacity is insufficient to meet population needs.
Example: Malakal Cemetery.

4. Assessment of Basic Services in Former Protection of Civilian (PoC) Sites - Evaluation of service provision within former PoC sites to inform the development of adequate infrastructure and services for the reintegration of displaced populations into the urban fabric.

5. Assessment of already existing projects by partners - Projects already implemented or planned by other partners in the field has been also included to avoid duplication in efforts and ensure alignment and harmonization with partners implementation
Example: Urban Water Supply System for Malakal, IOM (2025-2027)

.

These assessments provide a solid foundation for prioritizing projects - investments that will:

- **Rehabilitate and expand critical infrastructure**
- **Address service delivery gaps**
- **Strengthen urban resilience**
- **Facilitate social reintegration**
- **Promote inclusive and sustainable urban growth**

Collectively, these interventions will guide Malakal's transformation into a resilient, inclusive, and thriving city by 2035.

A decisive step in the development of the Action Plan was the workshop held in December 2025, which brought together local authorities and technical experts from the Ministry of Housing, Land and Public Utilities of Upper Nile State.

During this workshop, participants contributed their in-depth knowledge of the city and its population—particularly displaced communities' representatives re-integrated in Hai Matar.

Their inputs were instrumental in:

- **Identifying the entities responsible for project implementation**
- **Defining precise project locations**
- **Validating data previously provided by UN-Habitat, including timeframes, sectors, and cost estimates**

Considering the 24 bomas (neighbourhoods), a total of 46 projects were ultimately validated at the city scale. 46 development projects broader stakeholder consultations. These interventions were subsequently translated into a phased Action Plan spanning 10 years of implementation 2025 – 2035. They have also been structured across five priority areas for future investment:



Fig 63: Technical meeting with MHLPU - Participatory projects identification in Malakal, South Sudan
Source: @UN-Habitat 2025

06 IMPLEMENTATION

6.3 THE MALAKAL ACTION PLAN

The Malakal Strategic Urban Action Plan is structured into three main sections corresponding to the proposed implementation timeframe of projects:

- **short-term (0-3 years),**
- **medium-term (3-6 years), and**
- **long-term (6-10 years and beyond)**

Within each section, projects are presented in a table composed of five columns.

- **The first column identifies the topic** and sector of intervention, such as environment, mobility, housing, land and property (HLP), and other relevant sectors.
- **The second and third columns describe the proposed intervention** and provide detailed information on the project.
- **The fourth column indicates the entities responsible** for project implementation, while
- **The fifth column presents the estimated investment cost** required for project delivery and construction.

The implementation timeframe is also specified for each project.

Budget estimates were developed through benchmarking against comparable projects implemented in similar contexts and were adjusted to reflect the scale and scope of each intervention, site conditions, available space, local opportunities, and the specific development needs of the DACs**.**

As such, the figures presented should be considered indicative estimates intended to support project prioritization, resource allocation, and long-term investment planning.

The identified projects have been organized according to three implementation timeframes:

Short-term projects: 0 to 3 years (2025–2028)
23 projects identified and proposed

Bomas: Hai Matar, Hai Zandi, Elbesery, Hai Shuluk, Sora-Mulkie, Hai Luakat, Hai Chati, Hai Nuba, Hai Dinka, Rai El Mesiri, Sora-Jalaba, Emtidad, Biathin, Jalaba, Hai Sah, Hai Television

This area includes the sites of Hai Matar and Hai Luakat that are reintegration sites for IDPs who prior to the conflict owned a land title given by the State government.

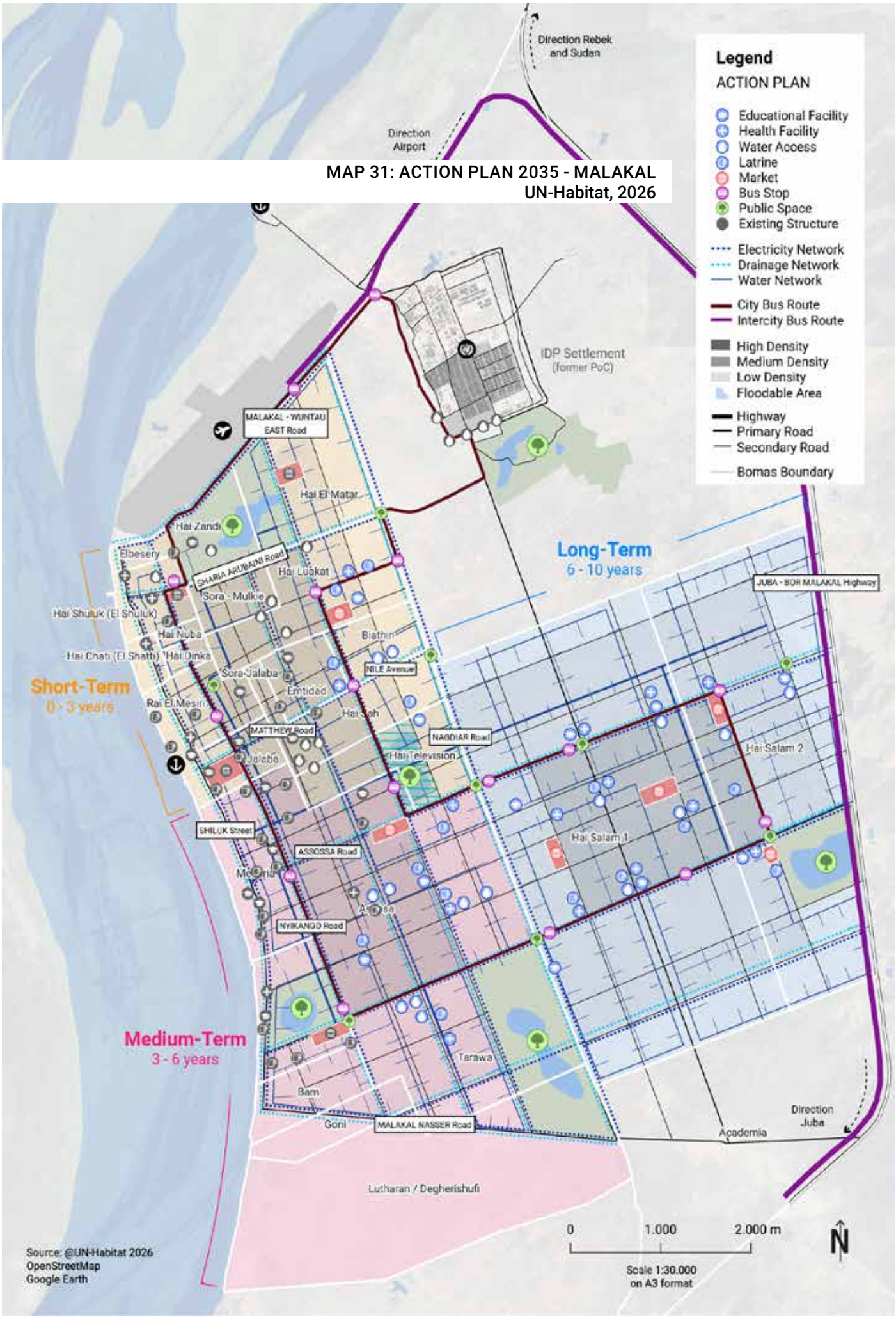
Medium-term projects: 3 to 6 years (2028–2031)
12 projects proposed

Bomas: Mederia, Assosa, Bam, Tarawa, Goni, Dengherishufi (Southern extension of Malakal)
This area a has been cleared by UNMASS in 2024

Long-Term projects: 6 to 10 years (2031–2035)
11 projects proposed

Bomas: Hai Salam 1 and Hai Salam 2
Area: clearance not yet initiated

In alignment with the development strategies, the identified projects have also been harmonized with the National and State Durable Solutions frameworks, as well as their corresponding Sustainable Development Goals (SDGs). This ensures that the proposed interventions effectively contribute to improving the living conditions of displacement-affected communities while generating a broader, long-term positive impact at the global level. Within this phased framework, short-term projects are of particular importance, as they are already mature and ready for implementation.
These interventions will play a critical role in initiating recovery, restoring basic services, and setting the foundation for long-term urban development in Malakal.



MAP 31: ACTION PLAN 2035 - MALAKAL
UN-Habitat, 2026

06 IMPLEMENTATION

6.3 THE MALAKAL ACTION PLAN

SHORT TERM PROJECTS
0 - 3 YEARS



TOTAL SHORT TERM 22 PROJECTS

MALAKAL INTEGRATE					
Area	**Urban Sector**	**#**	**Intervention**	**Project**	**Location**
COMPACT CITY	HOUSING - HLP	1	Durable Housing	Units 20 x 20 and 30 x 30	Hai Matar
		2	Durable Housing	Units 20 x 20 and 30 x 30	Hai Luakat
RESILIENT CITY	ENVIRONMENT	3	Risk Reduction	NBS _ Urban Park with water absorpion	Hai Luakat
		4	Risk Reduction	Drainage system	Along main primary and secondary roads
		5	Natural Resources Valorization	White Nile - River Bank Development	Elbesery - Hai Shuluk - Hai Chati
		6			Rai El Mesiri - Jalaba - Mederia
		7		Park - Playground	Hai Sah
INCLUSIVE CITY	URBAN BASIC SERVICES	8	Water Supply	Pipes and water tunks	Hai Matar
		9		Urban Water Supply System Plan	All Short Term Area
		10		Temporary Water Supply System	Hai Matar
		11	Electricity	Public Lighting network - solar panel	Sharia Arubani Road
		12	Waste Management	Dump site collector	Former PoC Area
	EDUCATION - HEALTH FACILITIES	13	Education	Joshua School - rehabilitation	Hai Matar
		14	Health	Clinics (2)	Emtidad, Hai Luakat
	SOCIAL FACILITIES	15	Public Istitution	Police Office station	Hai Matar
CONNECTED CITY	INFRASTRUCTURE	16	Mobility	Road Network Hierarchy Plan - Improvement and extension	All Short Term Area
		17	Transport	Multimodal Transport Station	N/R
		18	Transport	Transport stops	Specific sites Short Term area
		19	Transport	Road Network Improvement	Specific Roads
VIBRANT CITY	SOCIAL FACILITIES	19	Local Economy	Market	Hai Luakat
		20	Local Economy	Market	Hai Matar
		21	Local Economy	Fish Market	Hai Matar

ED STRATEGIC PLAN - ACTION PLAN

Responsible	Cost USD	Timeline									
		Short term			Medium term			Long term			
		0 - 3			3 - 6			6 - 10			
		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
State Government Housing Land and Public Utilties (MHLPU) - UNHCR	SCAR-SS Project										
State Government Housing Land and Public Utilties (MHLPU) - UNHCR	SCAR-SS Project										
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	300.000.00										
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	625.000.00										
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	9.750.000.00										
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	9.750.000.00										
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	200.000.00										
MHLPU - IOM WASH Programme	IOM Project										
MHLPU - IOM WASH Programme	IOM Project										
MHLPU - IOM WASH Programme	IOM Project										
National Government - Ministry of Electricity - MHLPU - **UN-Habitat**	153.000.00										
MHLPU - IOM WASH Programme	IOM Project										
State Government Housing Land and Public Utilties (MHLPU) - UNHCR	IOM Project										
State Government Housing Land and Public Utilties (MHLPU) - UNICEF	29.000.00										
State Government Housing Land and Public Utilties (MHLPU) - IOM	IOM Project										
National Government - Ministry of Roads and bridges - MHLPU - **UN-Habitat**	27.000.000.00										
State Government Housing Land and Public Utilties (MHLPU)- **UN-Habitat**	3.000.000.00										
State Government Housing Land and Public Utilties (MHLPU)- **UN-Habitat**	60.000.00										
State Government Housing Land and Public Utilties (MHLPU)- **World Bank**	World Bank Project										
State Government Housing Land and Public Utilties (MHLPU)- **UN-Habitat**	1.500.000.00										
State Government Housing Land and Public Utilties - Municipal Council	State Government										
State Government Housing Land and Public Utilties (MHLPU) - FAO	FAO Project										
	52.367.000.00										

Fig. 64: Action Plan Short Term projects - Table
Source: @UN-Habitat 2026

06 IMPLEMENTATION

6.3 THE MALAKAL ACTION PLAN

MALAKAL INTEGRAT

Area	Urban Sector	#	Intervention	Project	Location
MEDIUM TERM PROJECTS (3-6 YEARS)	COMPACT CITY	1	Durable Housing	Demarcation of new Plots	Selected bomas
	HOUSING - HLP	2	Durable Housing	Land Use - Residential areas	All the area
	RESILIENT CITY	3	Risk Reduction	Urban Park with water absorpion	Assosa
	ENVIRONMENT	4	Risk Reduction	Drainage system	Along main primary and secondary roads
		5	Risk Reduction	Dyke	Hai Televeision
		6	Natural Resources Valorization	White Nile - River Bank Development	Mederia - Bam - Goni
		7	Natural Resources Valorization	Park - Playground	Riverfront
			Natural Resources Valorization	Green corrdors- tree planting	Along main primary and secondary roads
	INCLUSIVE CITY	8	Water Supply	Pipes and water tunks	All the area
	URBAN BASIC SERVICES	9	Electricity	Public Lighting network - solar panel	Along primary and secondary roads
		10	Waste Management	Latrines netwrork	Selected bomas in Medium Term Area
	EDUCATION - HEALTH FACILITIES	11	Education	Schools (6)	Selected bomas in Medium Term Area
		12	Health	Hospital	Selected bomas in Medium Term Area
		13	Health	Health Centers (2 with 8 rooms)	Selected bomas in Medium Term Area
	CONNECTED CITY	14	Mobility	Road Network Hierarchy Plan - Improvement and extension	All Medium Term Area
	INFRASTRUCTURE	15	Transport	Transport stops	Selected bomas in Medium Term Area
	VIBRANT CITY	16	Local Economy	Market	Assosa
	SOCIAL FACILITIES	17	Public Space - Social	Cemetery - Memorial	Assosa



TOTAL MEDIUM TERM 24

ED STRATEGIC PLAN - ACTION PLAN

Responsible	Cost USD	Timeline
		Short term 0 - 3 / Medium term 3 - 6 / Long term 6 - 10
		2026 2027 2028 2029 2030 2031 2032 2033 2034 2035
State Government Housing Land and Public Utilties - Municipal Council	SCAR-SS PROJECT	
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**		
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	1.000.000.00	
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	10.200.000.00	
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	18.900.000.00	
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	1.000.000.00	
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	500.000.00	
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	1.000.000	
MHLPU - IOM WASH Programme	IOM Project	
National Government - Ministry of Electricity - MHLPU - **UN-Habitat**	153.000.00	
MHLPU - IOM WASH Programme	IOM Project	
State Government Housing Land and Public Utilties - UNHCR	7.100.000.00	
State Government Housing Land and Public Utilties	115.700.00	
State Government Housing Land and Public Utilties	44.000.00	
National Government - Ministry of Roads and bridges - MHLPU - **UN-Habitat**	33.800.000.00	
State Government Housing Land and Public Utilties (MHLPU)- **UN-Habitat** +	30.000.00	
State Government MHLPU - Municipal Counci- **UN-Habitat**	2.000.000.00	
State Government MHLPU - Municipal Counci- **UN-Habitat**	1.200.000.00	
	73.845.700.00	

Fig. 65: Action Plan Medium Term projects - Table
Source: @UN-Habitat 2026

06 IMPLEMENTATION

6.3 THE MALAKAL ACTION PLAN

MALAKAL INTEGRAT					
Area	**Urban Sector**	**#**	**Intervention**	**Project**	**Location**
	COMPACT CITY	1	Durable Housing	Demarcation of new Plots	all the area
	URBAN PLANNING	2	Sustainable development	Land Use Plan	
	RESILIENT CITY	3	Risk Reduction	Urban Park with water absorpion	Hai Salam 2
	ENVIRONMENT		Risk Reduction	Drainage system	Along main primary and secondary roads
		4	Valorization	Green corrdors- tree planting	Along main primary and secondary roads
	INCLUSIVE CITY	8	Water Supply	Pipes and water tunks	All Long term Area
	URBAN BASIC SERVICES	9	Electricity	Public Lighting network - solar panel	Along primary and secondary roads
		10	Waste Management	Latrines netwrork	Selected site in Long Term Area
	EDUCATION - HEALTH FACILITIES	11	Education	Schools (6)	
		12	Health	Hospital	
			Health	Health Center (4)	
		13	Health	Clinic (4)	
TOTAL LONG TERM 37 PROJECTS	CONNECTED CITY	14	Mobility	Road Network Hierarchy Plan - Improvement and extension	All Long term Area
	INFRASTRUCTURE	15	Transport	Transport stops	Selected site in Long Term Area
	VIBRANT CITY	16	Local Economy	Market (4)	Hai Salam 1 and Hai Salam 2
	SOCIAL FACILITIES	17	Public Space - Social	Cemetery	Hai Salam 1
		18		Police Office (2)	Hai Salam 1 and Hai Salam 2
		19		Stadium , Squares, Equipped Public gatherings	Hai Salam 1 and Hai Salam 3

ED STRATEGIC PLAN - ACTION PLAN

Responsible	Cost USD	Timeline								
		Short term			Medium term			Long term		
		0 - 3			3 - 6			6 - 10		
		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	SCAR-SS PROJECT										
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	800, 000 USD										
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	10, 200, 000 USD										
State Government Housing Land and Public Utilties (MHLPU) - **UN-Habitat**	1 000,000 USD										
State Government Housing Land and Public Utilties (MHLPU)	State Government										
National Government - Ministry of Electricity - MHLPU - **UN-Habitat**	157.000.00										
State Government Housing Land and Public Utilties (MHLPU)	State Government										
State Government Housing Land and Public Utilties (MHLPU)	1.800.000.00										
State Government Housing Land and Public Utilties (MHLPU)	115.700.00										
State Government Housing Land and Public Utilties (MHLPU)	88.000.00										
State Government Housing Land and Public Utilties (MHLPU)	146.000.00										
National Government - Ministry of Roads and bridges - MHLPU -	State Government										
State Government Housing Land and Public Utilties (MHLPU)- **UN-Habitat**	60.000.00										
State Government MHLPU - Municipal Council - **UN-Habitat**	7.500.000.00										
State Government MHLPU - Municipal Council - **UN-Habitat**	800.000.00										
State Government MHLPU - Municipal Council	1.000.000.00										
National Government - Ministry of Roads and bridges - MHLPU - **UN-Habitat**	300.000.00										



Fig. 66: Action Plan Long Term projects - Table
Source: @UN-Habitat 2026

06 IMPLEMENTATION

6.4 SHORT TERM PROJECTS

Short-Term Implementation: 0-3 Years

Bomas: Hai Matar, Hai Zandi, Elbesery, Hai Shuluk, Sora-Mulkie, Hai Luakat, Hai Chati, Hai Nuba, Hai Dinka, Rai El Mesiri, Sora-Jalaba, Emtidad, Biathin, Jalaba, Hai Sah, Hai Television

.

Clearance was completed in early 2023.
making it the first area ready to host IDPs from the POC who previous from the war owned a land. This enabled UNHCR and IOM to begin constructing durable housing under the EU-funded Flexible Mechanism Programme UN-Habitat developed a recommended site plan, outlining essential services and infrastructure for resettlement.

23 projects identified and proposed

This phase focuses on projects to be implemented within the next three years, supporting the initial stage of IDP reintegration from the former PoC site, in line with the State Government's plan for the designated areas of Hai Matar and Hai Luakat. Neighbouring bomas will also benefit from short-term interventions that collectively contribute to the wider development of Malakal City.

Several projects are already underway, led by humanitarian and development agencies in collaboration with the Upper Nile State Ministries (Housing, Land and Public Utilities, Infrastructure, etc.). Building on these efforts, UN-Habitat proposes additional high-priority projects.

These projects are designed to deliver immediate impact by improving living conditions for both IDPs and DACs, while strengthening Malakal's urban resilience.

The short-term projects are distributed across six thematic areas.

1. Housing – HLP

Housing Units 20 x 20 and 30 x 30 - UNHCR

2. Environment – Risk Reduction, Valorisation
Dump site collector – IOM
Pipes and water tanks – IOM
Drainage system along the road network – UN-Habitat
Riverbank - UN-Habitat
Natural Based Solutions to floods - UN-Habitat
Tree planting along secondary roads – UN-Habitat

3. Basic Urban Services – Water Supply, Waste Management, Electricity, Network
Temporary Water Supply System – IOM
Waste Management System - IOM
Public Lighting network - solar panel – UN-Habitat

4. Infrastructure – Transport, Road Network, Mobility
Plan of the road network – UN-Habitat
Bus Station – UN-Habitat
Station for moto-taxi, minibus – UN-Habitat

5. Social Equipment – Health, Education
Joshua School – reconstruction - UNHCR
Clinic - plan* - UN-Habitat
Primary / Secondary School - plan* - UN-Habitat

6. Economic, Social, and Recreational Facilities
Market in Hai Matar – State Ministry
Market in Hai Luakat – UN-Habitat



Map 32: Short term Projects - Action Plan Malakal
UN-Habitat, 2026

06 IMPLEMENTATION

6.5 MEDIUM TERM PROJECTS

Medium Term Implementation (3- 6 years)

Location: Southern extension of Malakal (area cleared by UNMASS in 2024)

Bomas: Mederia, Assosa, Bam, Tarawa, Goni, Dengherishufi

This phase primarily focuses on completing or expanding existing short-term initiatives. A key objective is to extend the water supply system to achieve comprehensive coverage across all underserved areas, ensuring alignment and consistency with interventions at the citywide level (IOM project).

These projects:

- **Depend on prior upgrades in basic infrastructure and improved accessibility**
- **Are of lower immediate urgency but remain essential for sustainable, long-term urban development**
- **Aim to accommodate expected population growth under normal conditions**

Several projects are already underway, led by humanitarian and development agencies in collaboration with the Upper Nile State Ministries (Housing, Land and Public Utilities, Infrastructure, etc.). Building on these efforts, UN-Habitat proposes additional high-priority projects.

A total of 24 projects has been identified, spanning six main thematic areas.

1. Housing – HLP
Plan of Residential Area – UN-Habitat

2. Environment – Risk Reduction, Valorisation

Dump site collector – IOM
Pipes and water tanks – IOM
Drainage system along the road network - UN-Habitat
Riverbank - UN-Habitat
Natural Based Solutions to floods - UN-Habitat
Tree planting along secondary roads – UN-Habitat
Dike – UN-Habitat

3. Basic Urban Services – Water Supply, Waste Management, Electricity, Network
Urban Water Supply System - IOM
Public Lighting network - solar panel – UN-Habitat

4. Infrastructure – Transport, Road Network, Mobility
Plan of the road network – UN-Habitat

5. Social Equipment – Health, Education
Clinic - plan - UN-Habitat
Primary / Secondary School - plan* - UN-Habitat

6. Economic, Social, and Recreational Facilities
Cemetery – UN-Habitat
Market in Assossa – UN-Habitat



Source: @UN-Habitat 2026
OpenStreetMap
Google Earth

Map 33: Medium term Projects - Action Plan Malakal
UN-Habitat, 2026

06 IMPLEMENTATION

6.6 LONG TERM PROJECTS

Long Term Implementation (6 - 10 years)

Location: South - Eastern Malakal

Area: not yet cleared by UNMASS
Bomas: Hai Salam 1 and Hai Salam 2

This phase is intended to accommodate long-term projects in an area that has not been cleared yet, therefore, it is possible, that after the clearance process, there may be findings that could influence the planning of the area, such as unexploded mines, wild animals, or zones that may not be suitable for construction. Hence, the plan in this site remains flexible, as additional constraints may emerge once the site assessments are completed.

The Upper Nile State Ministry of Lands, Housing, and Public Utilities envisages allocating Hai Salam 1 for the reintegration of internally displaced persons (IDPs) from the former PoC who owned land prior to the conflict.
Hai Salam 2 is intended to accommodate those who did not previously own land, as well as future demographic growth.

Due to the size of the area and its distance from the main urban core of Malakal, the area is expected to become a secondary urban center of the town. It is envisioned to function as a support helping to reduce congestion and respond to the needs of projected future population.

Hence the projects proposed for this area are highly comprehensive, as several essential services and public facilities will need to be re-established to ensure the sustainable development and functionality of this secondary urban core.

The total number of long-term projects is 37 comprising projects that:

- **Require extensive coordination among multiple stakeholders.**
- **Support the future expansion and sustainable growth of Malakal.**
- **Are not immediately critical for the initial urban development phase.**
- **Represent lower-priority and long-horizon interventions.**

Given the complexity of Malakal's urban development, it will be essential to establish a monitoring and evaluation framework, conducted every 2–3 years, to guide the adoption of additional projects that respond to evolving community needs while aligning with local, state, and national priorities.



Source: @UN-Habitat 2026
OpenStreetMap
Google Earth

Map 34: Long term Projects - Action Plan Malakal
UN-Habitat, 2026

06 IMPLEMENTATION

6.7 LINKAGES TO FINANCE AND INVESTMENT

Environmental Community Awareness, and Project Maintenance

It is noteworthy that, in parallel, a continuous series of awareness campaigns on risk prevention, environmental protection, and related issues will be carried out to strengthen the implementation of the proposed actions and ensure the integration of sustainability principles within the displaced and affected communities. These communities will play a key role in the follow-up, management, and maintenance of community-based projects and interventions.

Strengthening Local Institutional Capacity

In addition, capacity-building training programs for local authorities will be conducted throughout the implementation period to ensure the transfer of technical knowledge and skills. These trainings will support the authorities in updating the plan in response to changing urban dynamics, strengthening technical capacities, and enforcing land regulations to ensure that the proposed land use framework is respected during partner implementation activities.

FINANCIAL MECHANISMS

The economic and financial situation of Malakal highlights the broader challenges confronting urban areas across South Sudan, including rapid population growth, inadequate infrastructure, and the effects of climate change.
According to the World Bank Study on South Sudan Urbanization Review, Malakal's financial capacity to invest in critical infrastructure, public services, and economic development remains severely limited.

The key challenges are:

Underdeveloped Tax System: The city struggles with weak revenue generation due to a lack of a structured and efficient tax collection framework.
Large Informal Economy: The dominance of informal economic activities limits taxable income and complicates financial planning.
Dependence on External Aid: Malakal relies heavily on international aid and remittances from the International and global prospects to address both developmental and humanitarian needs, including support for IDPs.

To improve Malakal´s economic and financial situation, there is a need for targeted investment in infrastructure, enhancement of the local tax base, and development of financial services that can support small and medium-sized enterprises (SMEs). International support, including from development banks and donor agencies, remains crucial in bridging the gap between local needs and available resources. To finance the comprehensive strategies proposed for the Integrated Strategic Plan and key recommendations, various sources of funding can be considered, each aligned with specific aspects of the city's development goals.

The development of the Malakal Integrated Strategic Urban Plan concludes with the development of an Action Plan for the targeted urban areas and the prioritisation of projects.

The Action Plan is then passed to local governments, to further advance through the life cycle towards on-the-ground implementation. UN-Habitat support, has focused on the upstream stages within the project life cycle, laying the groundwork and setting the strategic direction before the downstream stages of the identified project, based on real implementation.

The downstream stages of a project involve transforming the planning into reality, this would include first a detailed feasibility study to assess the project's viability.

It typically includes developing a business case, covering key aspects such as project costs, potential revenue generation, funding sources, and associated risks.

Then, detailed design, financing, and construction follow. After implementation, the focus shifts to its operation, maintenance, and continuous monitoring, to ensure the intervention remains functional, sustainable, and beneficial to the community.

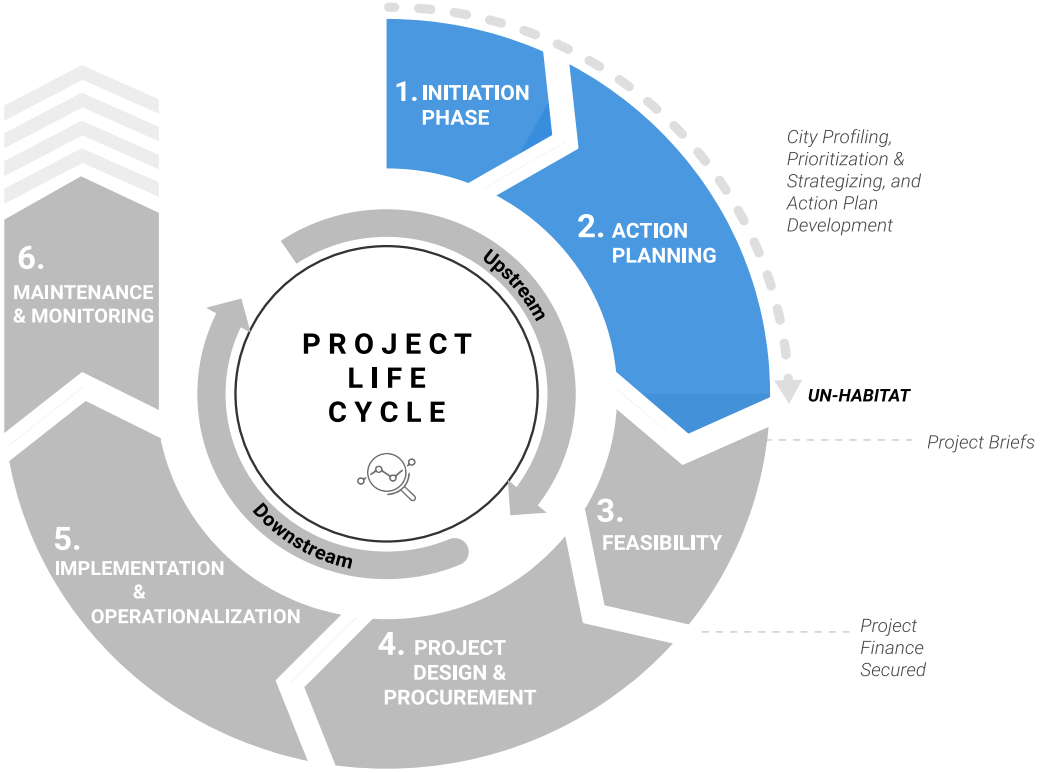


Fig.67: Projects Life cycle for implementation
Source: @UN-Habitat 2026

06 IMPLEMENTATION

6.7 LINKAGES TO FINANCE

To beging the downstream process of the prioritised project, the local government should assess available local resources for its implementation, identifying any financial gaps. Ideally, the local government would be able to utilize Own-Source Revenues (OSR), as it reduces dependency on external funding and encourages local ownership. OSR are generated locally by local governments, through taxes, fees, and other charges.

For cities heavily reliant on aid, transitioning to greater financial self-reliance is crucial for long-term success. While aid provides essential support, over- dependence can hinder governmental accountability and limit local ownership and sustainable financial systems.

As local governments strengthen their own revenue systems and increase their revenue generation, public-private partnerships can further increase the financial resources available Engaging local stakeholders throughout this process is essential, ensuring that the community's voice is integrated into decision-making, which ultimately contributes to greater financial sustainability, autonomy, and stability. However, in cities facing challenges like rapid population growth, migration, political or economic instability, this transition may be difficult.

Additionally, limited tax bases, economic hardships, and strained budgets can make it hard to mobilize sufficient local funds. Therefore, exploring external funding mechanisms is often essential to ensure successful project implementation If the project costs exceed available local resources, it's essential to explore external funding options.

Project funding refers to budget provided to support a project, typically through a one-time or periodic injection of capital that does not need to be repaid.

Project finance is a method of funding where the capital for a project is raised by securing loans or investments based on the project's expected future revenues that will repay the investment.

Accessing finance remains a significant challenge for local governments, particularly in low- income countries, though.
Critical barriers often prevent much needed financial resources and investments from reaching the local level, where they are essential for infrastructure development. **Investors are frequently hesitant to invest in vulnerable areas, as projects in these contexts may not generate sufficient revenue to justify the investment.**
While infrastructure projects in such contexts are crucial for community development, they may not offer immediate financial returns, making them less appealing to profit-driven investors.

However, by exploring innovative and sustainable solutions that generate revenue, new pathways for securing finance can emerge. **Projects that demonstrate both economic viability and long-term impact are more likely to attract investors.**

Funding is often sourced from governments, NGOs, or donors. Local governments have access to various funding options, both national and international, and selecting the appropriate source depends on the project's budget and specific needs.

Although a variety of mechanisms can be accessible, it is important to underline that the portion of funding allocated to cities often remains significantly lower than the amounts allocated to national governments.

This allocation can vary based on factors such as the degree of decentralisation, the focus of the aid program, and the local government's capacity to manage and utilize the funds effectively. Recognizing these challenges, UN-Habitat and UNHCR are committed to supporting local governments in navigating the funding landscape. **This includes providing technical assistance, facilitating connections with potential donors, and helping municipalities develop strategies to enhance their financial resilience and capacity to manage resources effectively.**

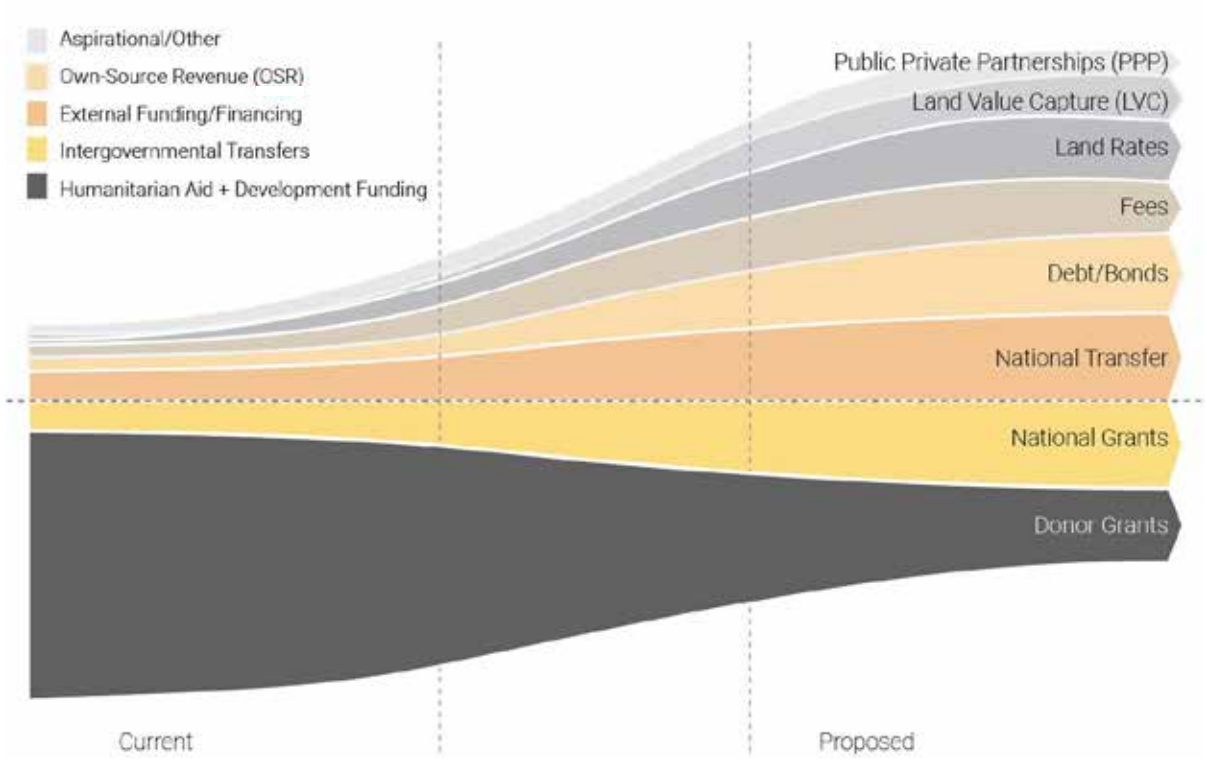


Fig. 68: Current and Proposed Grants for projects' implementation
Source: @UN-Habitat 2026

06 IMPLEMENTATION

6.8 SELECTED PILOT PROJECTS

After the elaboration of the Action Plan and a series of discussions with local authorities from the Upper Nile Ministry of Housing, Land and Public Utilities (MLHPU), UN-Habitat, and UNHCR, the priority areas for intervention were identified. **These included: water supply, waste management, housing, and road network improvement.**

However, since these sectors are already being addressed by humanitarian partners
- IOM (water supply and waste management)
- UNHCR (durable housing)
- World Bank (road network)

a the Technical Committee, together with UN-Habitat and the DACs communities representatives, identified five additional pilot projects to respond to other pressing needs of the city.

Project 1: Local Market in Hai Luakat
Project 2: Public lighting with solar panels
Project 3: Urban Park With Nature-Based Solutions
Project 4: Cemetery and Memorial in Assosa
Project 5: Public Transport Station

These projects focus on areas such as nature-based solutions for flood resilience, safety and security through renewable energy, local economic activities and livelihoods, and social integration. As a result,five priority pilot projects were selected for short-term implementation, and UN-Habitat has developed five comprehensive project briefs to support their advancement.

The strength of the Malakal Integrated Strategic Plan lies in its commitment not to duplicate the efforts of partners, but rather to harmonize and integrate all relevant interventions already planned and ongoing in the city. Its objective is to ensure implementation in areas that remain unaddressed, thereby fostering an integrated and holistic development of Malakal. In this context, **the pilot projects will be focused on the Hai Luakat area, which is currently under construction through UNHCR's Durable Solutions housing programme,** ensuring complementarity and added value to existing initiatives.

THE PROJECT BRIEF

A project brief is a concise, stand-alone document that outlines essential information about a pilot project. Its relevance lies in aligning estimated project costs with municipal capacities and providing investors with a clear overview of the project lifecycle, from implementation to long-term management. The brief serves as a tool to present the project to partners, donors, and potential financiers, thereby increasing the likelihood of securing funding and support.

STRUCTURE OF A PROJECT BRIEF

- **Introduction and Context.** Key national and city-level trends, setting the stage and urgency.
- **Project Summary.** Title, location, beneficiaries, implementing partners, and alignment with SDGs and relevant frameworks.
- **Objectives and Challenges Addressed.** Clear articulation of the project's purpose and the issues it seeks to resolve.
- **Expected Outcomes and Impacts:** Social, economic, and environmental benefits.
- **Financial Aspects.** Initial cost estimates, financing needs, and analysis of project viability (ability to generate revenue and sustain operations).
- **Risk Areas.** Identification of potential challenges in implementation.
- **Additional Studies Required:** Feasibility studies, draft engineering designs, and environmental/ social impact assessments.

By presenting well-structured and comprehensive project briefs, stakeholders gain a clear understanding of each project's value, feasibility, and alignment with broader development goals.

This approach strengthens the capacity of local governments and actors to mobilize the necessary financial resources and ensures that interventions are both impactful and sustainable.

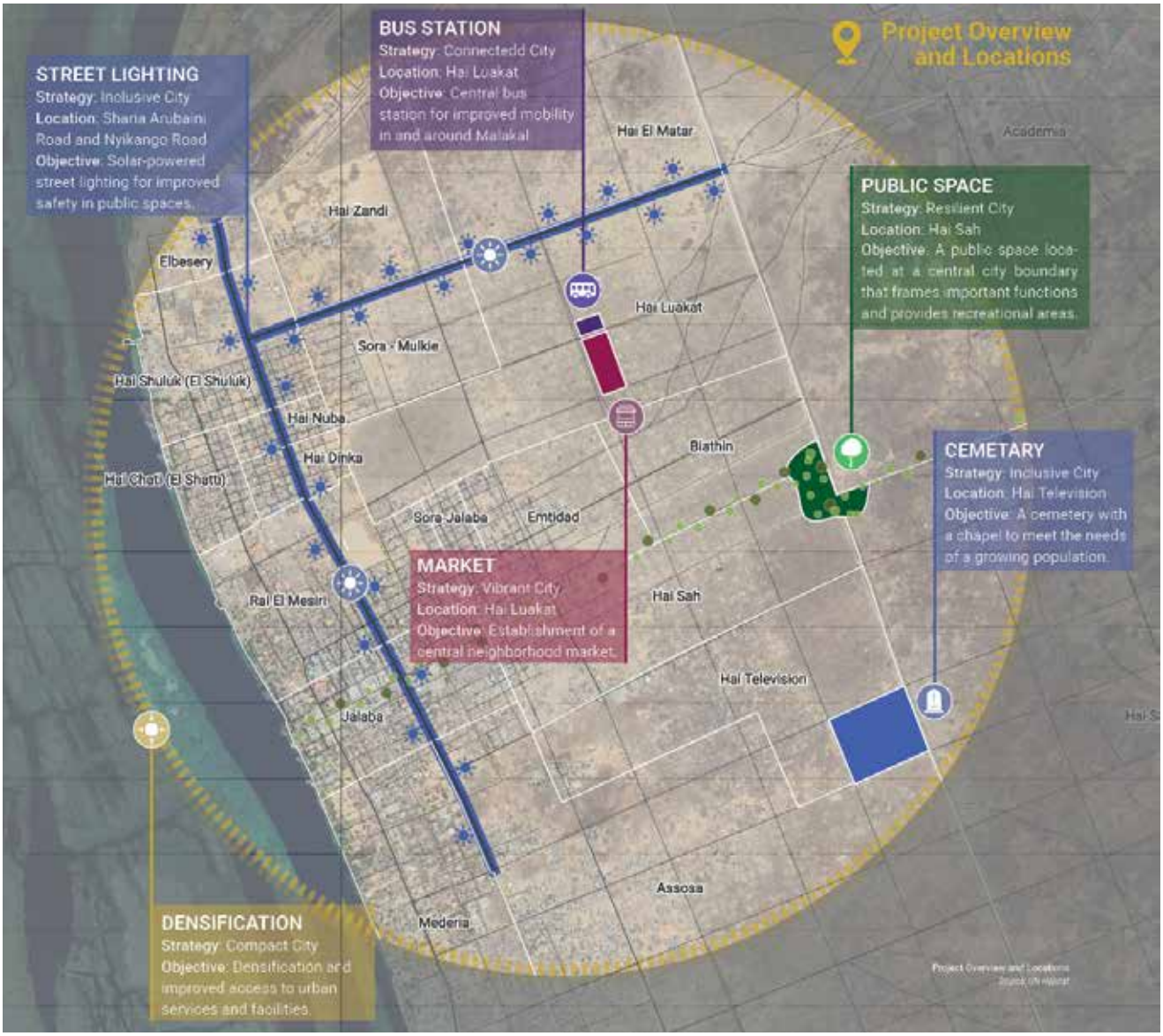


Fig. 70: Pilot projects area
Source: @UN-Habitat 2026



Fig. 71: Project Briefs Cover Pages
Source: @UN-Habitat 2026

06 IMPLEMENTATION

6.8 SELECTED PILOT PROJECTS

PROJECT 1: SHORT TERM LOCAL MARKET IN HAI LUAKAT

In Hai Luakat, the absence of a structured neighborhood market has forced residents to travel long distances or rely on informal, often unsanitary trading points to meet their daily needs. This lack of accessible retail space limits household convenience, weakens local economic activity, and contributes to poor health and sanitation conditions.This project refers to the development of a neighbourhood retail market aimed at serving the needs of the local population.

Location: Hai Luakat

Project Objectives: Providing Livelihoods; Job Opportunities; Revitalization of the Neighborhood: inclusion

Beneficiary Groups: Residents host and DACs; Farmers; Job Seekers; Local Businesses

Timeline: 34 Months

Estimated Budget: 1 500 000 USD

Project Partners: MHLPU; UN-Habitat

DEVELOPMENT STRATEGIES

1. Compact City
4. Inclusive City
5. Vibrant City

THE UPPER NILE STATE, SOUTH SUDAN AREA-BASED DURABLE SOLUTIONS ROADMAP

(3) Strengthening area-based support services and livelihoods
(4) Strengthening basic/public services infrastructure
(5) Expanding peace and community cohesion

IMPACT

The development of a local market directly addresses these challenges by creating a safe, organized space for the sale of groceries, household goods, clothing, electronics, and other essentials. With the market in place, families gain reliable access to commodities within walking distance, while vendors benefit from formal stalls that support hygiene and order. Beyond improving access to goods and services, the market will contribute to local economic development through the creation of direct and indirect employment opportunities, while also supporting improved urban health and sanitation conditions.

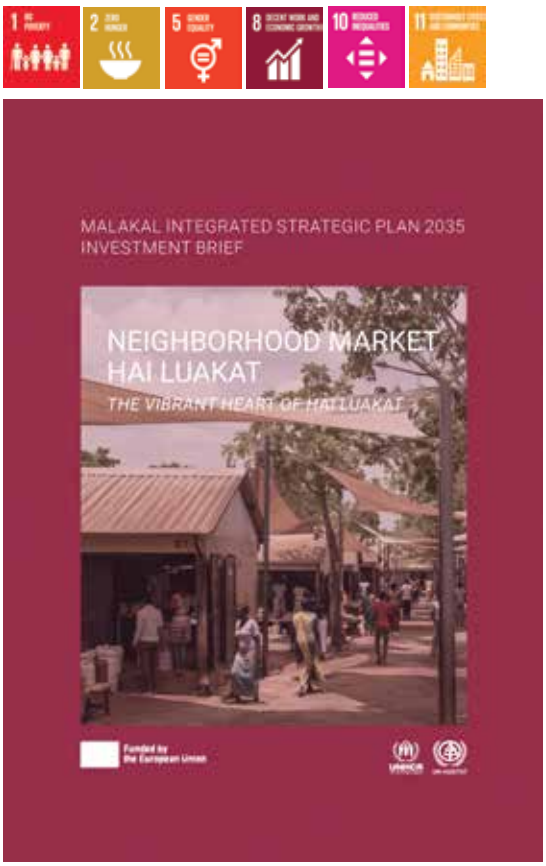






Fig. 72: Project 1: Local Market in Hai Luakat
Source: @UN-Habitat 2026

06 IMPLEMENTATION

6.8 SELECTED PILOT PROJECTS

PROJECT 2: SHORT-TERM PUBLIC LIGHTING WITH SOLAR PANELS

At night, many secondary roads and public spaces fall into darkness, leaving residents exposed to insecurity, harassment, and restricted mobility. The absence of lighting discourages movement, limits social and economic activity, and creates an environment of fear. This intervention consists of the installation of solar-powered public lighting along key roads and public spaces.

Location: Sharia Arubaini Road and Nyikango Road

Project Objectives: Safety; Renewable energy; Resilience

Beneficiary Groups: Women; Children; Vulnerable Groups

Timeline: 7 months; followed by operation and maintenance (O&M)

Estimated Budget: 153 000 USD
O&M: 5.000 USD / Year

Project Partners: MHLPU; Ministry of Electricity: UN-Habitat

DEVELOPMENT STRATEGIES

1. Compact City
2. Resilient and Sustainable City
4. Inclusive City

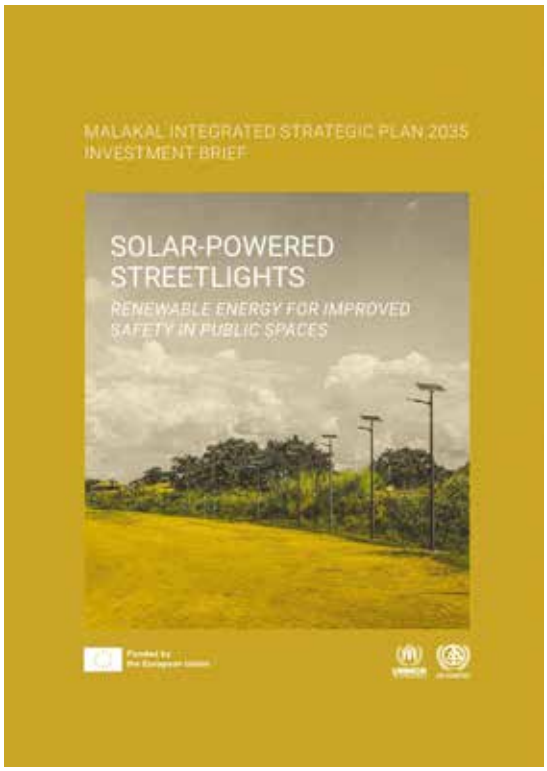
THE UPPER NILE STATE, SOUTH SUDAN AREA-BASED DURABLE SOLUTIONS ROADMAP

(1) Establishing safe and sustainable settlements
(3) Strengthening area-based support services and livelihoods
(4) Strengthening basic/public services infrastructure

IMPACT

The project aims to improve urban safety and security, facilitate nighttime movement, and enhance economic and social activities after dark. The use of solar energy also promotes environmentally sustainable and cost-effective urban infrastructure solutions.
By installing solar-powered public lighting, this project directly addresses the lack of illumination and its consequences. Safe, well-lit streets restore confidence, reduce risks, and allow communities to reclaim their evenings. Beyond safety, the intervention enables markets to stay open longer, supports local businesses, and fosters social life after dark—all while promoting sustainable, cost-effective infrastructure through renewable energy. In short, the project transforms unsafe, unlit spaces into vibrant, secure corridors of urban life.





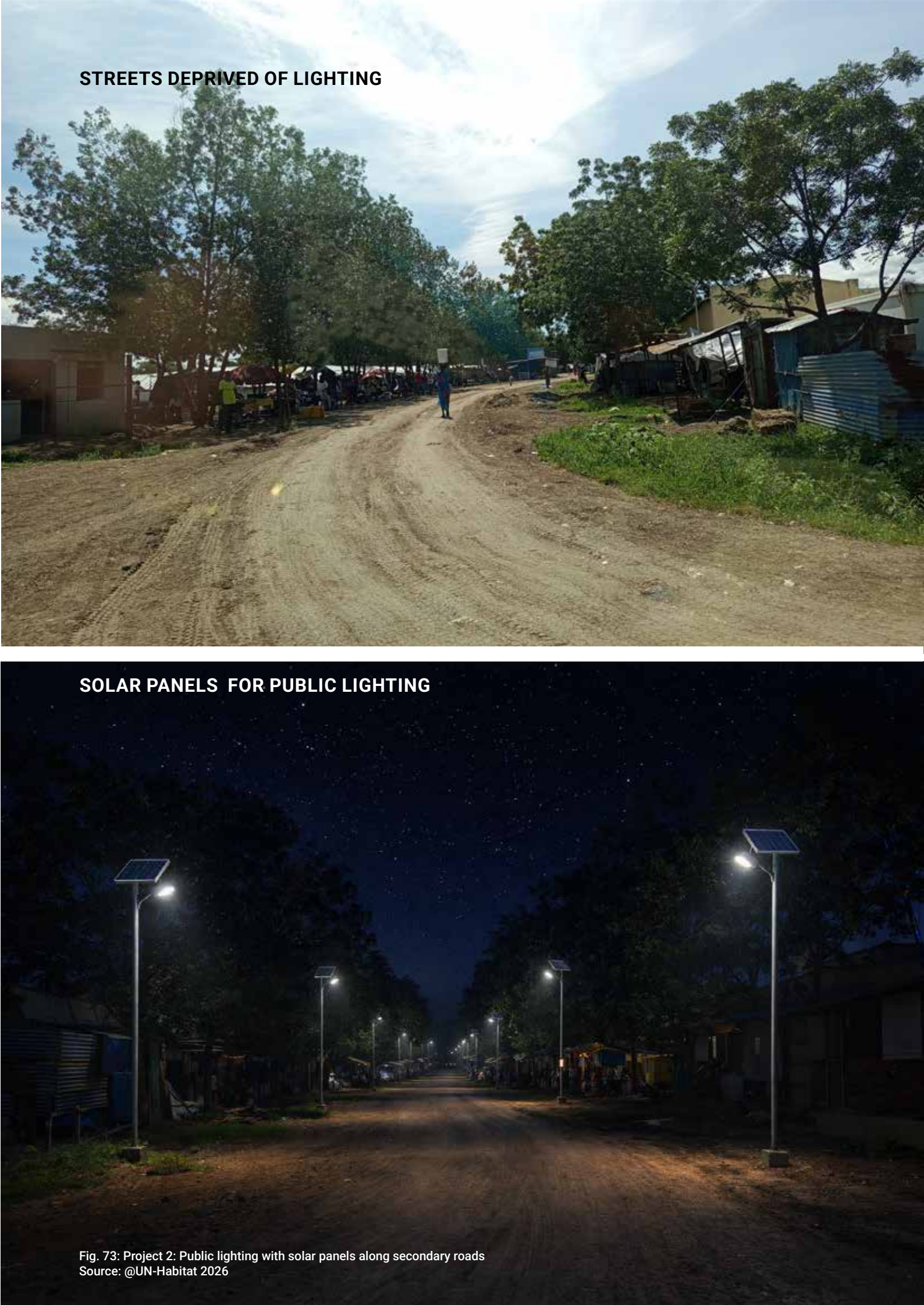


Fig. 73: Project 2: Public lighting with solar panels along secondary roads
Source: @UN-Habitat 2026

06 IMPLEMENTATION

6.8 SELECTED PILOT PROJECTS

PROJECT 3: SHORT-TERM PROJECT
URBAN PARK & NATURE-BASED SOLUTIONS

Flooding and the absence of safe public spaces have long undermined the quality of life in the area, leaving communities exposed to environmental risks while lacking places for recreation and social interaction.
The project involves the construction of urban parks integrated with nature-based flood mitigation solutions. The intervention combines permeable landscaping, biodiversity enhancement through the selection of adapted plants and trees, and the development of water retention basins with recreational functions.

Location: Hai Sah

Project Objectives: Resilient Public Spaces; Urban Commoning

Beneficiary Groups: Residents; Local Businesses; Environment

Timeline: 12 Months

Estimated Budget: 200 000 USD

Project Partners: MHLPU; UN-Habitat

DEVELOPMENT STRATEGIES

2. Resilient and Sustainable City
4. Inclusive City
5. Vibrant City

THE UPPER NILE STATE, SOUTH SUDAN AREA-BASED DURABLE SOLUTIONS ROADMAP

(1) Establishing safe and sustainable settlements
(3) Strengthening area-based support services and livelihoods
5) Expanding peace and community cohesion

IMPACT

In addition to creating public green and recreational spaces, the project will strengthen flood protection measures within the area. Feasibility studies will assess environmental risks and support the legal demarcation of the buffer zone. The impact is twofold: on one hand, it reduces vulnerability to floods and environmental hazards; on the other, it transforms the neighborhood into a healthier, more vibrant environment where families can gather, children can play, and biodiversity can flourish. By tackling the lack of flood resilience, limited public green areas, and weak environmental safeguards, the intervention builds safety, dignity, and long-term sustainability into the urban fabric.







Fig. 74: Project 3: Urban Park With Nature-Based Solutions
Source: @UN-Habitat 2026

6.8 SELECTED PILOT PROJECTS



PROJECT 4: MEDIUM-TERM CEMETERY - MEMORIAL IN HAI TELEVISON

The lack of formal cemeteries across the city has placed increasing pressure on communities, with unorganized burial practices eroding both dignity and cultural traditions. To address this need, the project proposes the development of a formal cemetery and memorial site in Hai Television,.

DEVELOPMENT STRATEGIES

1. Compact City
4. Inclusive City

THE UPPER NILE STATE, SOUTH SUDAN AREA-BASED DURABLE SOLUTIONS ROADMAP

(1) Establishing safe and sustainable settlements
(3) Strengthening area-based support services and livelihoods
5) Expanding peace and community cohesion

Location: Hai Television

Project Objectives: Basic Service and Public Space Improvement

Beneficiary Groups: Residents

Timeline: 56 Months

Estimated Budget: 1 200 000 USD

Project Partners: MHLPU; UN-Habitat

CEMETERY AND MEMORIAL SITE PROPOSAL

To address this need, the project proposes the development of a formal cemetery and memorial site, providing organized burial grounds that safeguard cultural values and a commemorative public space to preserve the memory of past war episodes. In doing so, the intervention offers a place of dignity, remembrance, and social healing, strengthening cohesion within the community.

The memorial will preserve the memory of past episodes of war, offering a place of collective remembrance and contributing to social healing and cohesion. The intervention will also provide a commemorative public space that recognizes the memory of those affected by the conflict and contributes to social healing cohesion.

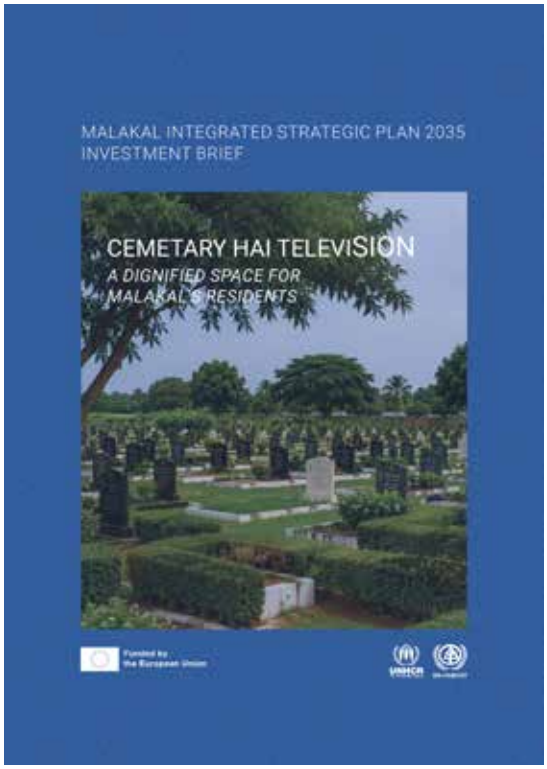


Fig. 76: Project 4: Cemetery and Memorial in Hai Television
Source: @UN-Habitat 2026

6.8 SELECTED PILOT PROJECTS



PROJECT 5: SHORT-TERM PUBLIC TRANSPORT STATION

The absence of a structured transport hub has contributed to traffic disorder, unsafe travel conditions, and limited connectivity between neighborhoods and key urban facilities.

Location: Hai Luakat

Project Objectives: Public Transport Improvement

Beneficiary Groups: Residents; Local Businesses

Timeline: 12 Months

Estimated Budget: 3 000 000 USD

Project Partners: MHLPU; UN-Habitat

DEVELOPMENT STRATEGIES

1. Compact City
3. Connected City
4. Inclusive City

THE UPPER NILE STATE, SOUTH SUDAN AREA-BASED DURABLE SOLUTIONS ROADMAP

(3) Strengthening area-based support services
(4) Strengthening basic/public services
(5) Expanding peace and community cohesion



TRANSPORTATION HUB PROPOSAL

IMPACT

This project, through the development of a formal public transport station, directly addresses these challenges by organizing passenger flows, improving safety standards, and creating a reliable node for urban mobility.

The impact extends beyond transport efficiency: by facilitating the smooth movement of people and goods, the station strengthens local economic activity, supports small businesses, and enhances access to jobs and services. In doing so, it tackles the lack of organized mobility infrastructure, unsafe commuting conditions, and missed economic opportunities, transforming urban transport into a driver of safety, connectivity, and inclusive growth.



Fig. 76: Project 5: Public Transport Station
Source: @UN-Habitat 2026

07



Fig. 77: Clean-up campaign with UNHCR and communities, Malakal, South Sudan
Source: @UNHCR 2026



WAY FORWARD

7. WAY FORWARD

7.1 PLAN IMPLEMENTATION RESPONSABILITIES

GOVERNMENT LEADERSHIP IN PLAN IMPLEMENTATION

To initiate the implementation of prioritized projects, the Ministry of Lands, Housing and Public Utilities (MLPU) will assess available local resources and will identify financial gaps.

Given Malakal's, challenging in a context marked by rapid population growth, migration, and economic or political instability, external aid will continue to provide critical support, ensuring local ownership, accountability, and the development of sustainable financial systems this transition will remain. Therefore, external funding mechanisms will be explored to ensure successful project implementation.

In response, UN-Habitat and UNHCR will support the State Ministry in navigating the funding landscape by providing technical assistance, facilitating partnerships, and helping develop strategies to strengthen financial resilience and resource management capacity.
The leadership role will transition to the relevant state governmental entities from the Ministry of Land, Housing and Public Utilities, responsible for implementation. These entities will oversee detailed design, procurement, and construction processes, ensuring that all projects will align with local regulations, technical standards, and community needs.

While local governments will take the lead, international partners such as UN-Habitat and UNHCR will continue to provide technical assistance until the end of the SCARS Project. This support will include specialized expertise, capacity building, advisory services, and facilitation of connections with donors, financiers, and implementing partners.

DURABLE SOLUTIONS MONITORING

The Integrated Urban Strategic Development Plan constitutes a core component of the technical processes and frameworks in advancing implementation of Upper Nile State Durable Solutions Roadmap, derived from the National DS Strategy and Action Plan. At the state level, the DS Roadmap is driven through the established coordination mechanism, the State Level Taskforce on Solutions.

This body is chaired by the Chairperson of the Relief and Rehabilitation Commission (RRC), co-chaired by the Area-Based Coordinator (ABC), and works in close collaboration with the Governor of Upper Nile State, and with membership across key government line ministries and development agencies from the UN, INGOs and NNGOs.

Upon completion, the Integrated Urban Strategic Development Plan will be disseminated through the DS Roadmap's coordination platforms, under the leadership of the Area Basdd Coordinator to ensure a technically informed and coordinated implementation within the framwork of UNS DS Roadmap Tier II.

This ensures that government institutions and development actors as key stakeholders in implementing durable solutions roadmap are fully informed and able to integrate the strategy into their priority activities across Upper Nile State in conformity with the roadmap Tier II 2026 - 2028 priorities for Upper Nile State.

Malakal Strategic Urban Development Plan under joint SCAR-SS project with UN-Habitat and UNHCR who will directly contribute and will incorporate the Area-Based Coordination ecosystem in Upper Nile State with clear established linkages to Upper Nile State Roadmap with its extended Tier II for 2026-2028.

Malakal Integrated Urban Strategic Plan will direct enabling impacts and compliment to strategic objectives of durable solutions strategy (UNSRM SO4 – Basic Services) for voluntary and dignified returns and reintegration of displaced populations by creating conducive conditions for returns through coordinated development of public infrastructure and services.



Fig. 78: Coordination Meeting with the Governor, MHLPU, UNHCR ABC Team Upper Nile State Malakal, South Sudan
Source: @UNHCR 2026



Fig. 79: Visioning Workshop with the MHLPUand Stakeholders, Malakal, December 2025
Source: @UN-Habitat 2025

7. WAY FORWARD

7.2 KNOWLEDGE SHARING AND CAPACITY BUILDING

COMMUNITY ENGAGEMENT - OWNERSHIP

UN-Habitat and UNHCR place communities at the center of its interventions, ensuring that displaced and affected populations are continuously informed and actively engaged in shaping their reintegration journey. Community consultations are being organized in Hai Matar and, soon, in Hai Luakat, where residents receive updates on progress related to their social and spatial reintegration into the city. These forums create a transparent dialogue, allowing communities to voice their perspectives, share concerns, and contribute to decision-making processes.

Beyond information-sharing, UN-Habitat is launching awareness campaigns focused on flood exposure and risk reduction. These campaigns not only build resilience but also empower households with practical knowledge to safeguard their livelihoods. Importantly, community voices are systematically integrated into monitoring and evaluation exercises, ensuring that the impact of implemented projects is measured against everyday realities.
By listening to how interventions affect routines, income opportunities, and safety, UN-Habitat and UNHCR ensure that Malakal Integrated Strategic Urban Plan is responsive, adaptive, and truly transformative.

This participatory approach fosters ownership, strengthens trust between institutions and communities, and guarantees that reintegration is not only a technical exercise but a lived, sustainable process. **By embedding accountability and resilience into community structures, Malakal's displaced populations are empowered to reclaim agency and contribute to the city's long-term recovery and growth.**



Fig. 80: Meeting with IDPs women community, Malakal, South Sudan
Source: @UNHCR 2026

COLLABORATION WITH TECHNICAL SERVICES (MLHPU)

Through its collaboration with the Upper Nile State Ministry of Lands, Housing and Public Utilities (MLHPU), UN-Habitat has advanced the validation of Malakal's future city extension. This partnership went beyond technical support: structured sessions were held with the Ministry's technical services, the Town Planning Department, and the geometers, ensuring that local expertise was directly engaged in shaping the city's vision. By embedding knowledge within these institutions, the collaboration has strengthened technical capacity in spatial data collection and multisectoral mapping, laying the foundation for evidence-based urban planning that will endure beyond the project's lifecycle**.**

CAPACITY BUILDING

Capacity building remains central to UN-Habitat's approach, ensuring that investments translate into lasting impact. Training in georeferenced data collection, cleaning, and updating is enabling a shift toward modernized, digital planning tools. As these practices become routine, local actors are not only applying innovative tools but also embedding them into institutional workflows. This transformation supports comprehensive spatial analysis, strengthens Malakal's resilience, These skills empower technical staff and local stakeholders to share knowledge, exchange best practices, and replicate methodologies independently and catalyzes local ownership of planning processes—ensuring that change is both sustainable and scalable.

KNOWLEDGE AND DATA SHARING

All GIS data generated under SCAR-SS Project Output 1.3 is being integrated into the One-Stop Center developed by UNHCR at MLHPU, ensuring that the urban observatory remains continuously updated. Comprehensive maps, co-produced with UN-Habitat, are now available to technical services, providing a reliable evidence base for strategic and high-level decision-making. By institutionalizing data-sharing mechanisms, the project enhances transparency, strengthens accountability, and ensures that spatial intelligence informs policy and investment decisions. This approach not only supports immediate planning needs but also builds a sustainable framework for long-term urban governance in Malakal.



Fig. 81: Meeting with technical local authorities at MLHPU, Malakal, South Sudan
Source: @UN-Habitat 2026

7. WAY FORWARD

7.3 DISSEMINATION

In fragile contexts, the voices of local governments and marginalized communities often remain underrepresented in global discussions. Through the SCAR-SS Project, UN-Habitat is ensuring that Malakal's experience is elevated to regional and international platforms, so that local challenges and opportunities inform global dialogue and policymaking. This effort bridges the gap between local realities and global agendas, contributing to the design of inclusive, context-responsive policies that address the needs of crisis-affected municipalities.

Lessons learnt and methodology applied in the the Malakal Integrated Urban Strategic Plan has already been shared in international forums attended by Humanitarian, Development partners, key related donors and stakeholders related to the topic of migration planning and resilience in response to the Sudan Crisis

Including:

- Annual Global Refugee Forum, UNHCR
- Annual Development Partners High-Level Meeting on the Sudan Regional Crisis Response, UNHCR
- Sudan Crisis Platform_https://lnkd.in/gC8sccH2UNHCR and UN-Habitat
- Bi-Annual _ African Urban Forum UN-Habitat and Host State Government (Latest session 8–10 April 2026, Nairobi, Kenya)
- Bi-Annual _ World Urban Forum , UN-Habitat and Host State Government (Last session 17–22 May 2026, Baku, Azerbaijan)
- Khartoum Process – Cities at the Frontline: Urban Governance, Migration and the Integration of Displaced Populations (Latest 2nd Session 3-4 March 2026, Kampala, Uganda)
- Malakal Integrated Urban Strategic Plan 2035, Launch, Juba, South Sudan (23rd September 2026)
- Malakal Integrated Urban Strategic Plan 2035, Launch, Malakal, South Sudan (13th October 2026)

These platforms demonstrate the effectiveness of durable solutions and integrated settlement planning approaches, positioning Malakal as a reference case for resilience and recovery in post-crisis urban contexts.

Looking ahead, UN-Habitat and UNHCR are committed to ensuring that the integrated settlement planning efforts piloted in Malakal are replicable in other cities. Lessons learned will be documented and disseminated through media outreach, international events, and conferences.

At the same time, local-level dissemination will be prioritized, with workshops and academic exchanges organized in Juba, Malakal, and other cities where this methodology can be applied.

By embedding Malakal's experience into both global and local knowledge-sharing ecosystems, the project ensures that its impact extends far beyond one city—contributing to a broader movement toward sustainable urban recovery.





Fig. 82: Malakal Plan Workshop with the MHLPU and Malakal Plan dissemination
Source: @UN-Habitat 2026



Fig. 83: Malakal Integrated Urban Strategic Plan 2035 Launch, October 2026, Malakal, South Sudan
Source: @UN-Habitat 2026



Fig. 84: Malakal Integrated Urban Strategic Plan 2035 Launch, September 2026, Juba, South Sudan
Source: @UN-Habitat 2026





Fig. 85: Games along water bodies in the ex-PoC, Malakal, South Sudan
Source: @UNHCR 2026

REFERENCES

ACAPS (2023). South Sudan: Conflict-Related Displacement

African Development Bank (2013). South Sudan: An Infrastructure Action Plan

African Development Bank Group (2022). MULTINATIONAL: Kenya–South Sudan Road Corridor Lesseru–Kitale and Morpus–Lokichar Road Upgrading Project, Phase I

African Development Bank Group (2022). Project Appraisal Report: Multinational: Kenya–South Sudan Road Corridor Lesseru–Kitale and Morpus–Lokichar Road Upgrading Project, Phase I

Bonn International Center for Conversion (2013). Brief 48 Oil Investment and Conflict in Upper Nile State, South Sudan

IGAD, United Nations, UNHCR (2024). South Sudan Durable Solutions Strategy and Plan of Action for Refugees, Internally Displaced Persons, Returnees and Host Communities

Institute for Peace and Security Studies (IPSS), Addis Ababa University (2018). South Sudan Conflict Insight: Conflict Analysis & Insights

IOM (2022). South Sudan Crisis Response Plan 2022

IOM's Displacement Tracking Matrix (DTM) reports (2025–2026).

IOM (2025) South Sudan - Flow Monitoring Registry - Cross Border Movement #68

International Organization for Migration (IOM) (2025). DTM – South Sudan Flow Monitoring

Japan International Cooperation Agency (JICA) (2014). The Project for Comprehensive Planning and Support for Urgent Development on Social Economic Infrastructure in Malakal Town in the Republic of South Sudan

Nyamach Hoth Mai (n.d.). Impacts of Climate Change on Human Health – The Case of Flooding in South Sudan

Nyibong, Daniel Thabo (n.d.). An Historical Account on the Growth of Malakal Town, 1908–1955

OCHA (2023). Humanitarian Needs Overview South Sudan

REACH Initiative (2023). South Sudan cross-border displacement: Rapid food security assessment in areas of return – Malakal County

REACH Initiative (2024). Emergency Food Security Update: Malakal County

REACH Initiative (2024). Key Public Infrastructure in Malakal PoC – May 2024

REACH Initiative (2024). Key Public Infrastructure in Malakal Town – May 2024

REACH Initiative (2024). SMART Survey Report in Malakal County, Upper Nile State, South Sudan

REACH Initiative (2024). Sudan Crisis: Area-Based Assessment for Malakal PoC Site

REACH Initiative (2024). Sudan Crisis: Malakal Town Area-Based Assessment Factsheet

REACH Initiative (2025). Severe Acute Needs in Six Displacement Sites

ReliefWeb _Internews (2024). Humanitarian Info Needs Community Voices Bulletin – Malakal, Issue #7

Republic of South Sudan, Ministry of Humanitarian Affairs and Disaster Management (2024). South Sudan Durable Solutions Strategy and Plan of Action for Refugees, Internally Displaced Persons, Returnees and Host Communities

Republic of South Sudan Ministry of General Education (2017–2027). South Sudan's National Education Policy

Republic of South Sudan Ministry of General Education (2023–2027). General Education Sector Plan

Republic of South Sudan Ministry of Health (2017). Basic Package of Health and Nutrition Services (BPHNS)

Republic of South Sudan , Ministry of Lands, Housing and Urban Development (2023). Draft National Land Policy

South Sudan Development Partner Briefing Urban, Resilience and Land Unit (URL) Africa East and South December 12, 2025. World Bank Office, Juba | South Sudan

South Sudan: An Infrastructure Action Plan (2013). Government of the Republic of South Sudan (GRSS), the African Development Bank Group (AfDB)

UN-Habitat (2019). Élaboration du Projet d'Aménagement, d'Embellissement et d'Extension – Dame Marie

UN-Habitat (2020). Planning Urban Settlements in South Sudan Basic concepts

UN-Habitat (2022). Dadaab Vision: Enhancing Self-Reliance for Refugees and Host Communities in Garissa

UN-Habitat (2023). Juba Strategic Plan

UN-Habitat (2023). Kakuma Regeneration Strategy: Enhancing Self-Reliance for Refugees and Hosting Communities in Turkana County, Kenya

UN-Habitat (2025). Baardheere Strategic Urban Plan for Durable Solutions to Displacement

UNHCR (2023). Forced Displacement Survey South Sudan

UNHCR (2024). Bulukat Transit Center Map

UNHCR (2024). FO Malakal Operation

UNHCR (2024). UNHCR Malakal – Briefing Note

UNHCR (2025). South Sudan County Level IDPs Population Heat Map – 31 March 2025

UNHCR (2025). South Sudan Global Appeal 2025: Situation Overview

UNHCR (2025). South Sudan Situation: Displacement Overview

United Nations (2024-Draft). South Sudan Flood Preparedness and Response Plan – Draft

United Nations (2025-Draft). South Sudan Flood Preparedness and Response Plan – Draft

Upper Nile State Government (2024). Upper Nile State, South Sudan Area-Based Durable Solutions Roadmap: Solutions Strategy for Returnees and Internally Displaced Persons (2024–2026)

World Bank (2026). South Sudan Urbanization Review

World Bank (2026). South Sudan Country Climate Development Report

World Bank Group (2025). Enhancing Community Resilience and Local Governance Project (ECRP-II)

World Bank, Triple Line (2024), Summary Report of Urban Disaster Risk Assessment _ Assessing Urban Disaster Risks and Investment Options for Urban Disaster Risk Reduction in South Sudan

Wordl Bank, (2025), South Sudan: Assessing Emergency Preparedness and Response Capacities at National and State Level and Development of an Investment PlanFinal Report Draft

Contacts:

UN-Habitat Regional Office for Africa, East and Horn of Africa Subregion
Project Manager and Author | Princesse Samba Makondele - princesse.samba@un.org

UNHCR South Sudan Country Office, Juba
Senior Development Officer | Pierre Fichter - fichter@unhcr.org

UNHCR South Sudan Country Office, Malakal
Malakal HoFO/Area-Based Coordinator for Upper Nile State | Dmytro Charskykh - charskyk@unhcr.org