

Urban Planning & Infrastructure in Migration Contexts

AMMAN SPATIAL PROFILE

Jordan



Acknowledgements:

This project is funded by:
Swiss State Secretariat for Economic Affairs (SECO)

The spatial and narrative analysis has been developed by UN-Habitat's Urban Practices Branch, Planning, Finance and Economy Section, under the Planning for Humanitarian and Development Practice Programme.

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Abbreviations

AFD	Agence française de développement (French Development Agency)	LLC	Limited Liability Company
AiIB	Asian Infrastructure Investment Bank	LTRC	Land Transport Regulatory Commission
ASEZA	Aqaba Special Economic Zone Authority	MBT	Mechanical Biological Treatment
BMZ	Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung (Federal Ministry for Economic Cooperation and Development)	MLDU	Municipal Local Development Unit
BRT	Bus Rapid Transit	MoENV	Ministry of Environment
CapEx	Capital Expenditures	Mol	Ministry of Interior
CES-MED	Cleaner Energy Saving Mediterranean Cities	MoLA	Ministry of Local Administration
CR	Community Resilience	MoPIC	Ministry of Planning and International Cooperation
CVDB	Cities and Villages Development Bank	MoU	Memorandum of Understanding
DLS	Department of Lands and Survey	MSW	Municipal Solid Waste
DoS	Department of Statistics	NCSCM	National Centre for Security and Crisis Management
DRR	Disaster Risk Reduction	ND-GAIN	Notre Dame-Global Adaptation Index
EBRD	European Bank for Reconstruction and Development	NGO	Non-Governmental Organisation
EU	European Union	NRP	National Resilience Plan
GAM	Greater Amman Municipality	PDTRA	Petra Development and Tourism Region Authority
GCM	Global Compact for Migration	PESTEL	Political, Economic, Social, Technological, Environmental, and Legal Factors
GDP	Gross Domestic Product	PforR	Programme-for-Results
GEF	Global Environment Facility	PPCR	Pilot Programme for Climate Resilience
GHG	Greenhouse Gas	PPP	Public-Private Partnership
GIS	Geographic Information System	PVC	Polyvinyl Chloride
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Corporation for International Cooperation)	RGP	Regional Development Plan
GLDU	Governmental Local Development unit	SDC	Swiss Agency for Development and Cooperation
GoJ	Government of Jordan	SDG	Sustainable Development Goal
GWh	Gigawatt Hours	SECAP	Sustainable Energy and Climate Action Plan
HUDC	Housing and Urban Development Corporation	SECO	Swiss State Secretariat for Economic Affairs
ILCA	Improving Living Conditions in disadvantaged Areas in Amman	SRF	Solid Recovered Fuel
ILO	International Labour Organisation	SuDS	Sustainable Drainage System
IMF	International Monetary Fund	SWOT	Strengths, Weaknesses, Opportunities, and Threats
IRC	International Rescue Committee	UNFCCC	United Nations Framework Convention on Climate Change
ISTD	Income and Sales Tax Department	UN-HABITAT	United Nations Human Settlements Programme
ITS	Intelligent Transport Systems	UNHCR	United Nations High Commissioner for Refugees
JEF	Jordan Environment Fund	UNICEF	United Nations Children's Fund
JEPCO	Jordan Electric Power Company	UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
JIC	Jordan Investment Commission	USAID	United States Agency for International Development
JOD	Jordanian Dinar	USD	United States Dollar
JORISS	Information System for Jordan Response Platform for the Syria Crisis	WAJ	Water Authority of Jordan
JREEEF	Jordan Renewable Energy and Energy Efficiency Fund	WASH	Water, Sanitation, and Hygiene
JRP	Jordan Response Plan	WFP	World Food Programme
JVA	Jordan Valley Authority	WSUD	Water-Sensitive Urban Design
KAP	King Abdullah Park	WWTP	Wastewater Treatment Plant
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)	3RP	Regional Refugee and Resilience Plan
LFG	Landfill Gas		

Definition of Terminology

Liwa: refers to the Ministry of Interior's first division after the governorate.

Qada: refers to the Ministry of Interior's second division after the liwa.

Localities: refers to the Ministry of Interior's third division after the qada.

Municipalities: refers to the Ministry of Local Administration's first division after the governorate.

City: refers to the Greater Amman Municipality's Administrative area throughout the spatial profile.

Districts: refers to refers to the Greater Amman Municipality's first division.

Neighbourhood: refers to the Greater Amman Municipality's second division after districts.

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Executive Summary

This document is the product of intensive profiling work done for Amman. This profile has a hierarchical scalar approach, starting from the national level and ending at the neighbourhood level.

National Level:

Being a safe haven in a region that has experienced much turmoil, Jordan has welcomed several waves of refugees over the years, making it the second largest refugee host per capita worldwide. Enormous population growth patterns coupled with rapid urbanisation has resulted in Jordan being one of the 50 most urbanised countries in the world. This has posed various challenges and strains on the country's infrastructure, economy, and the quality of services. Additionally, the rapid population growth has led to an increase in land prices in Jordan, making them among the highest in the region. Although there are several plans, policies, and strategies that shape the development of Jordan, each ministry will often plan, implement, and monitor its own projects individually, resulting in haphazard and uncoordinated initiatives and efforts. Furthermore, more than half of Jordan's municipalities are experiencing an acute deficit and high degree of indebtedness. Many municipalities rely heavily on central governmental transfers and only 3% of the central state budget is dedicated to municipalities.

Nevertheless, while Jordan has scored 67.4 out of 100 for the quality of infrastructure, there are several metrics to improve, particularly in relation to financial markets and funding capacity. The transportation sector accounts for more than 8% of Jordan's GDP, and the presence of well-connected street network, three major airports, and one seaport has strengthened Jordan's connectivity and transport infrastructure. However, despite the improvements in physical transportation infrastructure, public transportation is still limited across the country. Additionally, Jordan is suffering from the lack of affordable housing, with a total housing deficit of over 15.9%. Furthermore, one of the country's biggest challenges is water scarcity, whereby Jordan is the second most water scarce country in the world. Due to dilapidated pipes and tanks as well as improper installation and maintenance, 40% of the water transported by pipes is lost to leakage.

Within this context, this spatial profile has analysed the Kingdom from the national to neighbourhood level with the aim of identifying the key challenges, opportunities, and needed investments. The national level section provides a background on the national and international setting, as well as data on demographics, socio-economic conditions,

and refugees in Jordan. This includes an in-depth analysis of cross-border displacement dynamics, the governance and administration system, the national planning context, key plans and strategies, land and property rights, municipal finance, major infrastructure initiatives, affordable housing, and the climate risk context.

Regional Level:

Zooming in to Amman's Governorate, this profile has analysed topics such as the governorate's location and connectivity, the regional land administration and institutional context, the regional planning context, demographics, refugees, regional infrastructural access, land use, housing, and the real estate market. It was found that Amman Governorate's administrative boundaries have had a few changes over the past 50 years. Currently, it consists of nine Liwa's, four Qadas, and eight municipalities. The administrative boundaries outlined by the Ministry of Interior (MoI) include the Liwas and Qadas, which are under the administration of the Governorate of Amman. While the municipalities are under the administration of the Ministry of Local Administration (MoLA), excluding Greater Amman Municipality (GAM), which is considered an autonomous entity. However, for real estate services and land plotting purposes, the Department of Land and Survey (DoLS) divides the governorate into 8 directorates, 127 villages, and 1,207 basins, excluding Sweileh and Safoot villages. All these administrative boundaries are not aligned, impacting the decision-making processes as well as planning activities within the governorate.

Additionally, Amman Governorate, which includes the capital city of Jordan, Amman city, is the largest governorate in terms of population and has a central geographical location among the Kingdom's governorates. As of 2020, Amman Governorate's population constitutes of 42% of Jordan's total population, which is equal to 4.5 million, and most of this population -around 3.8 million- resides within Greater Amman Municipality (GAM). With more than half of the Governorate's population aged under 25, there is an increased demand on educational facilities and increasing dependency rate, which requires careful planning for the future.

Being the political, economic, and cultural hub of the country, Amman is the most urbanised governorate, with 97.2% of its population being urban. However, up to 40% of land within Amman Governorate's built-up area is vacant, which allows for a large degree of intensification. Furthermore, Amman Governorate is well accessed by most governorates through transportation infrastructure.

It has two international airports and a railway passing through it, which is only used for freight. Nevertheless, there is a heavy reliance on private cars.

Since the governorate is administered by Greater Amman Municipality (GAM) and Ministry of Local Administration (MoLA), several master plans were developed for the various municipalities, including the Metropolitan Growth Plan, Amman Resilience Strategy, Amman Green City Action Plan, USAID CITIES Programme, and Amman Climate Action Plan. Municipalities are not empowered to prepare their own master plans, and lack the staff, equipment, and training to do so. Legally, they are only able to update their land use plans.

Moreover, the governorate hosts around 1.6 million refugees, including Syrians, Palestinians, and Iraqis. The refugees vary in terms of location of residence across the governorate based on their financial abilities and the economic sectors that they are active in, but most of them are concentrated within GAM. There are four Palestinian refugee camps in the Amman Governorate and no Syrian refugee camps. All Syrian refugees in Amman live in urban areas alongside the host community. Their location reflects their engagement in various economic sectors, particularly industry and agriculture. Meanwhile, the concentration of Iraqi refugees in the western districts of Amman reveals that most of them can afford residing in houses in the wealthier districts. It also reflects their economic engagement in business and commerce, with many owning shops in Amman. Additionally, regarding infrastructure access in the governorate, about 98% of Amman Governorate's households are connected to the piped water system, the sewerage service covers 80% of the total water subscribers, and there is a good service provision of electricity throughout the governorate. As for solid waste management, the annual solid waste generated in GAM accounts for almost half of the total solid waste generated in Jordan. There are five dump sites that serve the central region of Jordan and only one sanitary landfill, which is Al-Ghabawi. Additionally, affordable housing is limited and has become a critical issue due to inflation in land, construction, and energy prices.

City Level:

This section looks at the administrative and governance context, demographics and urban growth, population density and distribution, migration context, land use, local economic activity, refugee employment, natural hazards, transport and mobility, planned infrastructure investments, access to basic services, access to public facilities, as well

as the municipal financial context of GAM, also referred to as Amman city.

Amman city has grown from a city to a metropolis, with an urban area of 630km². This urban area has an annual increase rate of 2%, which puts more pressure on the municipality to provide services. Additionally, the population of the city is estimated to reach 6.4 million by 2025, requiring an additional 1.3 million housing units. GAM is divided into 22 districts, whereby each district acts as a small municipality offering all services required by citizens directly and without referring to the Central Municipal Offices, excluding zoning and planning functions, which are carried out centrally in the Municipality main offices. In 2015, the population of GAM reached 4,077,450, with an average population density of 25,000 people/ km². It was found that areas with higher population density correspond to the areas with higher refugee presence, including Basman, Al Yarmouk and Ras El Ain, which are highly accessible to all services and offer a relatively lower cost of living than other districts of GAM.

The increase in population has led to increased pressure on infrastructure networks in these areas as the capacity was not originally designed to accommodate these growth levels. Within Amman, a fourth of the population has refugee status and one seventh of the population lives in refugee camps located in Amman. The remaining refugees will often live in overcrowded housing and informal areas around camps in the central and eastern part of the city. There are two Palestinian refugee camps within GAM, which suffer from weak infrastructure, hygiene, health, and education services in general. This is further compounded by high rates of poverty, unemployment, health issues, and limited access to socio-economic opportunities.

As for the land use, most of the land in Amman is privately owned; GAM owns only 20% of land within its boundaries. 52% of the land within GAM is unplanned, which means that they are unclassified. Residential land use comprises the highest percentage of the planned area, while green and open spaces only cover around 2% of the planned areas, with a public open space per capita that is equal to 2.5m². Additionally, the public transportation network within Amman covers most of the densely populated areas of GAM but does not extend far beyond the city centre. It was found that the city has well-managed road, tunnel, and bridge infrastructure, but the current public transport network in GAM is underdeveloped. Amman is also a pedestrian unfriendly city. Generally, the residents of Amman face challenges in mobility, whereby the extreme reliance

on private modes of transport to move throughout the city has generated severe congestion, poor public transport service, and very costly mobility. GAM residential areas are well connected to basic service networks, including water, electricity, and telecommunication. GAM is responsible for undertaking all waste management operations within its boundaries and 99% of the population are served by the Municipal Solid Waste (MSW) collection.

Accessibility to public facilities include healthcare, commercial, educational, and recreational facilities. It is worth noting that accessibility in this section was studied spatially, where good accessibility meant the ability to access these facilities within 15 or 30-minute walking distance by the residents. The quality of these facilities was acquired from the different stakeholders and presented in the Stakeholder Engagement Section. It was found that 47.3% of GAM's population have access to public hospitals and public health centres within a 15-minute walking distance, while 86.9% have access within a 30-minute walking distance. As for commercial facilities, almost the whole population is served with commercial facilities within a 30-minute walking distance. Also, GAM is well served with public schools spatially. Recreational facilities, on the other hand, are very limited and the minimal availability of public parks is considered a challenge. There are 189 public parks, but they are limited to only 92 of GAM's 220 neighbourhoods.

Regarding municipal finance, in 2016, GAM's budget was equivalent to all the other municipalities combined, and in 2020, 88% of municipal revenue was self-generated. GAM has seven main self-generated revenue sources, and they include property taxes, levies and fines, returns of investments, central government grants, grants from foreign partners, interest on cash investments, and income from the sale of land and property leases. Wages and labour expenditures have the highest expenditure percentage. This is followed by other expenditures, with operating expenditures being allocated the least amount. Moreover, it is estimated that the municipality accounts for 55% of the country's total employment. Despite that, unemployment in Amman is high at around 18.6%. Additionally, Amman is home to 48% of the country's economic and commercial institutions, and accounts for approximately 80% of the country's industry. It is dominant in terms of the national tourism sector, with 75.2% of all direct employment in the sector being in Amman. Regarding refugee employment, most refugees work informal jobs, and many work near their place of living, as the lack of affordable transport options to enable mobility between home, work, and

medical facilities has hindered their accessibility to these facilities. Furthermore, natural hazards are a challenge for the city of Amman, with its districts being among the most vulnerable to flash floods due to the increasing population and high concentrations of Syrian refugees, which exert pressure on infrastructure and services. Jordan is highly vulnerable to earthquakes as well, with the areas that are most heavily affected including Ras El Ain, Al- Yarmouk, Basman, Al-Naser, and Al-Abdali.

Based on the findings of this spatial profile, five neighbourhoods were found to have a high refugee presence and the lack of or weak access to infrastructure networks, public facilities, and public transport. To conclude this section, and in order to pick three neighbourhoods out of the five for further analysis, an evaluation matrix was done in cooperation with GAM representatives. The matrix included scoring the five neighbourhoods based on the aforementioned criteria, where the Al Hashmi Al Janoubi, Al Yadoudeh, and Al-Qweismeh neighbourhoods had the highest scores.

Neighbourhood Level:

At the neighbourhood level, these three neighbourhoods were analysed more closely, with each being found to represent a different typology; The Al Hashmi Al Janoubi Neighbourhood represents the typology of a dense neighbourhood with overloaded infrastructure networks, the Al Qweismeh Neighbourhood represents the typology of a neighbourhood that lacks access to some public facilities, and the Al Yadoudeh Neighbourhood represents the typology of a neighbourhood that lacks access to some infrastructure networks and public facilities.

After analysing these neighbourhoods, a validation workshop was held to validate the profile's findings and to select the pilot neighbourhood for the next phase of the project. As a result, the Al Hashmi Al Janoubi Neighbourhood was chosen. Accordingly, a validation workshop with the residents of the Al Hashmi Al Janoubi neighbourhood was conducted, which aimed to inform the residents about the UPIMC Programme and its objectives, to provide an overview of the developed neighbourhood spatial profile that has analysed the existing urban situation, as well as to obtain their perspectives on the identified challenges and opportunities regarding the neighbourhood's infrastructure, urban environment, transportation, and public facilities. Additionally, during this workshop, the residents of the Al Hashmi Al Janoubi Neighbourhood highlighted the needs and priorities of their neighbourhood.

Based on the spatial analysis and the results of the validation workshop with the neighbourhood's residents, the identified challenges and the needed interventions at Al Hashmi Al Janoubi in relation to the SDGs, are as follows:



SDG 3: Good Health and Well Being

The analysis revealed that there is a lack of access to health care facilities within a 5- and 15-minute walking distance at the Al Hashmi Al Janoubi neighbourhood. This was validated by the neighbourhood residents.

Accordingly, **the needed intervention** is to construct a comprehensive health centre or upgrade and transform the existing primary health center within the neighbourhood to a comprehensive one that includes a 24-hour emergency centre.



SDG 6: Clean Water and Sanitation

Residents described the water service as weak and limited. They also explained that the sanitation network needs regular maintenance. This is aligned with the capacity analysis conducted that revealed that the water and sewerage networks within the neighbourhood are overloaded.

Therefore, **the needed intervention** is to upgrade the water and sewerage networks to accommodate the increase in population.



SDG 9: Industry and Infrastructure

The residents mentioned the need for road maintenance, installing speed bumps, adding pedestrian crossings, and enhancing the street-lighting in general. The field visits conducted by the UN-Habitat team confirmed that the roads need rehabilitation and more lighting. Furthermore, the residents also discussed the issues of flash floods and poor storm-water drainage.

Accordingly, **the needed intervention** is to rehabilitate the road infrastructure and to add more lighting poles in the neighbourhood. There is additionally a need to provide periodic maintenance to the storm-water drainage system.



SDG 11: Sustainable Cities and Communities

The analysis revealed the limited commercial areas within the neighbourhood, which was further emphasised by the residents. Additionally, they mentioned the lack of facilities for children and people with disabilities. Residents also explained that the public recreational facilities in the neighbourhood need significant rehabilitation. Therefore, **the needed interventions** are to add a central commercial area, a nursery, a vocational training centre, and a centre specialized for people with disabilities. Regarding the public recreational facilities, **the needed interventions** include providing more secured play areas, more games (specifically inclusive games and activities for people with disabilities), more lighting poles, public toilet facilities, shaded seating areas, a kiosk, and regular maintenance in general.

As for transportation, the analysis showed that the neighbourhood residents have good access to public transport means within 5 and 15-minute walking distances. However, residents highlighted the need for public transport stops and routes. They also highlighted the lack of pedestrian bridges on the main roads that lead to the main nearby public transport stop available, which threatens their safety. The **needed interventions** in this regard is to extend a public transport route into the neighbourhood and to add a fixed stop in the central area of the neighbourhood. Additionally, pedestrian bridges on the main streets are highly necessary.

Furthermore, the unequal distribution of janitors and waste containers was highlighted as a challenge concerning solid waste management in the neighbourhood. Accordingly, **the needed intervention**, is to add waste containers and assign more janitors to serve the neighbourhood equally and efficiently.

Another **highlighted need** is the general beautification of the neighbourhood, with residents suggesting painting murals and increasing green elements, such as adding trees, and utilizing rooftops and vacant lots for urban agriculture.

Introduction

This document is a product of intensive profiling work held by the UPIMC team to fulfil the first component of the project. It is a stand-alone document, yet it is important to be considered while reading the action plans and prioritised interventions which will be produced in the second stage of the project's life cycle. The profile has a hierarchical scalar approach, starting from the national level and ending with the local/neighbourhood level. The formulation of the profile ensured the interconnectivity between each scale, to allow a two-way reading mechanism of the document. Each section of the profile combines a set of cartographic interpretations of the situation to provide a spatial dimension of the narrative.

About UN-HABITAT

The United Nations Human Settlements Programme, UN-Habitat, is the United Nations agency working for a better urban future. It is mandated by the UN General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all. UN-Habitat promotes transformative change in cities and human settlements through knowledge, policy advice, technical assistance and collaborative action to leave no one and no place behind. UN-Habitat focuses its efforts to reduce spatial inequality and poverty in communities across the urban-rural continuum, enhance shared prosperity for cities and regions, strengthen climate action and improve the urban environment, and Effective urban crises prevention and response.

Humanitarian-Development Nexus

Today, 55% of the world's population lives in urban areas, a proportion that is expected to increase to 68% by 2050. Such a high rate of urbanisation adds to the increasing pressures on cities and urban settings to absorb the demands of its population. In parallel, urban areas have been the main destination of the displaced, with over 60 per cent of refugees and a majority (80 per cent) of internally displaced persons (IDPs) now living in urban environments, mainly seeking socio-economic opportunities and safe places to reside. Such a situation has resulted in an unprecedented increase in the cost and duration of humanitarian assistance, especially with the protracted nature of crises and scarce development actions. Such a status necessitates stronger connectivity between humanitarian and

development efforts, especially since the 2030 Agenda and the Sustainable Development Goals (SDGs) do not only aim to meet needs, but also to reduce risks and vulnerabilities, leaving no one behind.

Urban Planning and Infrastructure in Migration Contexts (UPIMC) Programme UN-Habitat is partnering with the Swiss State Secretariat for Economic Affairs (SECO) to improve access to reliable services and socio-economic opportunities for migrants and displaced populations in urban settlements. The UPIMC will support a number of municipalities that host displaced populations in developing long-term strategies that build on their resilience to face future challenges. The UPIMC aims to foster multi-sectoral collaboration between UN-Habitat, national and local governments, humanitarian actors, development partners, as well as international financial institutions to develop sustainable interventions that build inclusive, safe, resilient, and sustainable settings. The programme is implemented in three countries, namely, Cameroon, Egypt, and Jordan.

Objectives

The UPIMC aims to contribute to the continuous national and international efforts to improve access to services and socio-economic opportunities for displaced populations side by side with the citizens living in challenging situations in the selected cities. This goal will be achieved by supporting municipalities with a long-term strategic approach to improve the accessibility of public services in the migration and displacement affected neighbourhoods through bankable infrastructure investments. The adopted planning approach ensures integrating a wide spectrum of stakeholders that involve humanitarian and development actors, as well as governmental parties such as line ministries and target municipalities. Such an approach aspires to support connecting short-term humanitarian responses with long term development interventions to enable more comprehensive and inclusive interventions.

Methodology

The methodology comprised primary and secondary data collection, together with field visits and intensive consultation with local, national government actors as well as the target communities. The collected data were

triangulated with a desktop review of multiple literature sources, including academic and grey sources. A set of spatial analyses was conducted from regional to neighbourhood scales to define the major challenges and opportunities and inform the project's next steps. Finally, the profile was reviewed and validated with the primary actors in the project, including representatives from the community.

Approach

UPIMC consists of four interlinked components: (1) spatial analytics and urban profiling, (2) developing a strategic vision and scenario building, (3) defining prioritised infrastructure investments and establishing linkage to financing, and (4) contributing to knowledge exchange. In the first component, the UPIMC team developed urban profiles based on a spatially focused cross-sectoral situational analysis of urban settlements hosting displaced populations, allowing local stakeholders to get a comprehensive spatial understanding of the existing situation as a basis for decision-making, long-term urban development strategies, and infrastructure investment planning. Building on the profile developed, the second component will develop a strategic vision for urban development in selected areas in the targeted cities. Participatory approach and planning charrettes rest at the core of this process, involving critical institutional stakeholders together with representatives of civil society. The urban profiles, scenarios, and action plans from the first two components set out the rationale and evidence to support decision-makers to identify interventions for prioritised investment in municipal services that are both financially realistic and viable. The production of the third component incorporates assessing the economic, social, and environmental potentials to obtain the sustainable impact of proposed interventions. The last component will build up and foster knowledge exchange and awareness in the cities among stakeholders for the importance of good data management and urban observatory platforms for future use. Through forums and digital media, the programme will also connect cities at the national level and internationally through events and international conferences, including the Cities Investment Platform events.

Target Audience

This profile provides entry points for national and international practitioners who seek to develop long term development strategies in their cities, as well as donor organisations and potential financiers. At the same time, this profile targets grassroots individuals, who are the primary change-makers in their communities, by providing a spatialised overview of the main potentials and opportunities of the profiled cities.

UPIMC Programme

By conducting activities that go beyond a pure planning stage, the Programme endeavours to support the prioritization of infrastructure investments and their linkage to financing, which will benefit migrant communities and all urban dwellers with a better quality of life and better access to economic opportunities. Accordingly, the scope of work will also ensure significant contributions to the Sustainable Development Goals (SDGs) by supporting the selected cities and neighbourhoods to become increasingly inclusive, safe, resilient, and sustainable. This will allow for the necessary shift from short term emergency interventions to long term development investments. The Programme will achieve this through the four interlinked components below:

- **Spatial Analytics and Urban Profiling**

Under the first component, this Programme will develop urban profiles based on a spatially focused cross-sectoral situational analysis of urban settlements hosting displaced populations. This allows local stakeholders to get a comprehensive spatial understanding of the existing situation as a basis for decision making on long-term urban development strategies and infrastructure investment planning. The urban profiling itself will build upon data already collected by the various actors using a participatory and area-based approach. It will develop a baseline that can be used as a consultative mechanism to support vertical and horizontal integration of stakeholder requirements including government entities at various levels and other relevant stakeholders. It will also be used to select suitable pilot areas within the cities, where more detailed scenario building will be conducted under the second component.

- **Develop a Strategic Vision and Scenario Building**

Building upon the analytical work and the recommendations for the selection of pilot areas under the first component, this component will develop strategic visioning and scenario building for urban development in selected neighbourhoods. It is based on a comprehensive planning charrette, which is highly participatory and inclusionary, involving critical institutional stakeholders together with representatives of civil society (displaced, migrants, host communities, etc.) and the private sector. Participants will provide direct inputs into the visioning process, which will facilitate discussion on strategic urban development visions, possible interventions, related individual interests, technical opportunities and/or constraints, as well as political objectives. The scenario building will be supported

by an action plan outlining what could be done, where and when. This will also unlock the next step for the clear identification of strategic infrastructure interventions and will allow for technical assessment of the intervention prioritization and its definition.

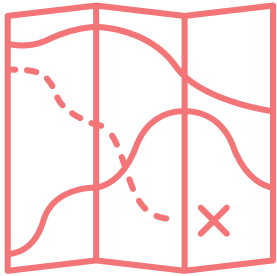
- **Define Prioritized Infrastructure Investments and Linkage to Financing**

The urban profiles, scenarios, and action plans from the first and second components set out the rationale and evidence to support decision-makers in identifying interventions for prioritized investment in municipal services that are both financially realistic and viable. It will aid in prioritizing investments through an assessment of the economic, social, and environmental potential as well as of the sustainable impact of the proposed interventions on the city and its migrant communities. The technical and financial feasibility of the prioritized interventions will further be detailed through technical assistance and consultative bilateral engagements with national and local authorities, donors, and development banks. As well as through analysing city budgets, capital spend potential, as well as investment platforms, such as UN-Habitat's Cities Investment Facility. The proposed prioritized infrastructure intervention and anchor points (where catalytic projects can be linked to existing city/neighbourhood priorities and policies for bankability) will then be presented and validated in a workshop with key local authority, development partners, and, where possible, the private sector. This will include work to link them to potential partners for financing and detailed pre-feasibility studies.

- **Knowledge Exchange**

This last component will build and foster knowledge exchange and awareness in the cities among stakeholders for the importance of good data management and urban observatory platforms for future use. Through forums and digital media, the Programme will also connect cities at the national and international levels through events and international conferences, including the Cities Investment Platform events. It will also make use of UN-Habitat's platforms and those of partners i.e., Cities and Migration Joint Work Programme of the Cities Alliance, share respective knowledge and experiences, as well as other examples such as UN Migration Network, UCLG or MMC.

COMPONENT #1



Spatial Analytics & Urban Profiling

Multi-Sectoral Spatial Analysis
 Profile Preparation & Pilot Area Identification

COMPONENT #2



Develop Strategic Vision & Scenario Building

Identification of potential economic opportunities
 Finalisation & dissemination of action plan

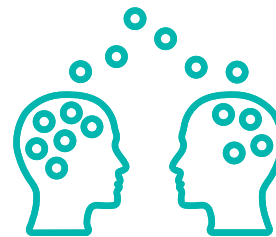
COMPONENT #3



Define Prioritized Infrastructure Investments & Linkages To Financing

Impact assessment framework of proposed infrastructure

COMPONENT #4



Knowledge Exchange & Capacity Sharing

City-to-city knowledge exchanges
 Capacity sharing sessions with local authorities to continue to monitor and guide infrastructure implementation



01

NATIONAL CONTEXT

National and International Setting

The Hashemite Kingdom of Jordan, hereafter named Jordan, is located in the rocky desert of the northern Arabian Peninsula. Jordan is bound by Syria to the north, Iraq to the northeast, and Saudi Arabia to the east and south, and covers an area of 89,318 square kilometres.¹ It has a population of 10.5 million (2019)² which is heavily concentrated in and around the capital city of Amman. Approximately half of the urban population resides in the Amman-Russeifa-Zarqa agglomeration³, hosting most of the salaried works and enterprises. This results in major spatial inequalities in growth patterns and revenue distribution between the agglomeration and the rest of the country.

Jordan has long been known as an island of stability in a volatile region. Throughout its history, and since the start of the Syrian crisis, it has generously opened its doors to refugees in large numbers. Jordan has the second highest share of refugees per capita in the world, which is 89 refugees per 1,000 inhabitants.⁴

Urbanisation

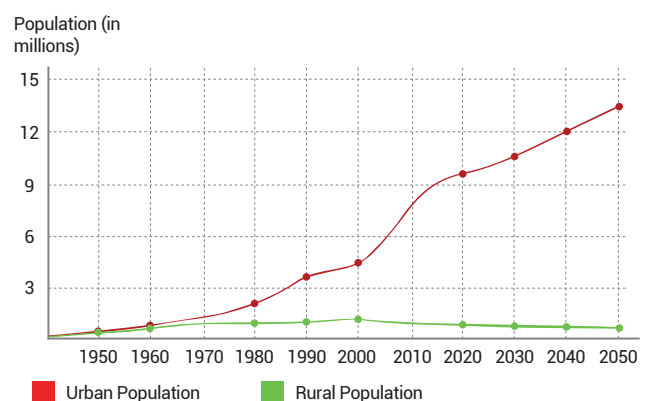
Jordan is one of the 50 most urbanised countries in the world.⁵ 90.3% of Jordan's population is living in urban areas.⁶ The country is characterized by rapid Urbanisation and urban growth, with a current annual population growth rate of 2.3% (2019) and population density of 118.9 person per square kilometre.⁷ Over the last two decades, Jordan's total built-up area has doubled, reaching 1,500 km²,⁸ with the urban built-up area amounting to 909 km².⁹ The spatial expansion of urban areas is equivalent to 1% per year, or 15 km²,¹⁰ which poses a risk to agricultural land and the provision of infrastructure and its financing.

Almost three quarters of Jordan consists mainly of a barren plateau, which is located towards the east and the south-east of the country. The western and north-western part of the country is the most fertile and inhabitable, and is also the most urbanised, where the majority of the population lives. The southern governorates are under populated, hosting only 8% of the population.¹¹ They have a lower level of development in terms of availability of infrastructure, with the exception of Aqaba city. This is mostly due to the landscape, availability of resources and overall climate.

As the majority of the urban population resides in the northern regions, the number of lower-income households are also higher there. The wealth distribution reveals that the northern governorates have the highest number of low-income households (29%), compared to the central (15%) and southern (23%) regions.¹² The data also indicates that a majority of the population in Madaba (61%), Mafraq (75%), Jerash (59%), Ajloun (55%), Tafleeh (57%), and Ma'an (60%) fall in the lowest income quantiles.¹³

Urbanisation drivers

Within the context of Jordan, various factors have influenced the pace of Urbanisation. Urban sprawl and inefficient urban planning have led to inadequate distribution and access to services and infrastructure provision. As cities are the main economic drivers of the country's GDP, the majority of the jobs are located in urban areas, encouraging rural-to-urban migration. In addition, the continuous and rapid influx of refugees throughout the years as a result of the region's political instability, is a key factor that led to Jordan's rapid Urbanisation.



Change (actual and projected) in urban and rural populations between 1950 and 2050

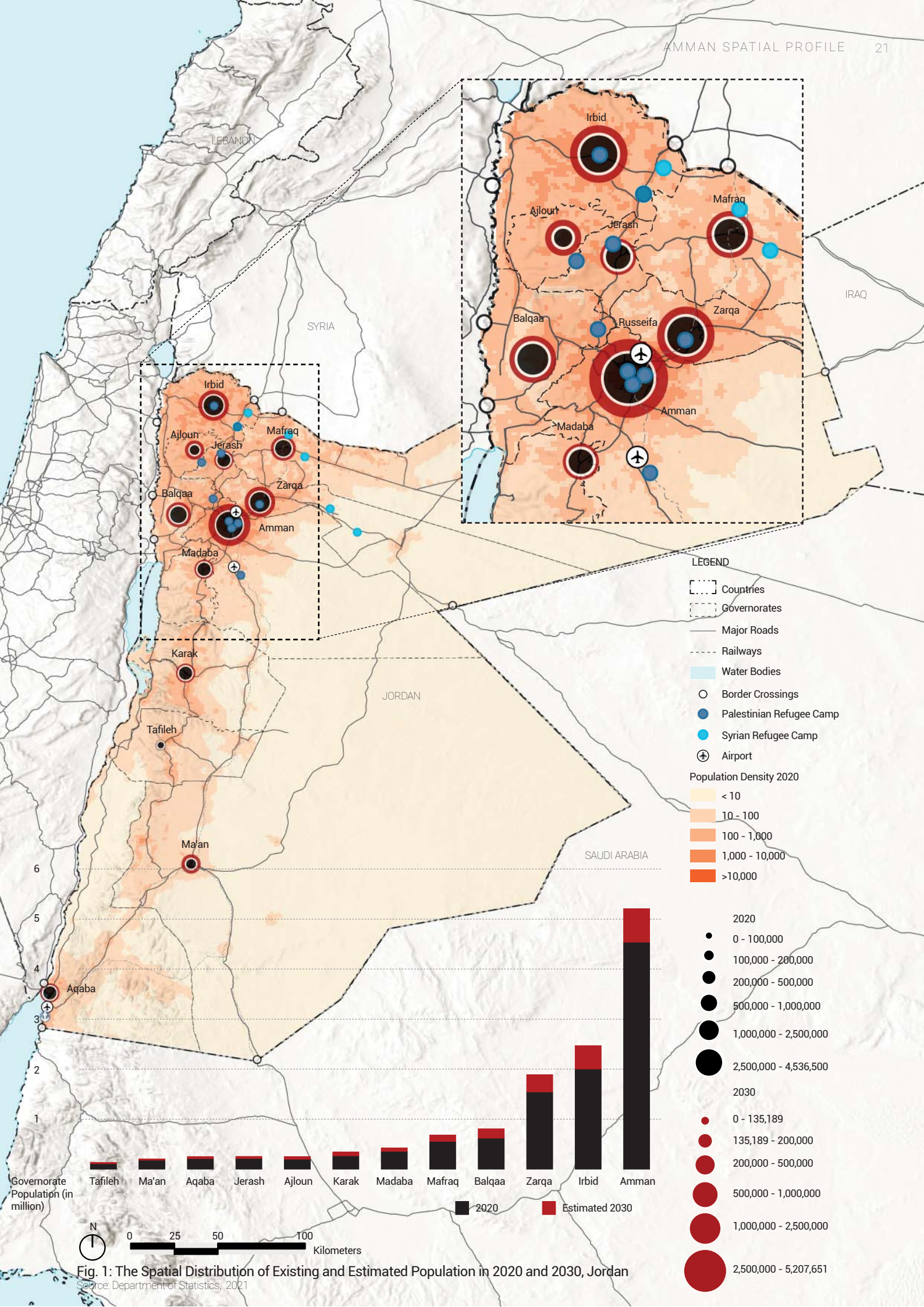


Fig. 1: The Spatial Distribution of Existing and Estimated Population in 2020 and 2030, Jordan

Source: Department of Statistics, 2021

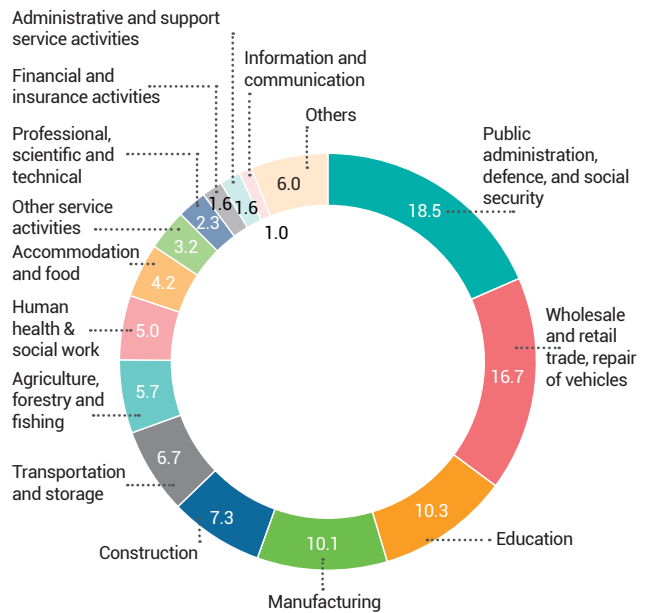
Demographics and Socio-Economic Background

Jordan's population has nearly doubled between 2004 and 2015, coinciding with the political situation in Iraq and Syria. Jordan is one of the youngest countries in the world, with around 63% of its population under the age of 30.¹⁴ This requires a long-term planning of resources to meet future needs of the growing population.

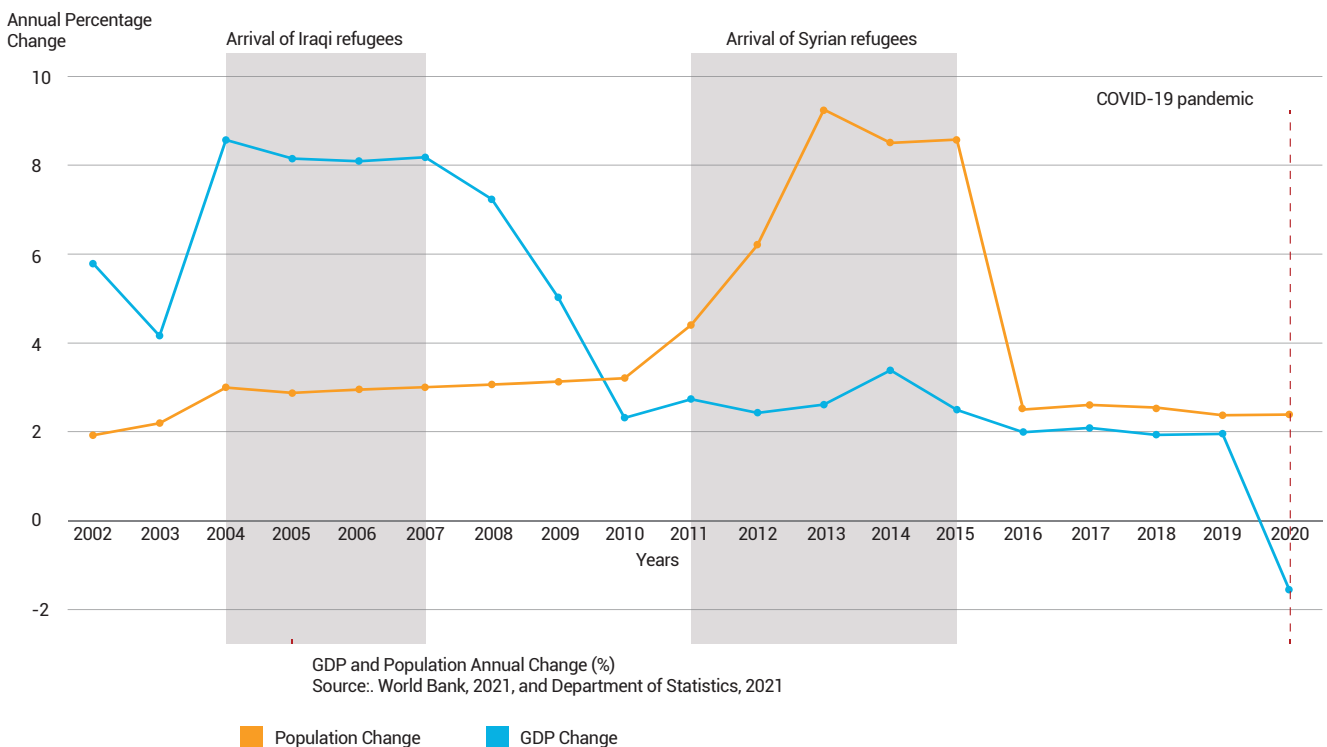
Despite the influx of several waves of refugees, Jordan has managed to keep a fair development growth rate over the past decade. Jordan has a GDP per capita (2019) of 2,994 Jordanian Dinar (USD 4,222.8)¹⁵ and an average growth rate of 4.06% per annum from 1993 until 2022.¹⁶ Annual remittances are estimated to reach USD 3.8 billion, which amounts to 10% of Jordan's GDP.¹⁷ The cumulative impact of the Syrian crisis – from both disruption to regional trade and the influx of refugees – is estimated at equivalent to 18% of GDP.¹⁸

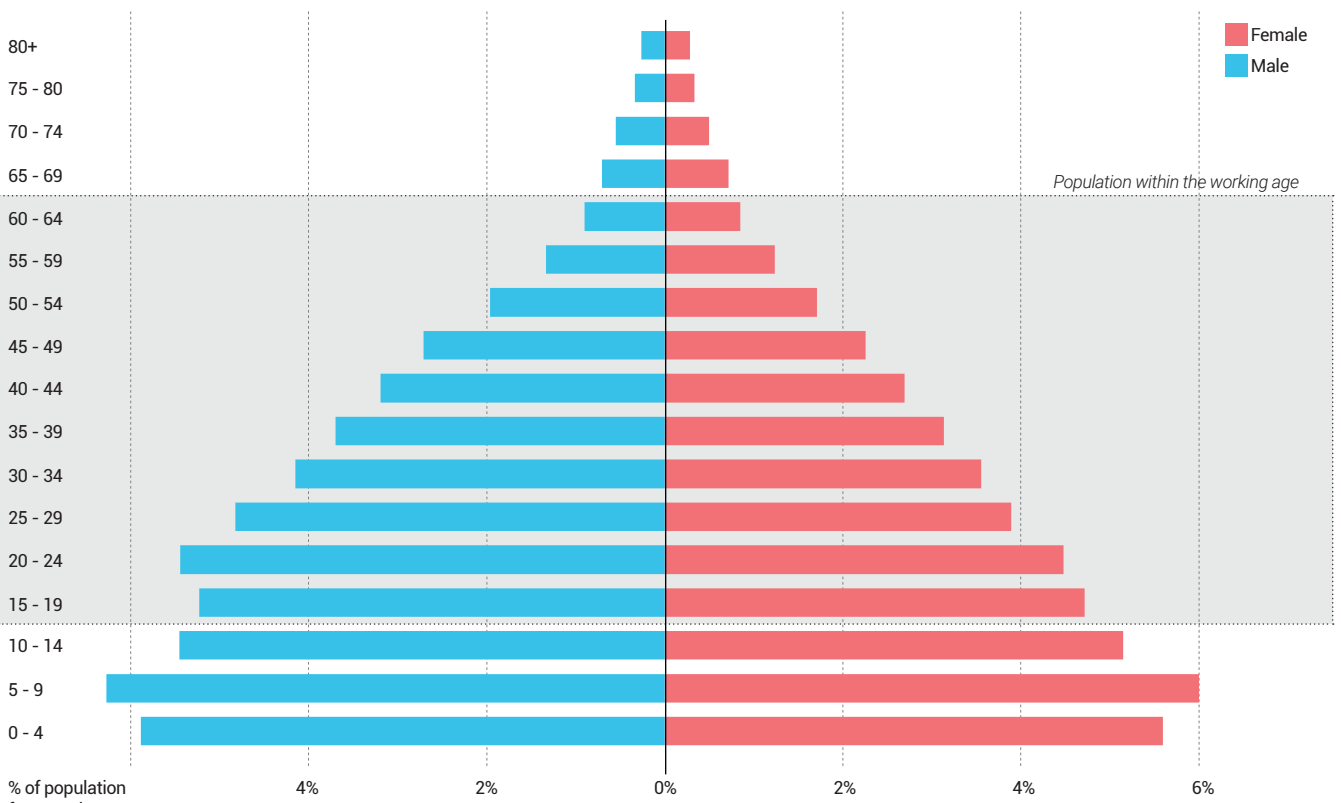
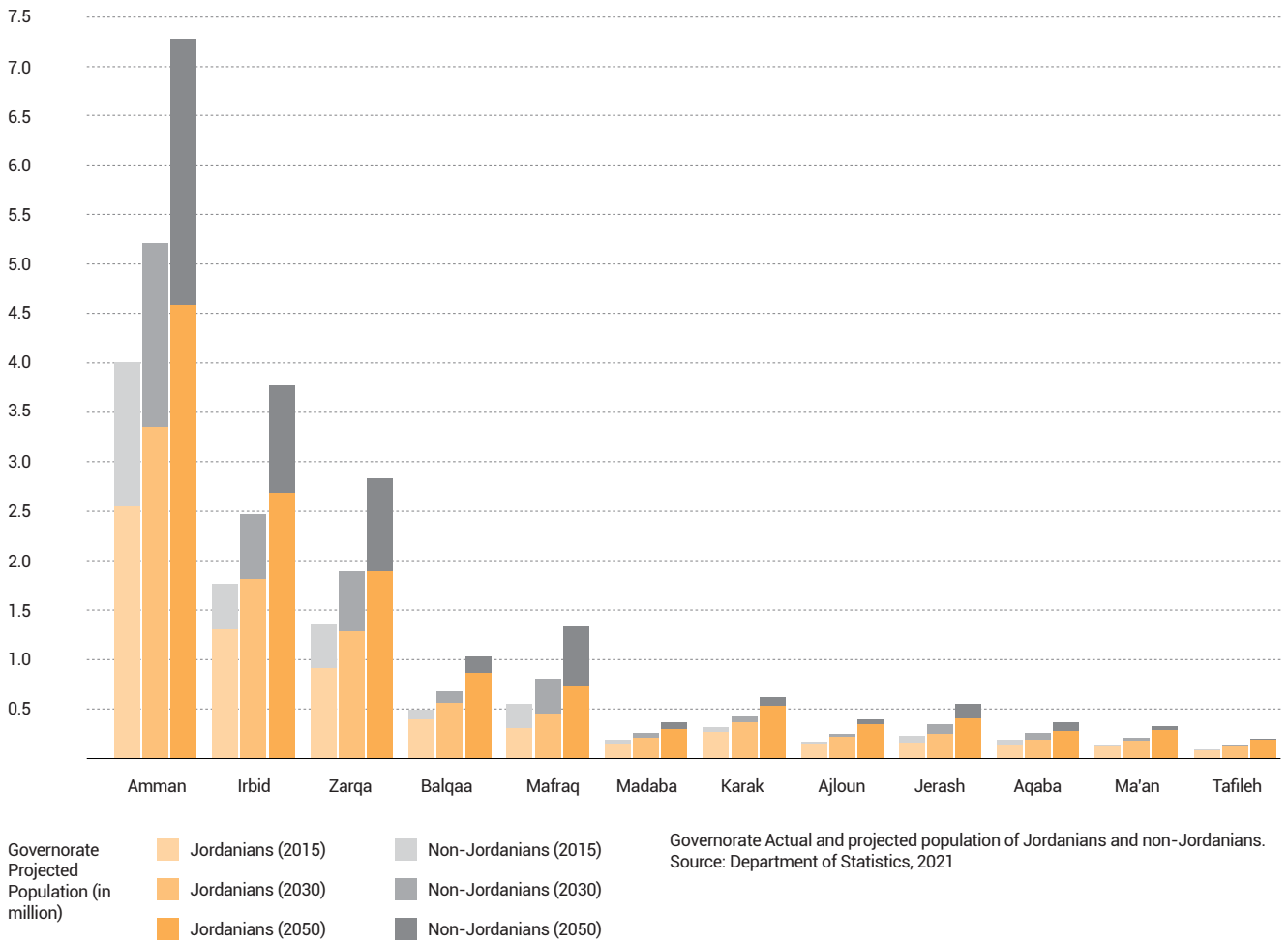
In terms of employment, 18.5% of the employed population work in public administration, 16.7% work in wholesale and retail trade, while 10.5% work in education. Jordan faces many economic challenges such as high unemployment rates and poverty; unemployment rates are currently at 19.3%,¹⁹ and have risen sharply over the years from 13% in 2015.²⁰ The rates increase to 43.1% among young people and 27% among women.²¹ Despite high education attainment rates, young people

in Jordan have low prospects for job opportunities. As for poverty, 14.4% of the population lives in poverty and another 18.6% are exposed to the risk of transient and seasonal poverty.²² The poverty profile of Syrian refugees coincides with pre-existing stresses among the Jordanian poor.



Distribution of Employed Household Individuals by Economic Activity (%)
Source: Department of Statistics, 2020





Breakdown of Jordan's population by age groups, male and female.
Source: Department of Statistics, 2021

Refugees in Jordan

The word "refugee" is defined as a person who has left his/her origin country due to the risk of serious human rights' violations and persecution.²³ Several waves of refugees have arrived seeking refuge in Jordan. However, within the Jordanian context, "refugees" are termed differently, depending on their nationalities

Jordan remains the second largest refugee host per capita worldwide with 89 refugees per 1,000 inhabitants.²⁴ Migration is profoundly associated with the history of Jordan whereby the various migration waves played a key role in shaping the country's politics, economy, society, and urban characteristics. Since its independence in 1946, the Hashemite Kingdom of Jordan has been a safe haven to approximately 4 million refugees due to instability in neighbouring countries, including Circassian, Chechen, Armenian, Palestinians, Iraqis, Syrians, Yemeni, Sudanese, and Somali refugees. These refugees have become a significant and integral part of the Kingdom's population and social fabric.

Circassian refugees began settling in Amman in 1878. They are credited with founding the modern city of Amman, which was abandoned during the 14th century.²⁵ Today, around 244,000 Circassian refugees live in Jordan.²⁶ Due to their assistance in the formation and development of modern Jordan, Circassian descendents are not legally considered refugees and are integrated within Jordanian communities.

Additionally, Jordan is the first and largest host country for Palestinians in the world. The first refugee wave was during the first Arab-Israeli war in 1948 when 700,000 Palestinians fled to Jordan.²⁷ This was followed by a second wave during the second Arab-Israeli war in 1967, when approximately 300,000 Palestinians fled to Jordan from the West Bank.²⁸ During the Gulf crises in 1990-1991, an estimated one million people arrived to Jordan, including 300,000 Palestinians, who were involuntary returnees.²⁹ Palestinians, who fled the Arab-Israeli wars in 1948 and 1967 are considered refugees, even though most of them were granted the Jordanian citizenship. Today, there are 2,307,011 Palestinian refugees registered with UNRWA living in Jordan.³⁰

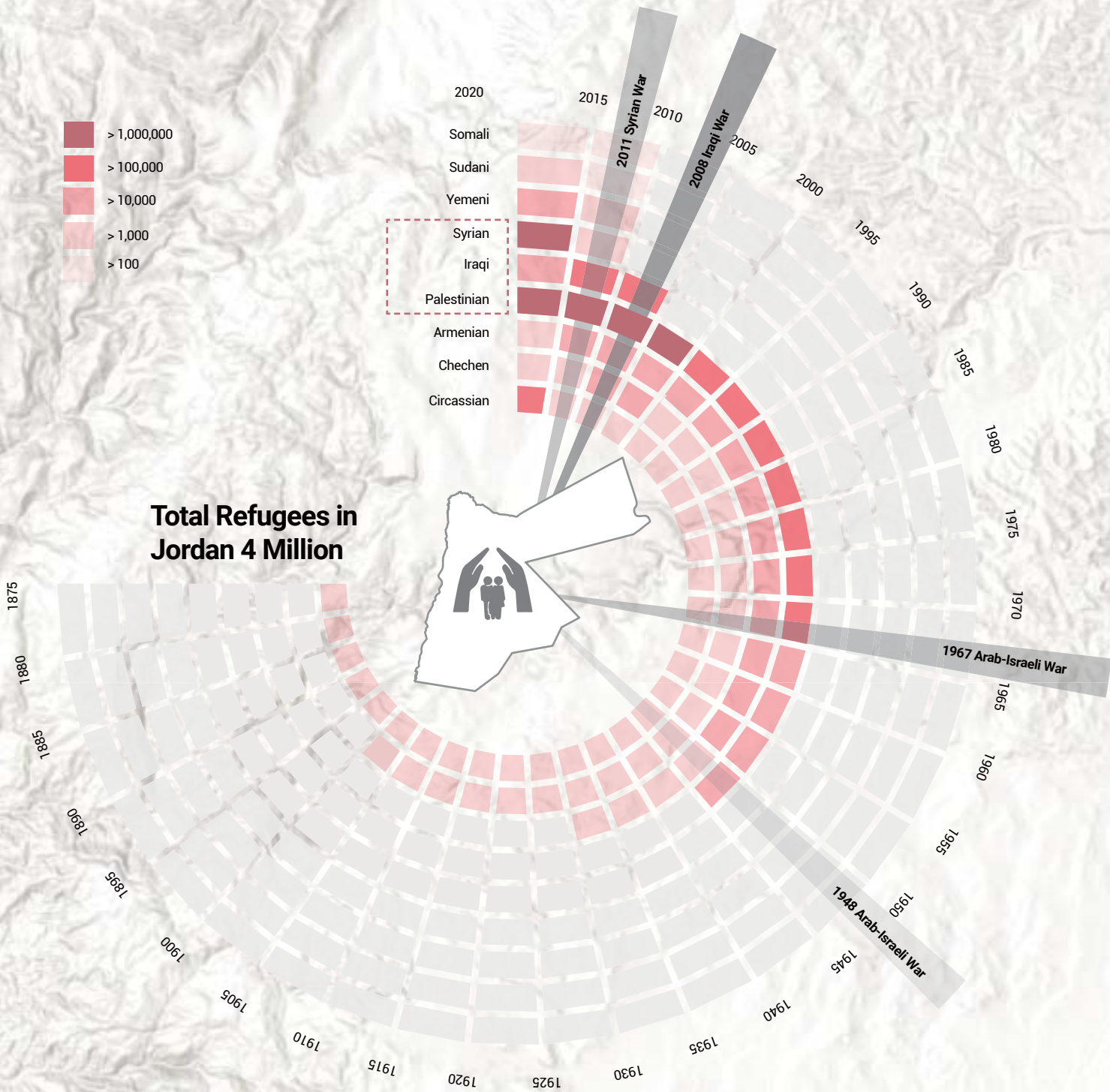
Iraqis also sought refuge in Jordan during the Gulf war, whereby an estimated 30,000 were residing in the

country.³¹ In the years following the invasion of Iraq in 2003, around 500,000 Iraqis sought refuge in Jordan. Iraqi migrants were referred to as 'guests' rather than refugees³², referring to their higher living conditions and their preference to reside in urban areas, such as Amman, as opposed to inside refugee camps.³³ Furthermore, their socio-economic status also gave them the privilege of obtaining partial citizenship rights and purchasing residency permits, which accordingly eased their access to job opportunities and services.³⁴ Since 2008, the Iraqi influx has boosted the Jordanian economy due to the many investments brought in by the Iraqis at that time. Today, around 70,000 Iraqis live in Jordan.³⁵

Furthermore, Syrians who arrived in Jordan after the Syrian conflict make up the largest portion of refugees in the Kingdom, after the Palestinians. They prefer to call themselves migrants or guests, or just "Syrian" or "from Hama".³⁶ However, the term under which Syrians are registered by the UNCHR is "Persons of concern".³⁷ Syrians came to Jordan while it was already suffering from several urban challenges and put further pressure on the country's very limited resources.³⁸ Jordan hosts around 670,000 registered Syrians today, most living among Jordanian communities rather than in camps. Official figures estimate that there are 1.4 million Syrians in Jordan, which accounts for more than 10% of the Jordanian population, placing immense pressure on the country's over-stretched resources during one of the most difficult economic periods in its history.³⁹

According to the UNHCR, 34,000 of the registered Syrian refugees have returned home from Jordan since 2018⁴⁰ and 30,000 in 2019. Refugees in Jordan cite security, safety, and lack of work opportunities and services as the main reasons hindering their return to their countries of origin.⁴¹

Moreover, the Kingdom additionally hosts small percentages of Chechen, Armenian, Sudanese, Somali, and Yemeni refugees. Accordingly, the profile will primarily consider Palestinian, Iraqi, and Syrian refugees, as they constitute the highest presence in Jordan and have the highest impact on the host municipalities' infrastructure.



Total Refugees in Jordan 4 Million

2.3 M

Palestinian Refugees in Jordan
96% of the Palestinian refugees residing outside camps and 85% of those living inside camps hold the Jordanian citizenship⁴².

1.4 M

Syrian Refugees in Jordan
670,000 registered Syrian refugees & the total number of Syrians count up to 1.4M⁴³.

244 K

Circassian Refugees⁴⁴

67000

Iraqi Refugees⁴⁵

13000

Yemeni Refugees⁵⁰

10000

Armenian Refugees⁴⁶

6000

Sudani Refugees⁴⁷

5000

Chechen Refugees⁴⁸

>1000

Somali Refugees⁴⁹

Fig. 2: Jordan Refugee Time-line

Cross-Border Displacement Dynamics

There are 16 refugee camps in Jordan, 13 for Palestinians and 3 for Syrians. However, only 20% of the refugee population reside in camps, and the majority live in urban areas; 29% live in Amman and 20.8% live in Irbid.⁵¹ The location of the refugees is typically based on their socio-economic abilities and the economic sectors they are involved in.

Palestinian refugees are under the mandate of the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA). Transitional camps were established to host the Palestinian refugees temporarily, where currently only 18% live in recognized Palestinian refugee camps across the country.⁵²

At the start of the ongoing conflict in Syria, large populations fled the war to neighbouring countries, particularly Jordan, Turkey and Iraq. An open-door policy was adopted in Jordan to welcome Syrian refugees in both camps and urban settings hosted in urban areas mainly Amman, Mafrq, Irbid, and Zarqa due to the proximity of shared borders, economic opportunities and provision of infrastructure. Syrian refugees are under the mandate of the United Nations High Commissioner for Refugees (UNHCR).

The flow of refugees from camps to urban areas had an adverse impact on the capacity of infrastructure and public facilities, such as education, health, public space, among others. It has also increased strain on natural resources, and in particular water, which is already quite scarce in Jordan. This is already noticed in cities such as Mafrq and Irbid. With Jordan's economy being highly dependent on international development aid, the refugee crisis has placed strain on the Jordanian government.

Despite Jordan not being a signatory of the 1951 Convention relating to the Status of refugees, protection of refugees and asylum-seekers is considered favourable. Response policies by the government such as the JRP and the Compact aim to meet the immediate needs of Syrian refugees living both in camps and urban areas, as well as host community impacted by the crisis.

The map reveals that Jordan's population is highly concentrated in its northern governorates, specifically in

Amman, Irbid, Zarqa, and Mafrq. Simultaneously, urban refugee counts are the highest in the aforementioned governorates. The continuous influxes of refugees into these urban settlements continue to exacerbate the pressure on infrastructure services.

In Amman, around 69% of Syrian refugee households receive wage income, while only 3% receive self-employment income. 11% of households also receive private transfer, which comprises support from relatives and friends both inside and outside of Jordan. The majority of households receive institutional transfer income; in Amman, around 79% of households receive an institutional transfer from various sources, including: Cash or in-kind assistance from UNHCR or other UN agency, National Aid Fund, NGO or charities.⁵³

Governorate	Wage income (%)	Self-employment income (%)	Private transfer (%)	Institutional transfer (%)
Amman	69	3	11	79
Irbid	57	5	27	91
Zarqa	52	5	27	91
Mafrq	52	4	14	92
Other gov.	58	1	13	79
Camps	65	3	9	100
All	61	3	14	90

Percentage of Syrian refugee households by forms of income.
Source: FAFO & MOPIC/The Living Conditions of Syrian Refugees in Jordan 2017-2018.

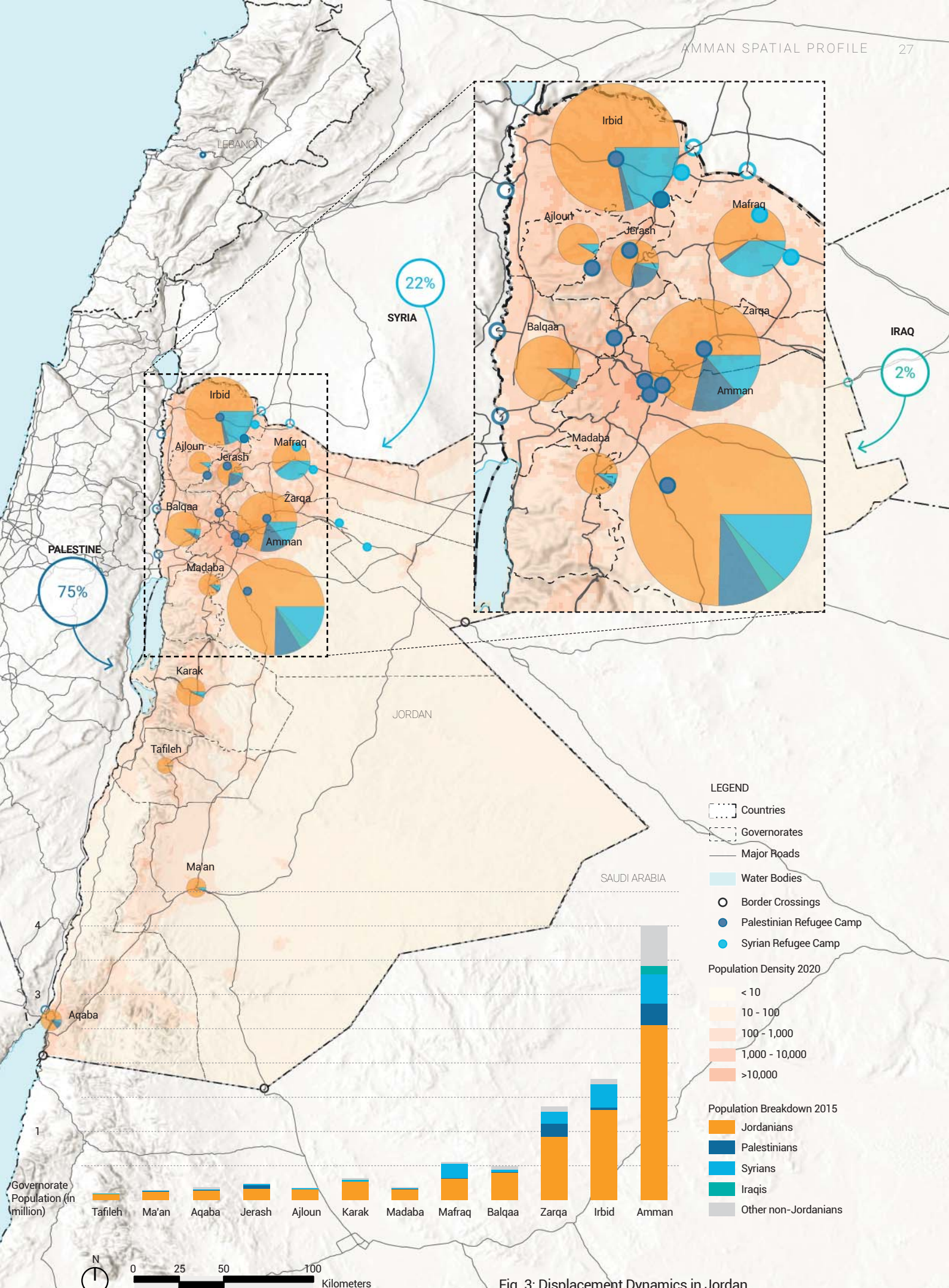


Fig. 3: Displacement Dynamics in Jordan
Source: DOS, 2015

Governance & Administration System

Jordan is transitioning from a highly centralized to a progressively de-concentrated system with more powers vested at the governorate and municipal levels.⁵⁴ Jordan is divided into twelve governorates (muhafazat),⁵⁵ which have gone through various iterations since 1975, when they were only 5. Each governorate is headed by a governor, who is appointed by the king, and directly reports to the Ministry of Interior (MoI).⁵⁶ The governor is the sole authority for all government departments and development projects in their respective areas. The governor acts, together with the decentralized directorates of ministries, as an extension of the central government.⁵⁷

The 2015 Municipalities and Decentralization Laws aim to integrate the municipalities into a general governance framework and increase accountability.^{58,59} The 12 governorates comprise of 100 municipalities.⁶⁰ All municipalities have a legal presence with financial and administrative autonomy, and are supervised by the Ministry of Local Administration (MoLA) with the exception of Greater Amman Municipality, Petra Development & Tourism Region Authority, and Aqaba Special Economic Zone.⁶¹

The central level is responsible for providing all basic public services including water, gas, sewerage, electricity, education, and healthcare, and the local municipalities play a limited role in the service provision due to their limited political power and financial resources, in addition to the limited capacity of municipalities to support local economic development.

This local administrative structure overlaps with other institutions that exist at the sub-national level, such as governorates, ministry offices and initiatives such as Local Development Units, which are responsible for socio-economic development in municipalities and governorates. The overlap in mandates requires continuous coordination and results in duplicity of efforts.

As a result of the Municipalities and Decentralization Laws of 2015, four types of councils were created, collectively forming Jordan's system of decentralization: the local council and municipal council at the municipal level, and the executive council and governorate council

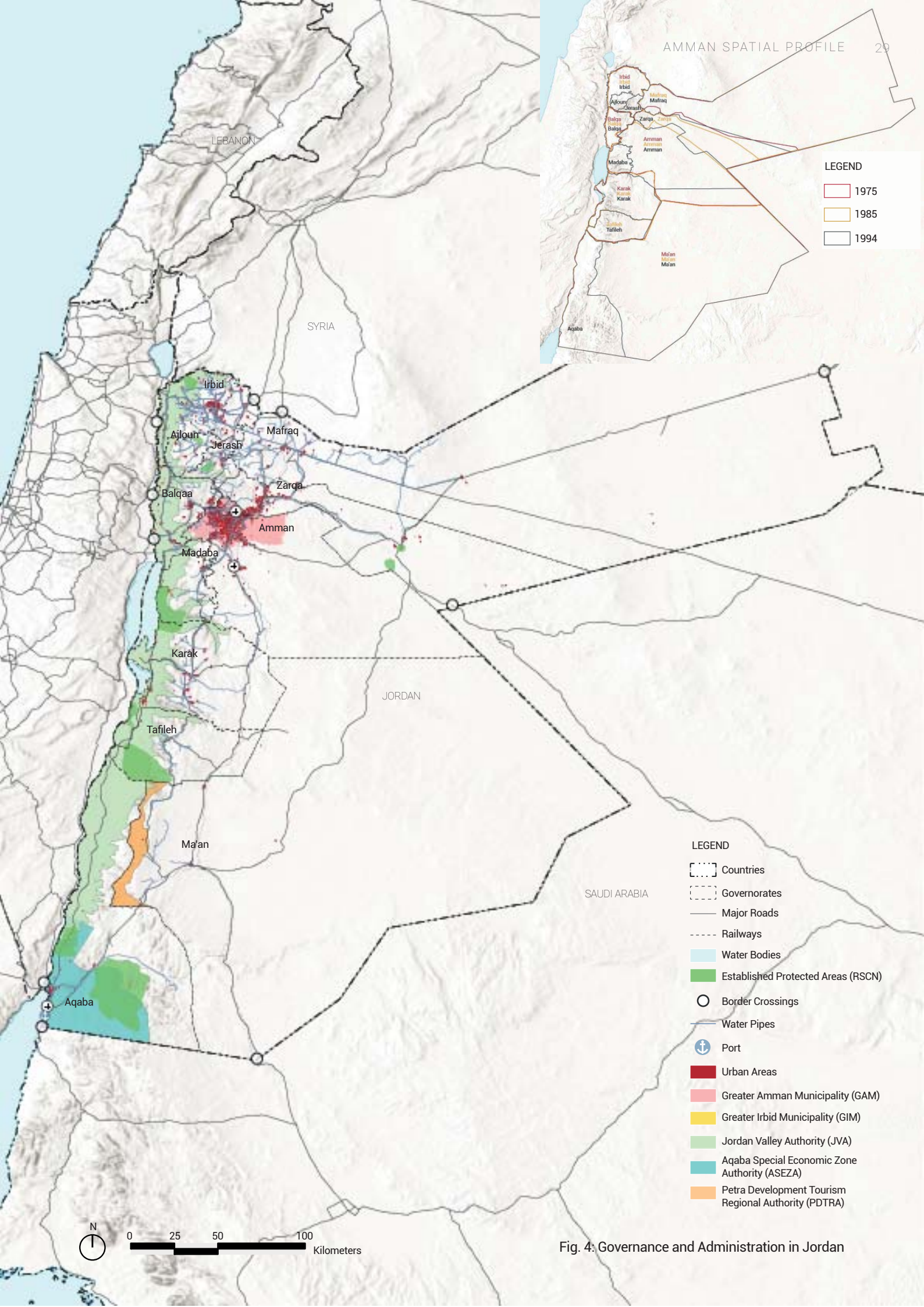
at governorate level.⁶² The local council has at least five members and represents more than 3,000 constituents, while the municipal council is formed by the heads of the local councils. The governorate council consists of 85% directly elected representatives and 15% appointed members. Through these elected governorate and local councils, a stronger accountability and transparency is expected, as well as an improved service delivery and increased community engagement.

Several entities are involved in planning. MoLA is responsible for the definition of zoning and building regulations and the preparation of master plans for all municipalities.⁶³ The Higher Planning Council within MoLA has the authority of temporary approval of the master plans either totally or partially and approves all zoning modifications in the country.⁶⁴

The Ministry of Planning and International Cooperation (MoPIC) is responsible for formulating policies and procedures that enhance and develop relations with donors and international financing institutions, providing and managing necessary funding for development projects, and working as a liaison between donors and international financing institutions and the government institutions.⁶⁵

The Ministry of Public Works and Housing (MoPWH) gives direction to all infrastructure policies in the country, as it is responsible for provision of roads, railways, airports and port infrastructures. Through the Housing and Urban Development Corporation (HUDC), the ministry gives direction to housing policies, which is in charge of monitoring housing dynamics, down-zoning and preparation of served land to be sold to developers. It can be noted that there is a multiplicity in urban planning institutions and actors, leading to weak coordination and overlap in responsibilities.

Each ministry plans, implements and monitors its own projects individually.⁶⁶ These plans are then integrated by Ministry of Planning and International Cooperation (MoPIC) into one coherent document.⁶⁷ While this approach provides a responsibility to MoPIC in terms of coordination, the lack of national, planning and regional documents hinders the process of prioritizing projects based on guiding documents.⁶⁸



LEGEND

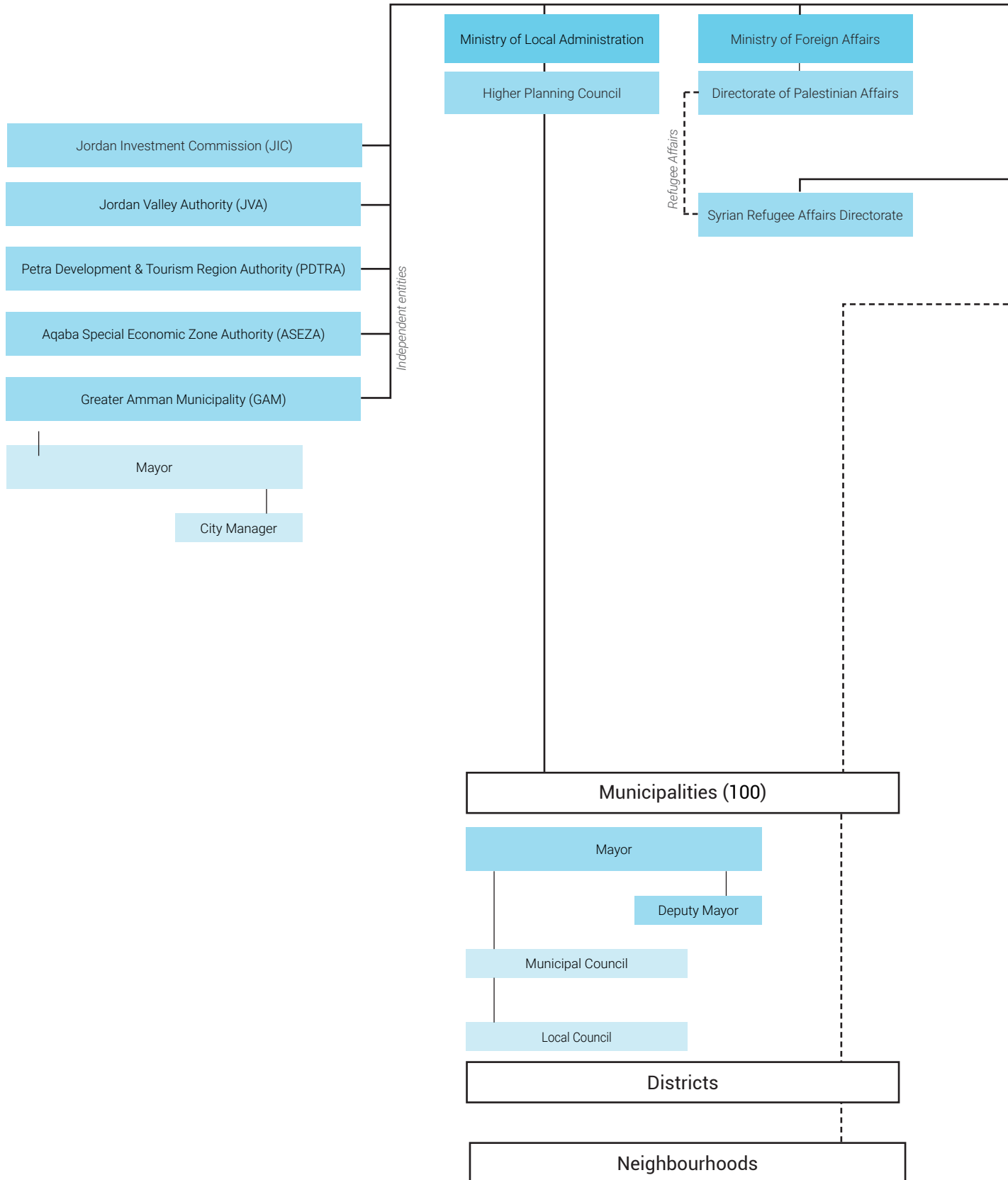
- 1975
- 1985
- 1994

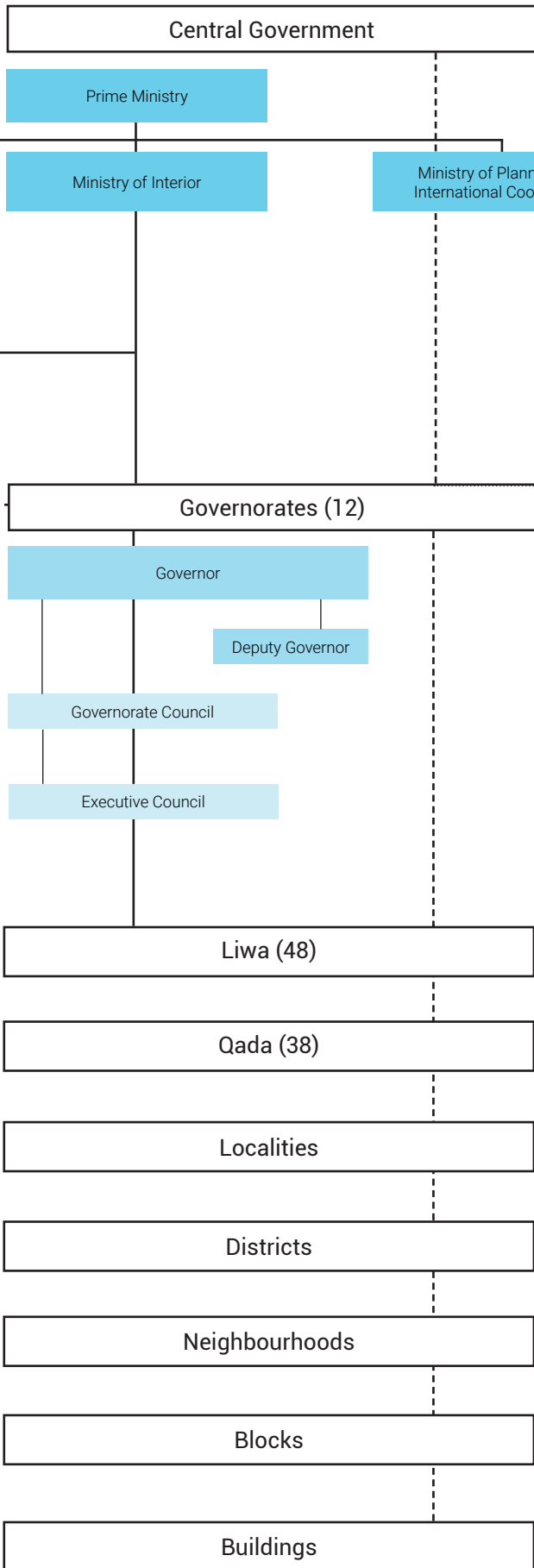
LEGEND

- Countries
- Governorates
- Major Roads
- Railways
- Water Bodies
- Established Protected Areas (RSCN)
- Border Crossings
- Water Pipes
- Port
- Urban Areas
- Greater Amman Municipality (GAM)
- Greater Irbid Municipality (GIM)
- Jordan Valley Authority (JVA)
- Aqaba Special Economic Zone Authority (ASEZA)
- Petra Development Tourism Regional Authority (PDTRA)

0 25 50 100 Kilometers

Fig. 4: Governance and Administration in Jordan

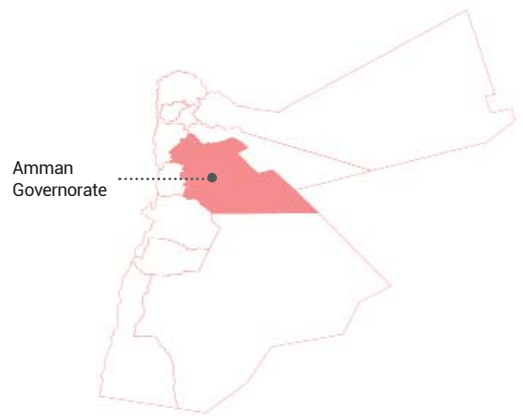




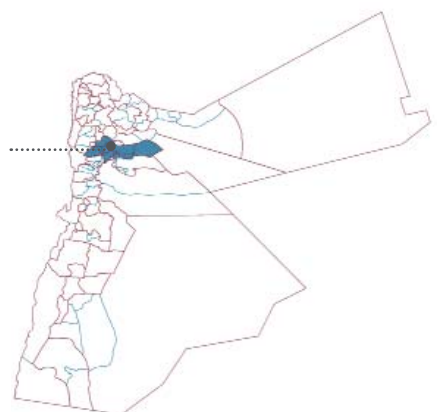
National boundary



Governorate



- Qasabet Amman Liwa
- Marka Liwa
- Al Qwesmeh Liwa
- Al Jamea (university) Liwa
- Wadi Al Seer Liwa
- Na'ur Liwa
- Sahab Liwa
- Al- Jiza Liwa
- Al-Muwaqqar Liwa
- Rajm al-Shami Qada
- Umm al-Rasas Qada
- Umm Al-Basateen Qada
- Hisban Qada



National Planning Context

Historical Background

Until 1946, Jordan, in its planning efforts, relied on assistance from the gulf states and private sector investment.⁶⁹ The high rate of population growth and the economic expansion caused rapidly expanding urban areas and demanded immediate integration of economic and physical planning at all levels, including national, regional, and local levels, which the government of Jordan was aware of.⁷⁰ Therefore, the government started to practice planning through a series of development plans. The Higher Planning Council was considered as the main planning unit in Jordan between 1972 and 1984, until it gained cabinet status as the Ministry of Planning.⁷¹

Planning in Jordan initially started as a coordination exercise among activities controlled by the cabinet members. Jordan's early plans addressed mainly economic growth and provision of public service facilities.⁷² The first attempt to apply contemporary physical development planning was for Amman in 1938 when then the British Mayor proposed a land use plan for the city, followed by a development plan in 1963.⁷³ Today, planning has taken a reactive approach to urban challenges as opposed to a proactive approach.

Planning Levels

As for laws related to planning, the only related law in Jordan is the "Law of Planning of Cities, Villages, and Buildings, No. 79" that was established in 1966. It is based on the town planning ordinance of the British Palestine Mandate, which had its origins from the 1932 British Town Planning Act.⁷⁴ This law remains temporary, with minimal attempts to update it until now.

At national level, MoPIC is responsible for national planning, which does not encompass physical or spatial planning. Jordan's planning system lacks a national urban policy that guides the development of all subsequent plans. UN-Habitat, in collaboration with MoLA, is currently working on formalizing a national urban policy for Jordan.

There are three levels of plans in Jordan: regional plans, structural plans and detailed plans. In terms of responsibility, regional and structural plans require the approval of the Higher Planning Council, detailed plans require the approval of municipal councils or

local committees of the municipal areas. In practice, however, detailed plans are also under the jurisdiction of the Higher Planning Council. This limits the ability of the council to address planning at national level.

There is a lack of integrated planning at the regional level and within governorates. The plans currently developed at regional level today are structural plans, covering only a few regions/governorates. This is often self-driven as none of the national level stakeholders are mandated to review or support this level of planning.

At local level, various levels of plans exist based on the level of details. Structural plans and detailed plans both include planned and unplanned areas, roads (widths, upgrading, proposed), land use, sewerage and water networks, prohibited areas, areas allocated for public use and building regulations. However, they vary in scale. Detailed plans also include: commercial activities, parks, restricted or special uses, detailed building regulations and an acquisition plan for transportation network extension.

Zoning Plans (Al-Tantheem) were established by the Cities, Villages and Buildings Planning Law of 1966. This usually refers to zoned areas within municipal zoning map, and are updated periodically. As for Subdivision Plans (Al-Taqseem), which were established by Al-Taqseem Law of 1968, they are applied on a per-basin basis. Typically, one-third of Al-Taqseem land will be designated for public purposes (roads, social facilities, parks). Zoning is not a pre-requisite for approval, and Al-Taqseem can be applied to areas that have existing zoning or to areas without zoning.

It is worth noting that the master planning efforts require monitoring to ensure execution, as there is a disparity between the theoretical documents and on-the-ground implementation. The section below displays some of the existing key plans, policies, and strategies in Jordan.

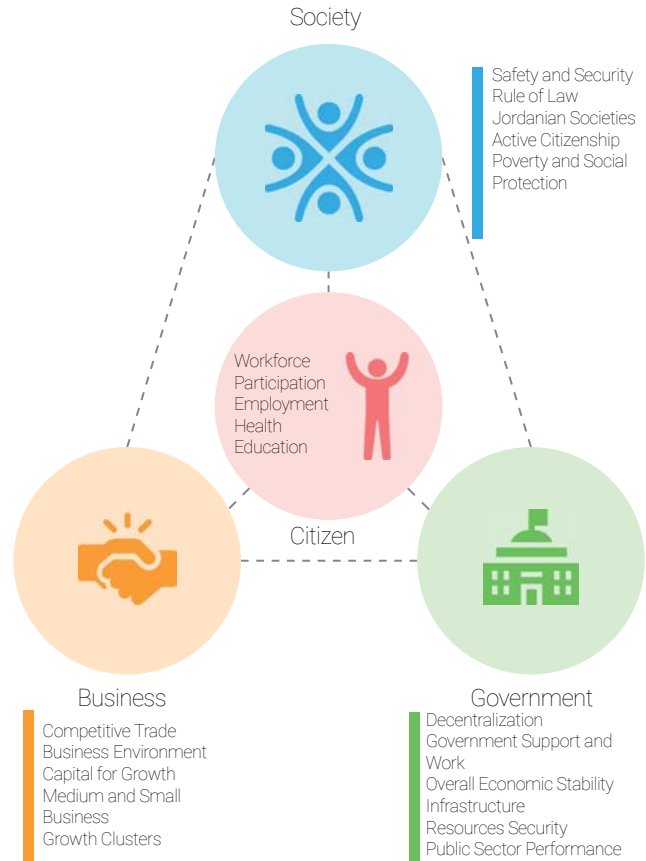
Key Plans, Policies and Strategies

There are several plans, policies and strategies that shape the development of Jordan. Additionally, various documents exist at national level that focus on addressing the needs of the refugees and host communities.

Jordan 2025⁷⁵

Jordan 2025 is the main strategy guiding the national vision based on sustainability, institutionalization, excellence, competitiveness and meritocracy. It is founded on the identification of goals that the Jordanian government aspires to achieve through the adoption of procedures and policies at sectoral level, which includes:

- Economic growth, fiscal stability, reduction of financial waste and public debt to safe levels;
- Foreign investment by enhancing and increasing business and investment competitiveness;
- Development of economic sectors through market creativity and honing the tools and means of high-value-added export-oriented sectors;
- Encouragement of small and medium-sized businesses;
- Enhancement of the policies governing the labour market;
- An increment of women’s participation in the labour market; and,
- Giving necessary attention to people with special needs.



Jordan 2025 Pillars

	Planning	Socio-economic	Humanitarian
National	Law of Planning Cities, Towns Villages and Buildings No. 79 for the year 1966	Jordan 2025	National Resilience Plan
	Natural Disaster Risk Reduction Strategy	Jordan Economic Growth Plan	Regional Refugee & Resilience Plan
		Jordan Response Plan	
		National Green Growth Plan	The Jordan Compact & CGM
	Jordan National Urban Policy (under formulation)		
Regional	Metropolitan Growth Plan (Amman)		
	Amman Building & Urban Planning Regulation of 2011	Local Development Plans	
City	Amman Building & Zoning bylaw 2018		
	Amman Municipality Law 2021		
	Amman Resilience Strategy, Amman Green City Action Plan, GAM Strategic Plan		
	Amman Climate Plan		

Key plans, policies and strategies at national, regional, and city levels

National Resilience Plan⁷⁶

The National Resilience Plan (NRP) provides a three-year Programme identifying high priority investments to respond to the impact of the Syrian crisis on Jordan. The NRP aims to mitigate the potentially destabilizing political, demographic, social, economic and fiscal effects of the crisis.

Regional Refugee and Resilience Plan (3RP)⁷⁷

The Regional Refugee and Resilience Plan (3RP) represents a strategic platform for coordination, planning, advocacy, and fundraising between humanitarian and development partners to respond to the Syrian crisis. It is a regional plan that includes five chapters covering Jordan, Turkey, Lebanon, Iraq, and Egypt. The 3RP has two interconnected components; the refugee component addressing protection and humanitarian assistance needs of refugees and the resilience component addressing resilience, stabilization, and development needs of affected individuals, communities, and institutions; aiming to strengthen the national actors' capacities.

According to the 3RP (2021), the major challenges that Jordan is facing are the impact of COVID-19 on both refugees and host communities which resulted in an increase the unemployment rate, food insecurity, and inadequate access to basic services and needs. Jordan's Key Selected Targets for year 2021 are highlighted below.

Jordan Response Plan⁷⁸

The Jordan Response Plan (JRP) was developed by the government of Jordan as a measure based on experiences from hosting various waves of refugees. Since 2013, the government has taken a proactive role in responding to the impact of the Syrian crisis within a resilience framework. The JRP is the only national comprehensive plan that includes financial support from the international community.

The 2015 and 2016-2019 JRP, prepared by governmental agencies and international donors, aims to meet the immediate needs of Syrian refugees living in cities and



More than 850,000

Syrian refugees and vulnerable Jordanians are targeted to receive food assistance through cash-based transfers



70,000 Syrian refugees

are issued work permits



550 officially established and registered Home Based Businesses

by GAM or municipalities under the purview of MOLA are owned by Syrians



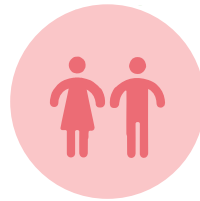
41,000 households

assisted with regular monthly cash assistance with 50,000 households assisted through COVID emergency cash assistance (3 months)



Water Supply

for around 77,000 refugees in Zaatari Refugee Camp is improved through integration of water services



50,000 Syrian refugees

working in the private sector and registered in national security system are supported with enrolment in social security



172,234 Persons

with disabilities, older persons at risk and other vulnerable persons are assisted through referral systems, targeted assistance and outreach

camps as well as vulnerable Jordanians affected by the crisis. JRP also aims to support the government budget to cope with the additional financial obligations and income losses resulting from the Syrian crisis, and strengthen the capacity and resilience of various sectors at local and national levels, including health, education, justice and water and sanitation systems. At the local level, the JRP assists municipalities in providing access to municipal services and infrastructure, such as solid waste management, energy, transport and environment. It also aims to address social imbalances and foster social cohesion between refugees and host community through increasing access to employment. For the period of 2020-2022, the JRP's main priority is to empower the systems to address key challenges to protect the dignity and welfare of Syrian refugees and vulnerable Jordanians impacted by the Syrian crisis, emphasizing the need for continuous collaboration with the international community.

The JRP has guided various changes over the past few years. Access to education has improved, with over 130,000 Syrian refugees enrolled in public schools across the country. More than 211,000 primary healthcare assistance services and 91,930 maternal and child health assistance services have been provided to Syrian refugees and vulnerable Jordanians. Cash assistance programming has reached an average of 143,000 Syrian refugees and 5,800 Jordanians per month, while 18,225 Syrian households have received non-food item kits. Several policies have been adopted to allow for formal participation of Syrian refugees into the workplace, resulting in over 220,000 permits issued. The government's recent policy changes have enabled the establishment of home-based business by Syrian refugees inside and outside camps, resulting in around 49 Syrian-owned home-based businesses.

The Jordan Compact⁷⁹

In February 2016, a new approach to dealing with protracted displacement was signed: the Jordan Compact. It brings together international humanitarian and development actors under the host country leadership, combining humanitarian and development funding through multi-year grants and concessional loans. The Compact is an innovative approach to addressing large movements of refugees as it brings together humanitarian and development actors for a more effective response to protracted displacement. It is anchored to three interlinked pillars, which aim to support Jordan's growth agenda while maintaining resilience and economic stability, through the following goals:

- Turning the Syrian refugee crisis into a development opportunity that attracts new investments and opens up the EU market, creating jobs for Jordanians and Syrian refugees, while also supporting the post-conflict Syrian economy;
- Rebuilding the Jordanian host communities by adequately financing the resilience of host communities through grants from the JRP; and,
- Mobilising sufficient grants and concessionary financing to support the macroeconomic framework, and address Jordan's financing needs over the next three years, as part of Jordan entering into a new Extended Fund Facility programme with the IMF.

One of the targets of the Compact is access to formal labour markets. Jordan has been able to issue 200,000 work permits for Syrian refugees. The Compact stipulates that Jordan will institute reforms to improve the business and investment environment and formalise Syrian businesses. As part of the Compact, the EU has committed to relaxing trade regulations to stimulate exports from 18 designated economic zones and industrial areas in Jordan, in return for employment quotas for Syrian refugees in these businesses. Jordan has also committed to provide access to schools to all Syrian children and provide vocational training opportunities.

The Global Compact for Migration⁸⁰

In 2016, Heads of Governments and States within the UN General Assembly, came together for the first time at the global level, to discuss issues related to refugees and migration. Several intergovernmental consultations and negotiations were held towards the development of a Global Compact for Safe, Orderly, and Regular Migration. The Global Compact for Migration (GCM), prepared under the auspices of the United Nations, is the first intergovernmentally negotiated agreement that covers holistically all international migration dimensions. The non-binding GCM encompasses 23 objectives that address better management of migration at global, national, regional, and local levels. It is considered a significant opportunity to improve the governance of migration, address the challenges associated with today's migration, and strengthen the contribution of migrants and migration to sustainable development.

In 2019, the UN established a National Migration Working Group in Jordan, to ensure coordinated support by the UN country team, to the Government of Jordan (GoJ) and other relevant non-governmental stakeholders in implementing the GCM and other relevant policies⁸¹.

Land & Property Rights

While Jordan has a relatively large land area in comparison to its population, more than half of the population lives in or around Amman.⁸² Competition for urban land has led to an increase in land prices, which are among the highest in the region.⁸³ Despite this large land area, relatively little is found inside urban areas, and even less that is unbuilt.⁸⁴ Most available land in urban areas is in small, isolated pockets that are left over from other developments, or already allocated to municipalities for future development and provision of social infrastructure or public use.⁸⁵ As a result, the remaining large tracts of land are privately owned and found on the outskirts of urban areas.⁸⁶

Jordan has a mixed legal system based on civil law, Shari'a law (Islamic law) and customary law.⁸⁷ The legal, institutional and administration frameworks related to land tenure reflects a gradual movement towards land privatization.⁸⁸ While this has enabled more inhabitants and foreign nationals to own land, the de facto and de jure land law have led to unsustainable land use practices and severe land degradation, particularly in the rangelands.⁸⁹

The current land ownership in Jordan falls under three categories: privately owned land that is registered and documented; tribal land which had been historically distributed by tribal leaders; and state land which provides free access to all resources to the land owned by the state.⁹⁰ While private land, which is represented by 800,000 titles, are registered, state land, accounting for 80% of the country's total lands, are poorly defined and documented.⁹¹ Customary rights on these lands are unclear and can lead to large-scale tenure insecurity.⁹²

In urban areas, most of the land is privately owned land, and is transacted through sale or lease.⁹³ Most of the privately owned land in urban areas are inherited as opposed to outright land purchase.⁹⁴ State-owned land is authorised for lease or purchase only for Jordanian nationals.⁹⁵ However, foreign nationals and firms are able to own or lease properties in Jordan for investment purposes and are allowed one residence for personal use if their home country permits reciprocal property ownership rights for Jordanians.⁹⁶

The elimination of tribal ownership has led to lack of incentives to encourage Bedouins and pastoralists to maintain and conserve the resources and rangelands.⁹⁷ Informal sale of former tribal lands in both urban and rural areas still occurs.⁹⁸ Considering that the basis for security land rights is through land registration, the transactions of these lands is not considered valid.⁹⁹

The Department of Lands and Survey (DLS) was established in 1927 and plays a vital role in guaranteeing the right of ownership of land, conflict resolution on matters concerning land and water sources.¹⁰⁰ It is considered Jordan's information bank on land ownership and is currently responsible for three main tasks: cadastral surveying, registration of land and property, and management of treasury (State) lands.¹⁰¹ All land transactions must be registered with DLS, even in special economic development areas like JVA and ASEZA.¹⁰² The cadastral database is digitalized and keeps records of all procedures and documents, including land registers and cadastral plans.¹⁰³ DLS has land registration directorates and registration offices in all governorates and sub-governorates.¹⁰⁴ As for treasury (state) lands, DLS carries out several tasks including leasing, expropriation and control of subdivision and boundary fixing transactions implemented by licensed surveyors.¹⁰⁵ DLS collects sales taxes and registration fees from the governorate.¹⁰⁶

Despite these well-established land administration processes and clear mandates, there are various challenges.¹⁰⁷ Most urban land is privately owned, while most non-urban land is treasury (state) land.¹⁰⁸ As private lands are located in prime areas, they have become more expensive with the increased demand, while state lands are outside the land market and remain underutilized.¹⁰⁹

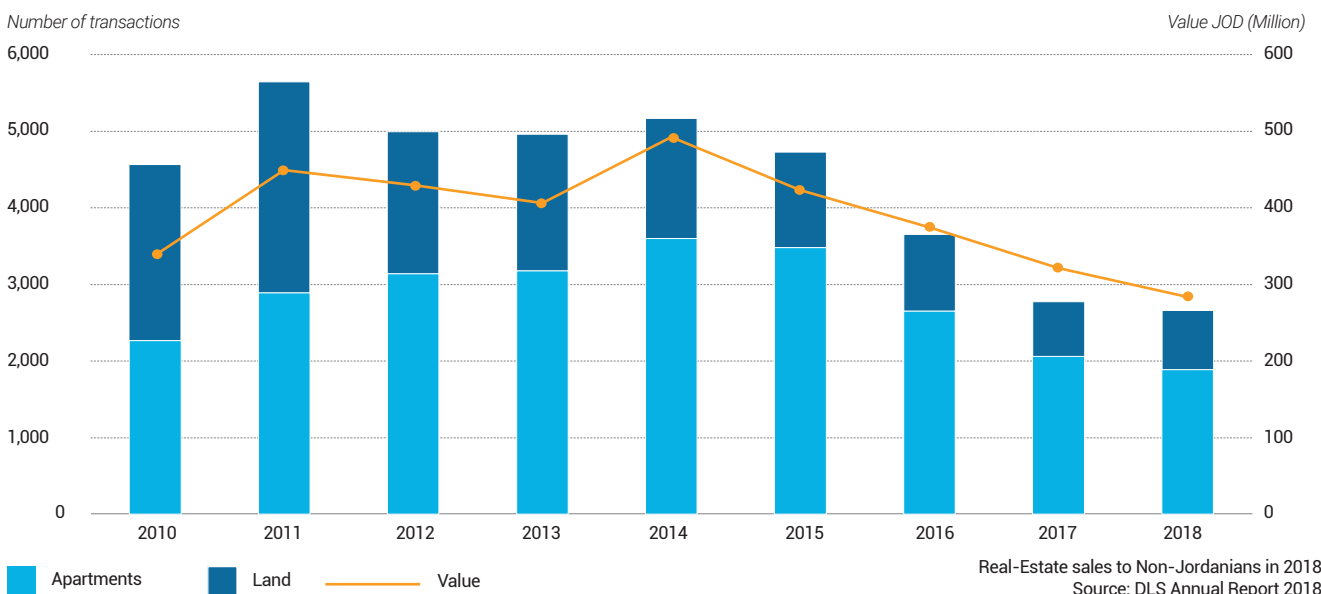
During the land market bubble between 2005 and 2008, land speculation raised land prices by a factor of 10.¹¹⁰ This was influenced by the population influx of Iraqi and Palestinian refugees, scarcity of land, and higher land value assessments by the DLS.¹¹¹ While the land market stabilized in the intervening years, the influx of Syrian refugees has created a high demand for rental housing. Rental costs are highest in Irbid, East Amman and Madaba.¹¹²

Women’s rights to land are enshrined within the Constitution, the legal framework, within the Shari’a law and even the customary law.¹¹³ There are no legal restrictions on the ownership or purchase/sale of land by women both as individuals and jointly through marriage.¹¹⁴ Data from 2012 reveal that married women’s ownership of house and land titles increases with age and wealth, and that urban married women and those living out of refugee camps are more likely to own a house than rural married women.¹¹⁵ Women with higher education are also more likely to own land or house titles.¹¹⁶

However, social restrictions on land inheritance and land ownership remain and have an adverse impact on poor women, driven by strong cultural, religious, traditional and financial barriers.¹¹⁷ Female heirs face pressures to relinquish their land and property rights through various forms ranging from intimidation, violence, and subtle coercive forms of taking land rights by male heirs through offering “gifts” to female heirs in exchange of land and property shares.¹¹⁸ Families headed by women also tend to have fewer economic assets than households headed by men; 43% of male heads of households receive loans for agricultural development and 14% receive loans for income-generating activities, compared to 21% and 9% of female heads of households respectively.¹¹⁹

Legal improvements need to be accompanied by remedies to realize women’s land rights, including increasing women’s awareness of their rights to inheritance, enforcing laws relating to the division of inheritance, and empowering women economically to enable claims to their rights. The Jordanian government, in cooperation with NGOs, have worked to promote women’s empowerment and removing legal barriers to land access, ownership and use.¹²⁰

As for refugees, they are the most tenure insecure in Jordan, particularly Syrian refugees.¹²¹ A quarter of refugee families are female-headed households.¹²² Many households rent houses without basic rental agreements, leaving families vulnerable to forced eviction and further displacement.¹²³ Furthermore, one in ten refugees is living in an informal shelter such as a tent, mud hut or caravan.¹²⁴ Almost half of refugees are living in shelters whose condition is classified as undignified.¹²⁵ There are efforts to improve tenure security through programmes that provide rent-free accommodation to families most in need by upgrading uninhabitable, substandard buildings.¹²⁶ Through bilateral agreements, renters agree to upgrade houses in exchange for the legal right to occupy the land and property for a 12-24 months period.¹²⁷ As demand for dignified housing increases, tensions between refugees and host communities are likely to increase.¹²⁸



Municipal Finance

In this chapter, it is important to note that Greater Amman Municipality (GAM), Aqaba Special Economic Zone (ASEZA), Petra Development Tourism Regional Authority (PDTRA) and Jordan Valley Authority (JVA) are autonomous entities, and do not fall under MoLA's jurisdiction, therefore the information below excludes them, unless stated otherwise. Also important to note, is that under the Local Administration Law of 2021, municipalities are classified into three categories based on population size; category 1 includes 12 municipalities with populations over 200,000, category 2 includes 65 municipalities with populations between 50,000 and 200,000, and category 3 includes the rest of the municipalities that are not classified in categories 1 and 2.

Jordan's municipalities are legal and budgetary entities governed by the Local Administration Law, which defines them as "a civil institution with financial and administrative independence." Budget preparation and execution is governed by Law No.22/2021, it details the responsibilities of the Local Council to approve the general and annual budgets of the municipality. It is then endorsed by the Minister of Local Administration.¹²⁹

However, municipalities are, for the most part, institutionally and financially weak.¹³⁰ Many rely heavily on central governmental transfers, due to low income revenues, municipal staff salaries accounting for half the budget, and the lack of capacity to manage their own resources and utilize their own revenues/expenditure,¹³¹ and further exacerbated because of the state-imposed privatization of urban services.¹³² As a result, many responsibilities and financial resources remain vested in centrally-controlled agencies.¹³³ This renders municipalities subject to strict centralized control over their budgets.¹³⁴

The transfer allocation system dates back to 2002, and takes into account several factors, including: population, percentage of poor, and distance to Amman. Although central fiscal transfers represent more than half of the municipal revenues, Jordan remains one of the Middle Eastern states wherein municipalities receive the lowest share in public expenditures, only 3% of the central state budget is dedicated to municipalities.¹³⁵ Municipal expenditure for all entities including (GAM, ASEZA, PDTRA and JVA) relative to GDP is 6.2%.¹³⁶ The system has been unstable over the past few years due to other commitments from the central government.¹³⁷ Consequently, municipalities are typically not notified in advance about the amount of governmental transfer, and in many instances, the grant transfer is delayed until May or later, driving municipalities to borrow from

the Cities and Villages Development Bank (CVDB). As such, mayors have expressed concerns about the lack of predictability in the system, limiting the ability to properly plan budgets and expenditures.¹³⁸

More than half of Jordan's municipalities are currently experiencing an acute deficit and concomitant high degree of indebtedness. In 2017, the government decided to distribute JOD100 million to municipalities to help them settle a proportion of their debts,¹³⁹ total municipal debt in 2017 amounted to JOD130 million. Many municipalities spend most of their budget on municipal employees' salaries, which highly restrains their scope of action in the face of indebtedness. This centralized control over local spending has negative consequences on the quality of service delivery and urban planning at the municipal level.¹⁴⁰

Figures show that approximately 43% of Jordan's population work as civil servants,¹⁴¹ resulting in low economic dynamics within the municipalities.¹⁴² Despite an announced municipal hiring freeze, the amount spent by municipalities on salaries and wages increased from JOD 36.9 million in 2002 to JOD 44.1 million in 2004 and JOD 95 million in 2012 to JOD 130 million in 2015. This amounts to 47.6% of 'category 1' municipalities' budgets, and around 33% of 'categories 2 and 3' municipalities' budgets.¹⁴³

This issue is further exacerbated by the Syrian crisis, that has caused increased pressure on the fragile services to meet the demands from both host communities and refugee populations. The JRP estimates that the total debt of municipalities to provide services to Syrians in Jordan, is reaching an average of USD 20.9 million per year for the years 2020-2022.¹⁴⁴

Municipalities cost	2020	2021	2022
Municipalities Debt (USD)	151,056,338	161,355,634	172,444,542
Cost per person	13.9	14.5	15.1
Total cost of Syrian refugees	19,500,006	20,899,269	22,409,828

Total direct cost for municipalities to provide services to Syrians in Jordan for the period 2020-2022.

Source: JRP

The cumulative impact of the Syrian crisis is equivalent to 18% of the GDP, due to disruptions to regional trade as well as influx of refugees.¹⁴⁵ According to 2016 World Bank Quarterly Economic Brief (QEB), it is estimated that each refugee costs the Jordanian government \$3,750 (JD2,500) per year. The influx of more than 630,000 registered Syrian refugees costs the Kingdom over \$2.5 billion a year, which amounts to 6% of Jordan's GDP and one-fourth of the government's annual revenues.

According to JRP 2020-2022, the Jordanian government has incurred substantial costs from service provision to Syrian refugees. These costs mainly include energy and water, which the government provides at subsidized prices to all residents regardless of the nationality, in addition to providing education, exemption of work permit fee, and infrastructure services.¹⁴⁶ The cost estimates of these services in 2020, as well as the forecasts for 2021 and 2022, are reported in the table below.

	2020	2021	2022
Subsidized Energy	146,333,803	149,150,704	151,967,606
Subsidized Water	59,000,000	60,000,000	61,000,000
Work Permit Waivers	41,509,600	39,622,800	37,736,000
Infrastructure Depreciation	147,798,044	148,395,250	150,222,047
Health	72,277,000	74,373,000	76,529,000

Cost of Providing Selected Public Services to Syrian Refugees (measured in JD). Source: JRP

In 2016, the total municipal revenues reached JOD 359.8 million. Of this, JOD 110 million came from governmental transfers, JOD 9 million from governmental grants, and JOD 240.5 million in self-revenue. JOD 138 million (58% of self-revenue) was generated through building and land taxes, waste collection fees reached JOD 16.5 million (7% of self-revenues), and betterment levies charged by the municipalities to support the extension of infrastructure to new areas totalled to JOD 13.2 million (6% of self-revenues).¹⁴⁷

Many municipalities have limited access to own-source revenue from property tax collection, capital revenues from renting out public buildings, and fees for solid waste collection, permitting and licensing. Most municipalities are only able to raise one third to one fifth of their revenue from such sources. Commercial financing for municipal investments has been limited, with municipalities mostly borrowing from CVDB.¹⁴⁸ CVDB reserves the right to intercept fiscal transfers as a mitigation against the risk it is exposed.¹⁴⁹

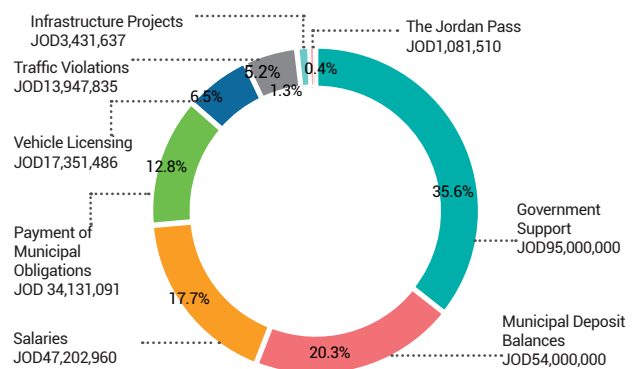
In terms of investments, direct investments by municipalities are limited, with the majority of investments within municipal areas coming from line ministries through their de-concentrated units at governorate level. However, consultations with municipalities are often limited, resulting in limited coordination for an integrated urban approach.¹⁵⁰ The lack of coordination could be attributed to the fact that governorates operate under and are administrated by the MoI, while municipalities represent a separate government level, overseen by MoLA.

The availability of financing for municipalities is necessary, to enhance sustainable urban development across the whole of Jordan. Given the municipalities' limited capacity to support local economic development, the government has taken steps to improve the financial situation of the municipalities, including the expansion of the transfer pool, application of a more equitable municipal transfer formula, and a revision to the Municipalities and Decentralization Laws.

Cities and Villages Development Bank

The Cities and Villages Development Bank, is an administratively and financially independent public institution established in 1979, that provides long term financing to establish both services and productivity projects through local councils. The bank's capital in 2017 was raised to 110 million, with 68% contributed from the central government, 30% from local councils, and 2% from the Jordan Central Bank.¹⁵¹

The CVDB administrates and guarantees loans held between the municipalities and any other party, assists the local councils in setting priorities for economic feasible projects and provides technical experience and services including training of technical staff. It acts as financial intermediary for government transfers. The accounts of municipalities are inspected by the Audit Bureau (AB). CVDB loans for one municipality must not exceed 15% of the bank's capital and reserves, and a single loan must not be greater than 2% of the bank's capital. A loan is subject to the financial position of the municipality and the project's priorities (technical studies).¹⁵² Despite the services provided by CVDB to municipalities, provision of infrastructure projects has accounted for JOD 3.4 million, equivalent only to 1% of the total portfolio, highlighting an opportunity for future empowerment.



2019 Accounts Source: CVDB 2019 Annual Report

Land Value Capture Instruments

The 1966 Planning Law has a number of provisions that could be useful for municipalities to build upon to increase their revenue streams. There are provisions for two forms of development levies within the planning law, including 'general' and 'special' development levies. General development levies are implemented following decisions of the Supreme Planning Council, while special development levies are decided by the provincial or local planning committees. Revenues are used to cover capital expenses of a particular public or private project, and both development levies should be charged to land or property owners.¹⁵³

Betterment Levies

Betterment levies, which are outlined in article 54 of the Planning Law, entails a one-off charge levied on land located in a specified area of influence, that has increased in value as a result of public investment. The article indicates that revenues from these levies are meant to cover costs of land expropriation required for future public investment and associated compensations, along with other costs of construction.¹⁵⁴

The Real Estate Ownership Law for 2019 has provisions for betterment taxes, which is charged following an official expropriation of land that was for the purpose of the construction of a new road or the expansion of road space. It is charged on property owners directly affected by the road space and is typically up to 25% of the amount of the overall appreciation of the land. The tax is paid specifically in four equal instalments over a period of four years.¹⁵⁵

However, despite all these instruments legally present in laws, it has been noted that taxation is not as politically acceptable as needed; only around 7% of respondents of a recent survey on public opinion noted that they would support the government levying new taxes to improve basic services such as health care, education and infrastructure. 70% of the survey respondents cited affordability reason, and another 12% cited the low provision of services provided by the government does not justify an even higher tax take.¹⁵⁶

Local Economy

The informal sector constitutes 26% of the Jordanian

economy, limiting municipal revenue collection and hindering local economic development.¹⁵⁷ In terms of ownership of enterprises, Syrians have recently begun establishing their own private investment businesses, in the industry, commerce, agriculture or real estate sectors.¹⁵⁸ By the end of 2013, Arab investors have invested 40% in the industry sector, 38% in the commercial sector, 20% in the agricultural sector and 2.5% in the real estate sector, highlighting Jordan's openness to investors and ease of doing business.¹⁵⁹ Moreover, investments in the Kingdom are expected to reach around \$8.9 billion, comprising 18.7% of the GDP in 2022.¹⁶⁰

A large number of Public-Private Partnerships (PPP) have been signed to meet increasing infrastructure needs since 2005. By 2015, 30% of the total public sector's investment portfolio was procured through PPP, compared to 6% in emerging economies.¹⁶¹ The PPP Law No. 17 was approved in 2020, providing the legal framework for the government's PPP programme and formalizing the role of the PPP unit. Jordan's PPP Unit, coordinates government efforts to increase private sector participation in key infrastructure projects.¹⁶²

Jordanian municipalities are very interested in the involvement of the private sector and the development of PPP. They are required by law to create investment committees comprising the mayor, the executive director, members of the Municipal Local Development Unit (MLDU) and a representative of the Finance Department.

Local Economic Development

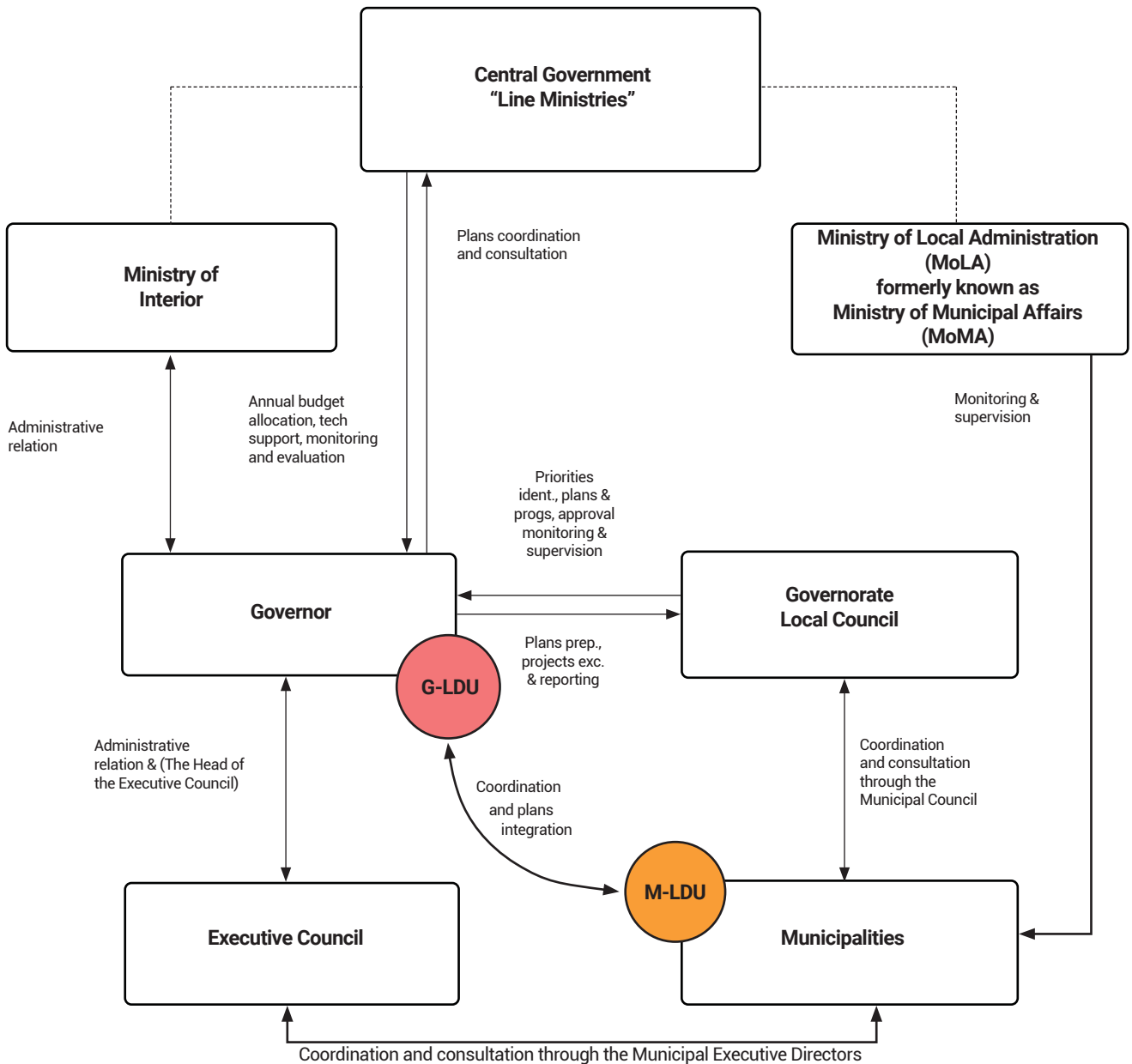
In order to address the rising unemployment, and foster job creation at municipal level, MLDUs were created in the 1990's, but each unit typically consists of only one person.¹⁶³ Some mayors did not see the benefit of the MLDU and shut them down. In 2003, Local Development Units were created within each governorate (GLDUs), with the aim of developing participatory mechanisms to engage local stakeholders in local development processes. GLDUs were reactivated in 2006 during the preparation of the decentralization process.

According to the 2021 Local Administration Law, municipal councils are in charge of identifying local

investment needs through a participatory process. In reality, the LDUs are playing this role.

USAID works with municipalities in order to train them to foster business creation and economic growth in

their communities, and launched a the USAIN LENS project to improve local economic development (LED). The project works with the GLDUs and MLDUs in Amman, Zarqa and Irbid which gather most of Jordan’s enterprises, to achieve economic growth.



The Decentralization Structure including coordination between LDU's
Source: OECD 2017

Major Infrastructure Initiatives

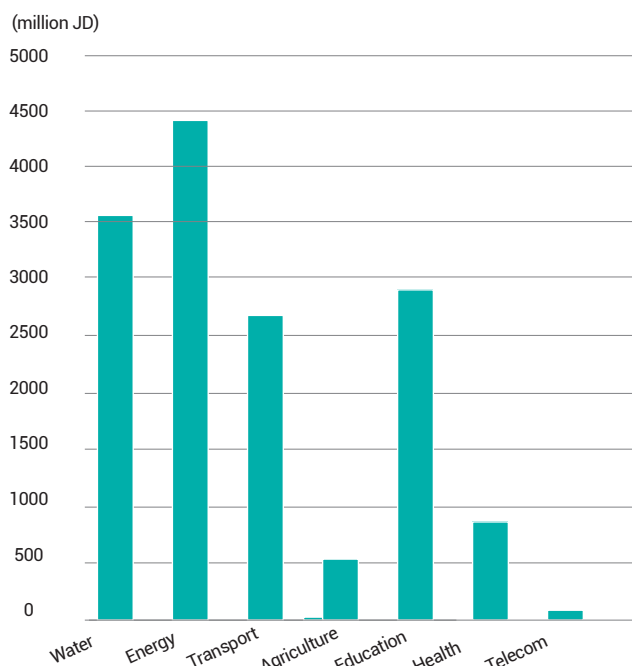
Jordan's infrastructure is well developed, and contributes heavily to the GDP. In 2017, the public services sector contributed to 61.4% to the GDP, while the industrial sector contributed 27.4% to the GDP.¹⁶⁴

Jordan is one of the highest ranked countries in Global Infrastructure Hub's InfraCompass 2020, with the quality of infrastructure scored at 67.4 out of 100.¹⁶⁵ The country is considered to be a global leader in the Activity drive, in particular, scoring 80.9.¹⁶⁶ The 'Activity' is measured against the extent and nature of recent infrastructure investment activity and extent of private sector involvement over the last five years, relative to the size of the economy, whereby at 1.4% of GDP, Jordan has one of the highest levels of private investment in infrastructure as a share of GDP globally.¹⁶⁷

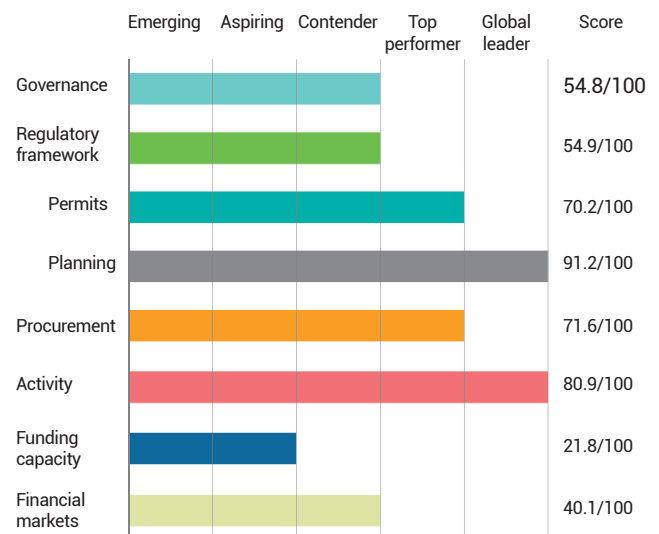
However, InfraCompass 2020 also reveals that there are several metrics to improve, particularly in relation to financial markets (stocks trade), funding capacity (gross government debt) and funding capacity (long term GDP growth). Jordan traded stocks worth approximately 5.5% of GDP in 2019, below the Upper Middle Income Countries' average of 25.6%.¹⁶⁸ This indicator is essential for infrastructure investors to exit investments

at appropriate points. Jordan's debt to GDP ratio is at 94.6%, revealing one of the highest level of gross government debts in Upper Middle Income Countries.¹⁶⁹ Jordan's long-term GDP growth is 2.7%, lower than the average, could also hamper Jordan's ability to borrow and build more infrastructure.¹⁷⁰

The assessment from InfraCompass reveals that Jordan is a high scorer in terms of planning, whereby there is a set of priorities and corresponding pipeline projects. In total, 250 projects have been identified in the pipeline, with a total cost of JOD 15.853 billion. These projects are all listed in key documents, such as the Jordan Economic Growth Plan 2018-2022 and Green Growth National Action Plan 2021-2025, and have been uploaded to the Information System for Jordan Response Platform for the Syria Crisis (JORISS). From the 250 projects, the majority of the projects are in the water and energy sectors, with 36 and 33 projects respectively, followed by education (29), health (25), agriculture (16), sanitation (13), justice (10) and transport (9). In terms of costs, more than JOD 2 billion have been allocated for projects in water, energy, transport and education, revealing high interest by the government to address key challenges related to these sectors, such as water scarcity, reliance on fossil fuels, limited mobility options and growing youth population.



Planned and Ongoing Infrastructure Projects' Cost Per Sector

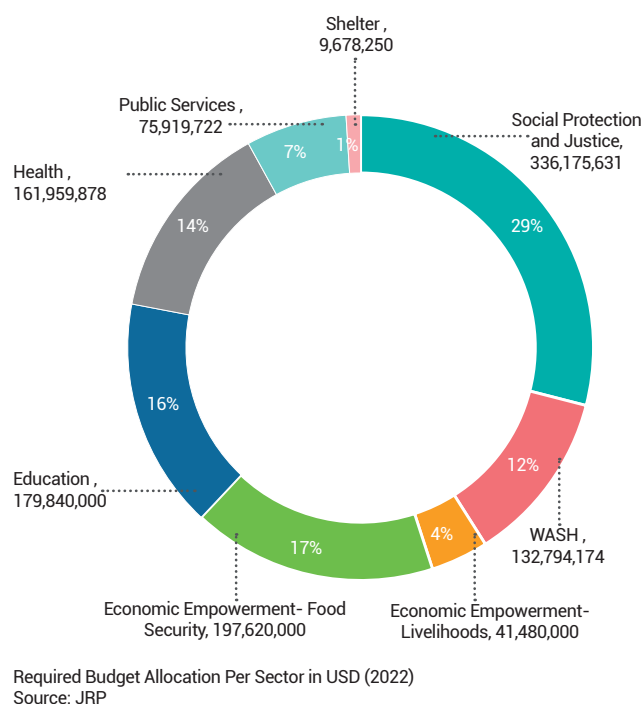


Ranking of Jordan's driver performance on a scale from "Emerging" (score from 0-20) to "Global Leader" (score from 80-100). Source: Global Infrastructure Hub

Refugee Response

The Syrian crisis has increased the pressure across basic needs, such as water supply, educational and health sectors.¹⁷¹ In the first two years of the Syria crisis, the international community’s response focused almost exclusively on providing humanitarian assistance to the refugees. However, more recently, attention has turned to building resilience of the host community and mitigating the impact on the country’s population, infrastructure, and economy.¹⁷²

The JRP supports infrastructure provision by identifying key priorities in infrastructure systems to provide access to quality public services in several vital sectors. The highest sector allocated funding is social protection and justice, followed by WASH, economic development, shelter, education, health and public services.¹⁷³



Sector	2020	2021	2022	Total
Public Services	116,003,454	106,151,555	75,919,722	298,074,731
Health	163,268,972	177,889,629	161,959,878	503,118,479
Education	202,060,332	180,315,000	179,840,000	562,215,332
Shelter	25,071,888	10,178,044	9,678,250	44,928,182
Economic Empowerment- Food Security	225,752,000	216,756,268	197,620,000	640,128,268
Economic Empowerment- Livelihoods	68,465,000	58,845,000	41,480,000	168,790,000
WASH	129,775,983	220,883,397	132,794,174	483,453,554
Social Protection and Justice	386,883,817	343,655,889	336,175,631	1,066,715,337
Total Project Requirements	1,317,281,446	1,314,674,782	1,135,467,655	3,767,423,883
Direct Budget Support	932,267,195	948,035,730	959,402,595	2,839,705,520
JRP Grand Total	2,249,548,641	2,262,710,512	2,094,870,250	6,607,129,403

Required Budget Allocation for Infrastructure Sectors in Jordan USD (2020-2022)
Source: JRP

Jordan overall is heavily reliant on not only the private sector for the provision of infrastructure, but also development banks. In 2018, EBRD provided Jordan with USD 1 billion to finance infrastructure projects in energy, transport, water and wastewater, solid waste, education and other municipal services.¹⁷⁴ More recently, the Asian Infrastructure Investment Bank (AIIB) has approved a USD 250 million investment in Jordan to accelerate economic recovery from the COVID-19 pandemic, as well as another USD 1.2 billion project co-financed with the World Bank called the Inclusive, Transparent and Climate Responsive Investments Programme-for-Results (PforR) project.¹⁷⁵

Electricity and Telecommunications

The quality of Jordan's existing infrastructure is widely recognized, with its electricity and telecommunications infrastructure ranking among the best in the region.¹⁷⁶ 100% of the population has access to electricity, with only 10.3% of electricity output lost.¹⁷⁷ It is also estimated that 87.6% of the population are subscribed to mobile-broadband, while only 3.9% are subscribed to fixed-broadband internet.¹⁷⁸

Transport

The transport sector, which accounts for more than 8% of Jordan's GDP, also has a relatively well-developed infrastructure to support the growth. It is one of the best in the region, with a scoring of 76.9.¹⁷⁹ The highway network covers more than 2,700km, connecting all corners of the Kingdom with 1,900km of secondary roads.¹⁸⁰ The presence of 3 major airports in the country has strengthened Jordan's connectivity and transport infrastructure.¹⁸¹ However, despite the improvements in physical transport infrastructure, public transportation is still limited across the country for several reasons. Therefore, most Jordanians are dependent on the use of individual motorized vehicles, whereby 52% of respondents to a survey by REACH/UNWOMEN indicated that cars are their primary means of transport, while only a fifth rely on the bus system.¹⁸² The survey also exposes the car ownership gap between Jordanians and Syrians, whereby less than 1% of Syrian survey respondents indicated that they own a car, and 41% indicated that walking is their primary means of transportation.¹⁸³

Basic Services

Jordan has one of the lowest levels of water resource availability per capita in the world. Nevertheless,

approximately 98% of the population has access to an improved water source.¹⁸⁴ Yet, it is estimated that 40% of water transported by pipes around the country is lost to leakage due to dilapidated pipes and tanks as well as improper installation and maintenance.¹⁸⁵

It is worth noting here that water deficits are projected to occur in Jordan due to the increasing water demand, driven by the population growth and influxes of refugees, as well as the decreasing water levels at the existing ground and surface water sources. These deficits are expected to vary geographically across the Kingdom; the Northern Governorates are expected to experience a more significant water deficit in comparison to the Southern Governorates. This increases the need for bulk water conveyance infrastructure to redistribute water. The Ministry of Water and Irrigation is currently considering seven new planned water resources' projects, including: Amman Aqaba Water Desalination Conveyance Project (AAWDCP), Wadi Al Arab II, Hasa Shadeiah Wellfield (Khan Al Zabib Project), Hesban Wellfield Utilization Project, Basalt Wellfield Utilization Project, Kufranjah Dam Water Supply Project (Phase II), and Wehda Dam Water Supply Project. These projects vary in status ranging from being in the detailed feasibility phase to the construction phase.¹⁸⁶

Furthermore, there are planned wastewater infrastructure improvement projects, including capacity upgrading of the existing 28 WWTPs and 14 new WWTPs. Additionally, there are planned projects that aim to improve the existing sewerage network and expand the network's coverage.¹⁸⁷

Public Private Partnerships

Jordan has raised about \$10 billion in private capital through PPPs in the electricity, transport, and water sectors since the 1990s.¹⁸⁸ However, challenges were witnessed in screening projects and preparing feasibility studies to expand the PPP models. A new PPP law was ratified in April 2020, to take effect in August 2020 in an effort to increase the significance and magnitude of PPP Projects in Jordan, to introduce more scrutiny and comprehensiveness to the overall PPP framework.¹⁸⁹ Such efforts have been noted to help in achieving Jordan's Vision to support economic development, alleviate fiscal pressures and help address the effects of the refugee crisis.¹⁹⁰

Affordable Housing

Jordan's housing sector is currently facing two major and interconnected challenges; firstly, the lack of adequate, affordable housing, and, secondly, the need to respond to the escalated housing demand driven by the significant population growth of its own citizens alongside the succeeding influxes of Palestinian, Syrian, and Iraqi refugees.¹⁹¹

Stimulated by demographic growth and arrival of several waves of refugees, Jordan's private sector produced 1.1 million dwellings between 2004 and 2015.¹⁹² With half of these apartments built in Amman, many of them are spacious and unaffordable. Affordable housing accounted for less than 1% of the total housing produced between 2004 and 2015.¹⁹³ Being comprehensive, the total housing deficit in Jordan is over 15.9% at a national level; excluding Syrian refugee camps; which accounts for 310,926 households, of which 64% (199,245 households) suffer a quantitative deficit while 36% (111,681 households) suffer a qualitative deficit. Additionally, the 2015 Census revealed that 10% of the population live in overcrowded conditions and 43% of non-Jordanian households share apartments.¹⁹⁴ In mid-sized cities, Jordanians are competing with Syrian refugees for rental apartments.¹⁹⁵

Furthermore, the widespread lack of adequate and affordable housing in Jordan have historically been exacerbated by several factors, such as the mismatch between the housing supply and demand, the increase in land prices due to land speculation, the absence of taxation of vacant land, the lack of integration between housing and urban planning, the lack of appropriate regulation to address affordability, the lack of institutional capacity, the lack of stakeholder and political commitment, as well as the lack of incentives for developers to build more affordable units.¹⁹⁶

Developers have concentrated production on larger units (120-200 m²) whereby 50% of the new housing units that were built between 2004 and 2015 have an area of over 150 m², 40% of units have an area between 100-149 m², and a mere 10% of units are smaller than 100 m². This has consequently exacerbated the mismatch between the supply and demand of households. This is especially evident from the significantly high vacancy rates, which reached 18.4% in 2015.¹⁹⁷ Additionally, the

number of vacant units doubled in over a decade, going from 220,000 in 2004 to 432,000 in 2015. A staggering 57% of vacant units nationwide were concentrated within Amman, with the vacancy rate increasing to 23% in 2015. This challenge is much greater now with the influx of refugees, who compete with Jordanians for affordable housing.¹⁹⁸ Over the next decade, Jordan will need to produce between 62,000 to 74,000 housing units based on the demand (small sized units) annually to reduce the current deficits and keep up with new household formations.¹⁹⁹ However, with the slowdown in construction since 2015, only 35,000 dwellings are formally constructed each year.²⁰⁰

The Housing and Urban Development Corporation is the sole government agency responsible for housing and the umbrella under which the Jordanian housing sector operates. The HUDC was given the mandate to build housing for the middle classes and ensure serviced plots for individuals to inhabit. Decent Housing for a Decent Living, an initiative launched in 2008 aspired to build about 100,000 in five years. However, the initiative was not completed, and due to financing challenges, less than 10,000 units were built.²⁰¹ Over recent years, and due to several factors affecting its effective delivery of housing on the production side, the HUDC has been transitioning its role from production to focus more on policy.²⁰²

Moreover, the Kingdom has made several efforts to combat the affordable housing shortage, such as building social housing projects, launching the Royal Housing Initiative named 'Decent Housing for Decent Living', and establishing the Housing Loan Subsidy Programme and the Jordan Mortgage Refinance Company. Unfortunately, these efforts have had limited success.²⁰³

Furthermore, regarding housing in refugee camps, Jordan became the first Arab country to upgrade the temporary refugee camps (also considered to be informal settlements) through public participation between 1981 and 1986.²⁰⁴ Various initiatives took place after that across the country to continue upgrading Palestinian refugee camps.²⁰⁵

Climate Risk Context

With very limited sources of water, Jordan is the second most water scarce country in the world, with annual renewable water resources being less than 100 m³ per person.²⁰⁶ It is heavily reliant on water resources outside its borders, which has led to tensions with neighbouring countries. The water scarcity is further compounded by the large influx of refugees, which has increased Jordan's struggle to meet domestic water needs.

Jordan ranked 81 out of 181 in the NDGAIN index for climate vulnerability.²⁰⁷ Although it is not a significant contributor to climate change, Jordan is one of the countries most affected by it. It has begun to suffer from its negative effects, including increasing temperatures, erratic rainfall, declines in available water (underground and surface), and an increased likelihood of heatwaves, flash floods, droughts and landslides.²⁰⁸

Since 1960, the country has witnessed a rise in annual maximum temperatures of 0.3°–1.8°C and rise in annual minimum temperature of 0.4°–2.8°C across all regions.²⁰⁹ There has been an increase in the average number of heatwaves across the country and consecutive dry days nationwide. A decline in annual precipitation by 5-20% was witnessed across the country.²¹⁰ The latest flash floods that took place in south of Jordan in 2018 killed 12 people in Petra,²¹¹ and 21 people in the Dead Sea area.²¹² The country is expected to experience a 15-60% decrease in precipitation and 1-4 centigrade increase in temperature between 2011 and 2099, which will have serious impacts on natural ecosystems, river basins, watershed and biodiversity.²¹³ This will, in turn, impact food productivity, water resources, health, infrastructure, and urban areas.

Jordan's first National Policy on Climate Change was adopted in January 2013. The policy aims to: strengthen Jordan's capacity respond to the impacts of climate change and solidify Jordan's global stewardship in emission reduction; build the adaptive capacity of communities and institutions with consideration for gender and vulnerable groups; and ensure that the interests of vulnerable groups (including the poor, youth and women) are adequately addressed in mitigation and adaptation policies and strategies.²¹⁴ Jordan has ratified various climate change agreements and protocols, including the Paris Agreement (ratified November 2016), and the Kyoto Protocol (January 2003).²¹⁵

Inhabitants of Jordan are vulnerable to natural hazards due to limited proactive approach to disaster prevention and mitigation, insufficient institutional capacities at the national and local levels, limited trained human resources, lack of awareness amongst senior officials and communities about disaster preparedness, and unsatisfactory implementation of existing policies.²¹⁶ The National Disaster Risk Reduction Strategy aims to strengthen the DRR sector in Jordan.

As for climate mitigation, the potential for mitigation is large, even though Jordan's total greenhouse gas (GHG) emissions are very small; the total GHG emissions from the energy sector, transport and industrial energy activities were 74% of the total GHG emissions of Jordan, while the waste management sector emitted about 13%, and industry about 8%.²¹⁷

There is a need to strengthen the promotion of renewable energy and energy efficiency in Jordan, which will have a large impact on the reduction of GHG emissions in the country and increase mitigation.²¹⁸ To do so, there needs to be a political and legal framework for renewable energy and energy efficiency, as well as a need for strengthening the implementation and enforcement of existing regulations, such as green building codes.²¹⁹

With the transport sector being one of the highest contributors to GHG emissions, strategies need to be developed to promote energy efficiency and low carbon transportation modes. Climate change perspectives should also be integrated in solid waste and wastewater policies, strategies and action plans. Access to national and international financing for low carbon energy and environmental technology should be enhanced, as well as promote technology transfer of mitigation in Jordan.²²⁰

As Jordan's urban footprint is increasing, the land available for agriculture is declining.²²¹ 41% of Jordan's total land area is characterized as degraded due to overgrazing, unsustainable agricultural and water management, and over-exploitation of vegetative cover. In order to increase climate change mitigation, it is vital to improve forest and range land management to increase the capacity to store GHG.²²²

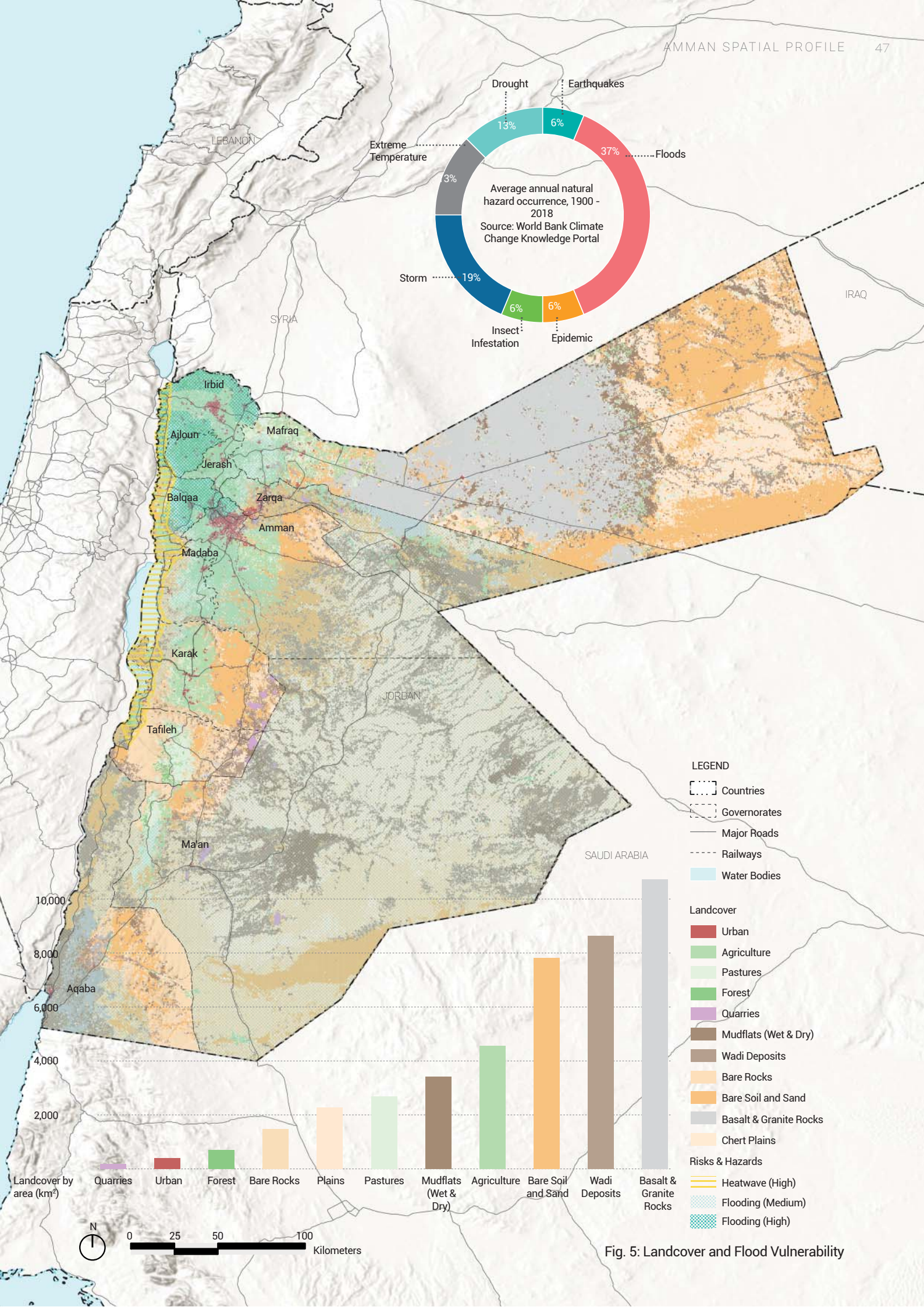
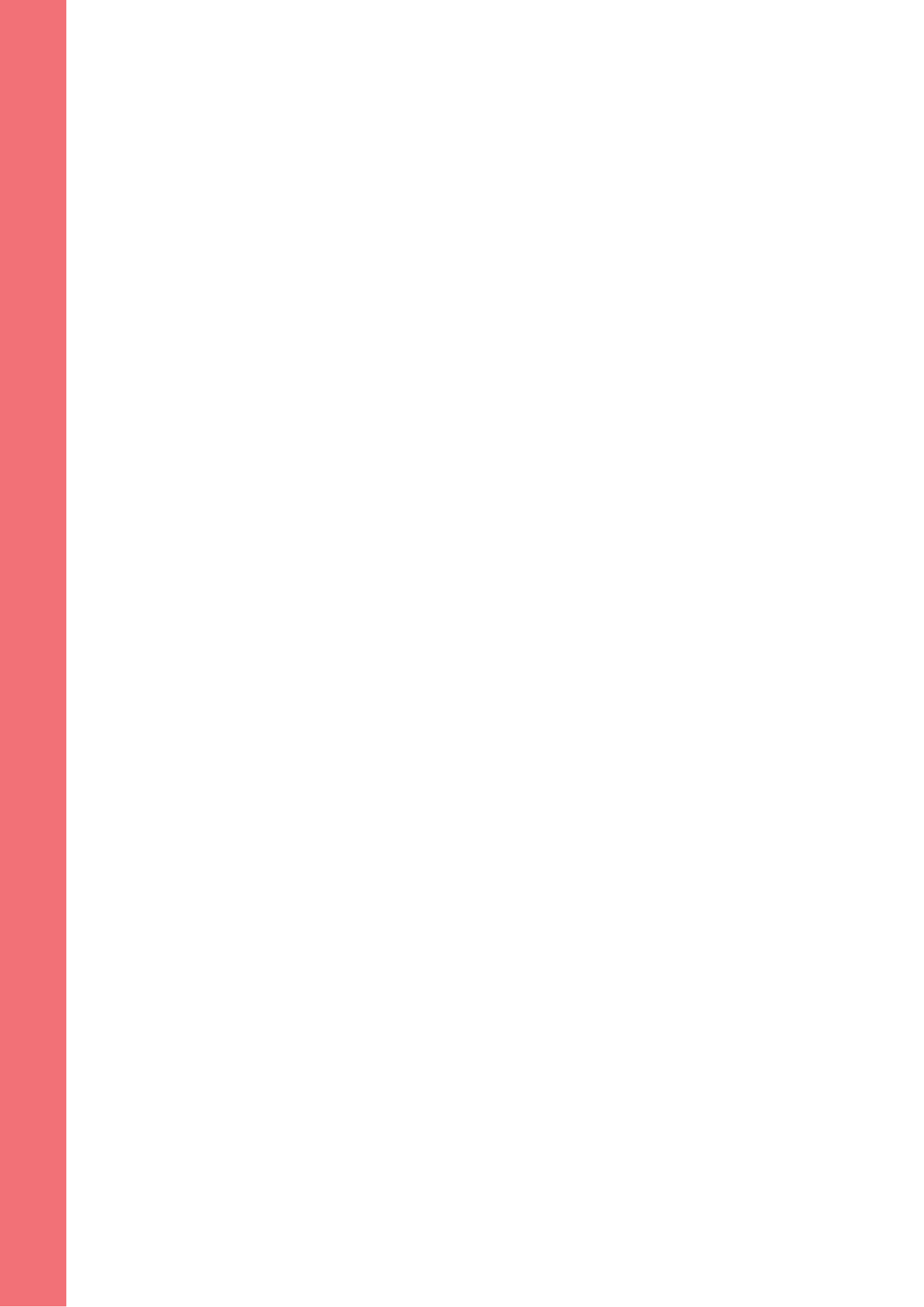


Fig. 5: Landcover and Flood Vulnerability



02

REGIONAL CONTEXT

Amman Governorate Location & Connectivity

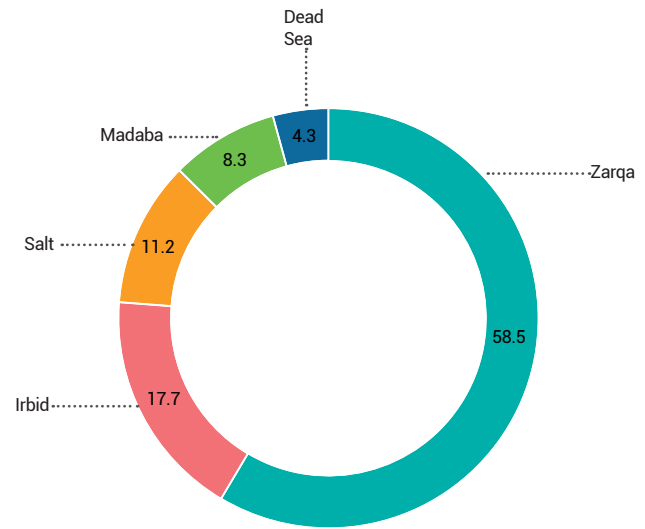
Amman Governorate is the largest governorate in terms of population, and has the capital city of Jordan, Amman. It is located in the north-western region of Jordan, and has a central geographical location among the Kingdom's governorates. It borders Zarqa Governorate to the north and northeast, the governorates of Al Balqaa and Madaba to the west, and Karak and Ma'an governorates to the south. It shares an international border with Saudi Arabia from the east. The governorate is around 750 m above sea level,²²³ and extends over an area of 7,579 km², equivalent to 8.5% of Jordan's total area.²²⁴

Amman is the most urbanised governorate, with 97.22% of the population being urban.²²⁵ It is the political, economic and cultural hub of the country, housing 48% of economic and commercial institutions at national level and the majority of the state's institutions, governmental departments, and the Parliament.²²⁶

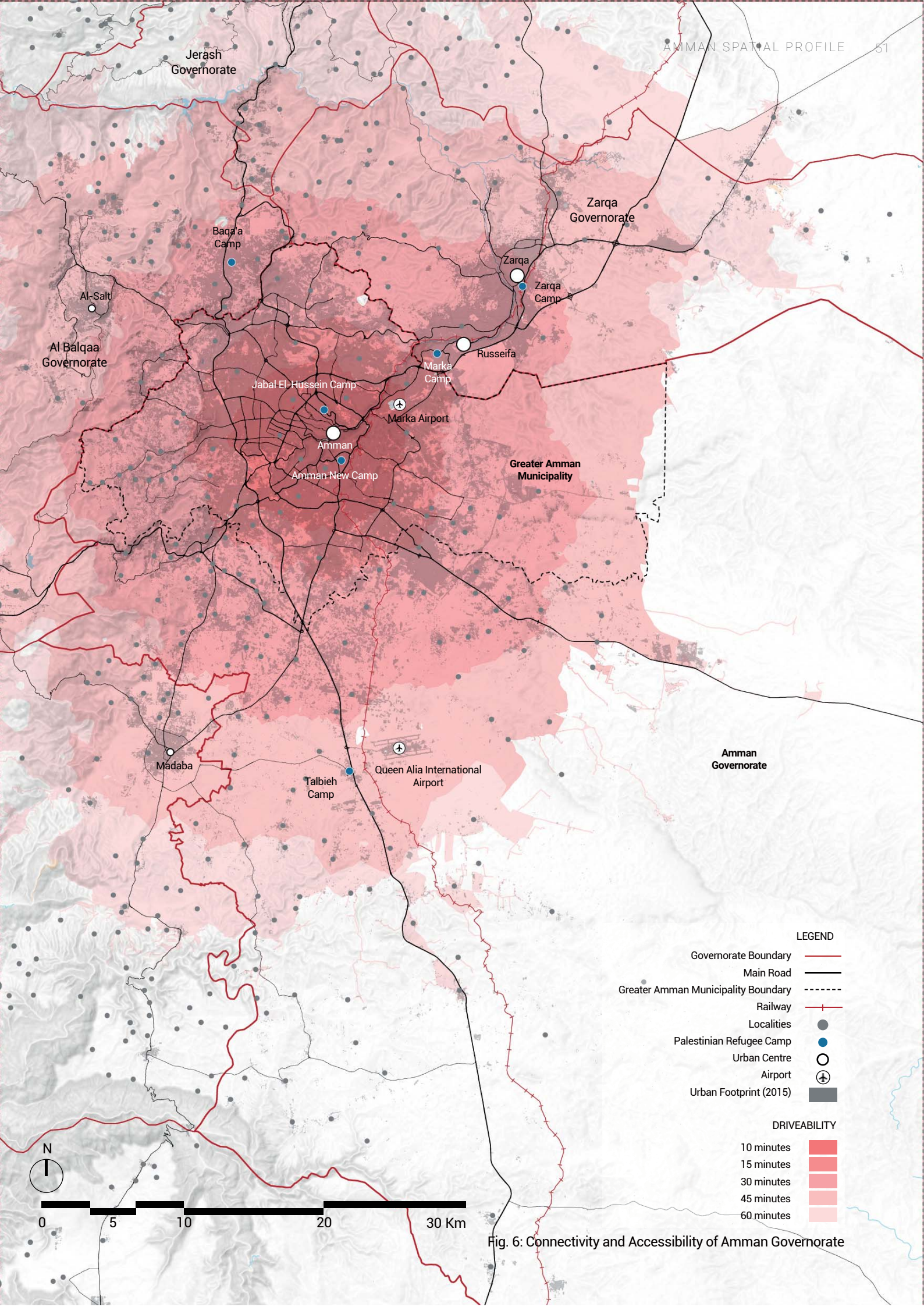
The growth of Amman and Zarqa has long been intertwined due to their close proximity to each other; around 56% of Jordan's total population resides in Amman and Zarqa governorates.²²⁷ The connection between these two cities has resulted in the development of smaller cities such as Russeifa, and the creation of the Amman-Russeifa-Zarqa corridor.

The city of Amman can be accessed by major urban areas in Amman Governorate and other nearby governorates, including Zarqa, Russeifa, Al-Salt, Ein Al-Basha, Madaba, Sahab and Marj Al-Hamam. Connectivity is better enabled to governorates and settlements north of Amman, as opposed to the south.

As for transportation, the city is well accessed by most governorates, and has two international airports. There is a railway passing through the governorate, which is only used for freight. Around 56% of households own at least 1 private car, indicating a heavy reliance on private modes of transport.²²⁸ While there are private operators running bus routes from Amman to other governorates, the majority of the transport within and out of the city takes place through private cars. At least 1 million trips are made in and out of Amman City on a daily basis, making the daytime population of Amman reach approximately 5.5 million.²²⁹ Around 58.5% of the trips are from Zarqa governorate, followed by Irbid governorate (17.7%) Al Balqaa (11.2%), Madaba (8.3%) and the Dead Sea area (4.3%).



Daily Commutes' percentage into Amman from surrounding governorates (MGP, 2008)



LEGEND

- Governorate Boundary ————
- Main Road ————
- Greater Amman Municipality Boundary - - - - -
- Railway —+—+—+—
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre ○
- Airport ⊕
- Urban Footprint (2015) ■

DRIVEABILITY

- 10 minutes ■
- 15 minutes ■
- 30 minutes ■
- 45 minutes ■
- 60 minutes ■

Fig. 6: Connectivity and Accessibility of Amman Governorate

Regional Land Administration and Institutional Context

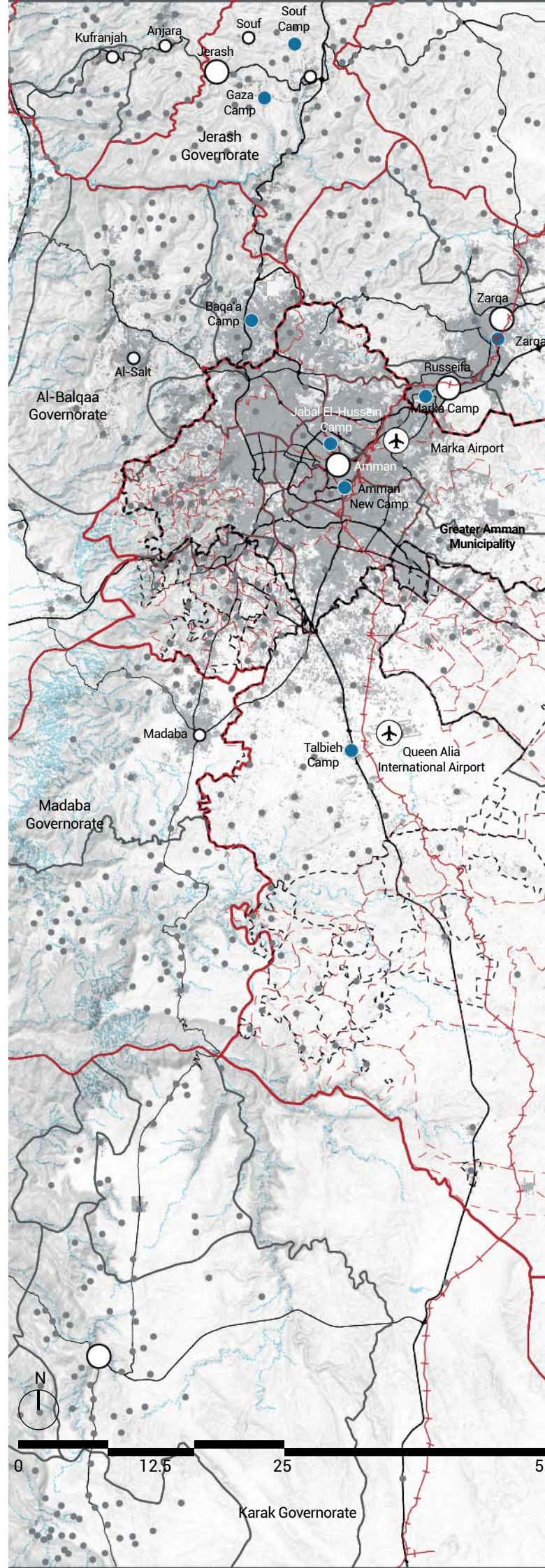
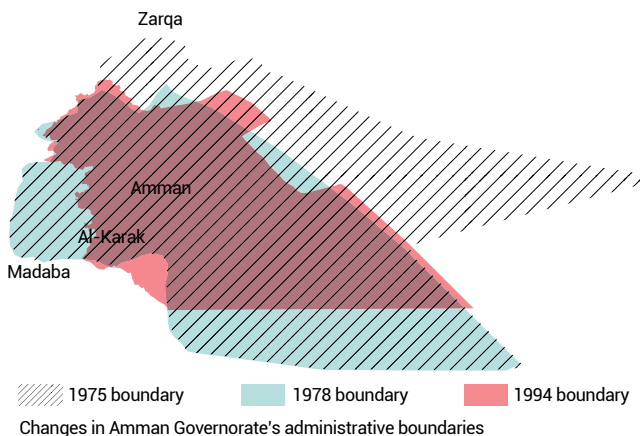
Amman Governorate's administrative boundaries have had a few changes over the past 50 years. In 1975, the administrative boundary of Amman Governorate included the areas currently under the governorates of Madaba and Zarqa. This was later changed in 1985 to only include the areas currently under the governorate of Madaba, until 1994 which shaped the governorate of Amman to what it is today.

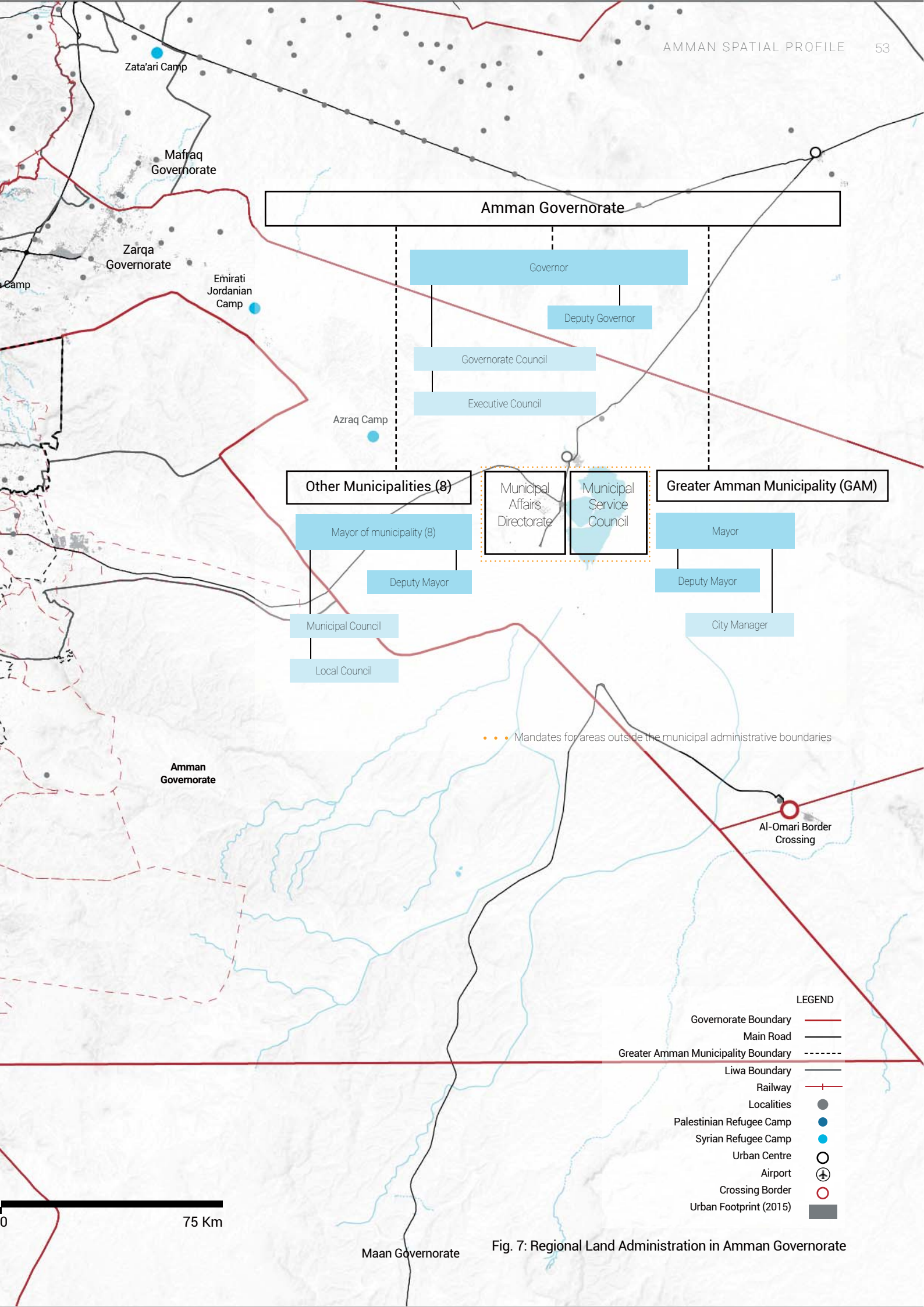
Amman Governorate consists of nine Liwas, four Qadas, and eight municipalities.²³⁰ These divisions correspond to different institutions, and particularly 3 different divisions. The administrative boundaries outlined by the Ministry of Interior (MoI) include the Liwas and Qadas, which are under the administration of the Governorate of Amman. These divisions cover the entire area of the governorate, and are essential for census, which is conducted by the Department of Statistics.

In terms of planning, the municipalities are mainly responsible for conducting planning activities, under MoLA. There are eight municipalities within the governorate of Amman excluding Greater Amman Municipality (GAM). These municipalities do not cover the entire area of the governorate, as there are some uninhabited areas in the east and southeast parts of the governorate.

As for real estate services and land plotting, the Department of Lands and Survey (DoLS) divides the governorate into eight directorates, 127 villages and 1,207 basins, excluding Sweileh and Safoot villages.²³¹

It is important to highlight that all the administrative boundaries described are not aligned, impacting decision-making processes and planning activities within the governorate.





Amman Governorate

Governor

Deputy Governor

Governorate Council

Executive Council

Other Municipalities (8)

Municipal Affairs Directorate

Municipal Service Council

Greater Amman Municipality (GAM)

Mayor of municipality (8)

Mayor

Deputy Mayor

Deputy Mayor

Municipal Council

City Manager

Local Council

••• Mandates for areas outside the municipal administrative boundaries

Al-Omari Border Crossing

LEGEND

- Governorate Boundary ———
- Main Road ———
- Greater Amman Municipality Boundary - - - - -
- Liwa Boundary ———
- Railway ———+———
- Localities ●
- Palestinian Refugee Camp ●
- Syrian Refugee Camp ●
- Urban Centre ○
- Airport ○
- Crossing Border ○
- Urban Footprint (2015) ■

0 75 Km

Fig. 7: Regional Land Administration in Amman Governorate

Regional Planning Context

Since the governorate is administered by GAM and MoLA, several master plans were developed for the various municipalities. Municipalities are not empowered to prepare their own master plans, and lack the staff, equipment and training to do so. Legally, they are only able to update their land use plans.

Metropolitan Growth Plan

For the parts of the governorate that fall under 2008 GAM boundaries, the Metropolitan Growth Plan (MGP) is the main guiding document that provides an overall framework to unite and coordinate all other sub-plans.²³² The MGP aspires to integrate land use, transportation and infrastructure investment to encourage compact and integrated urban development. The MGP also aspires to transition from automobile travel to public transit use and pedestrian movement, identifying major roadway, transit and pedestrian infrastructure and services that the city would need by 2025.²³³

The MGP identifies primary, limited and no growth areas. The primary growth areas include existing built-up areas as well as settlement expansion areas to absorb future population growth. Limited and no growth areas include natural heritage areas, such as watersheds, wadis and forest areas, as well as cultural heritage areas, rangelands and croplands, and quarry and mineral extraction areas.²³⁴

The MGP was developed in 2008, prior to the arrival of the Syrian refugees, and as such does not have any special focus on refugees. According to GAM, only 20% of the MGP has been implemented. Since the MGP is set until 2025, GAM is currently updating it with the support of the comprehensive planning department, using selected areas from GAM's administrative boundaries and according to instructions from GAM's council.

Amman Resilience Strategy

Other plans and documents were developed based on the MGP, which take into account the refugee influx. In 2017, the city of Amman adopted the Amman Resilience Strategy to cope with its main urban problems compounded by the refugee influx and the impact of climate change. An action plan was proposed based on five pillars, focusing on becoming integrated and smart; environmentally proactive; innovative and prosperous; young and equal; and united and proud.²³⁵ The resilience strategy aims to

connect refugee response efforts with the city's long-term actions, and to focus on job opportunities and enhance access to municipal social centres for refugees.

Amman Green City Action Plan

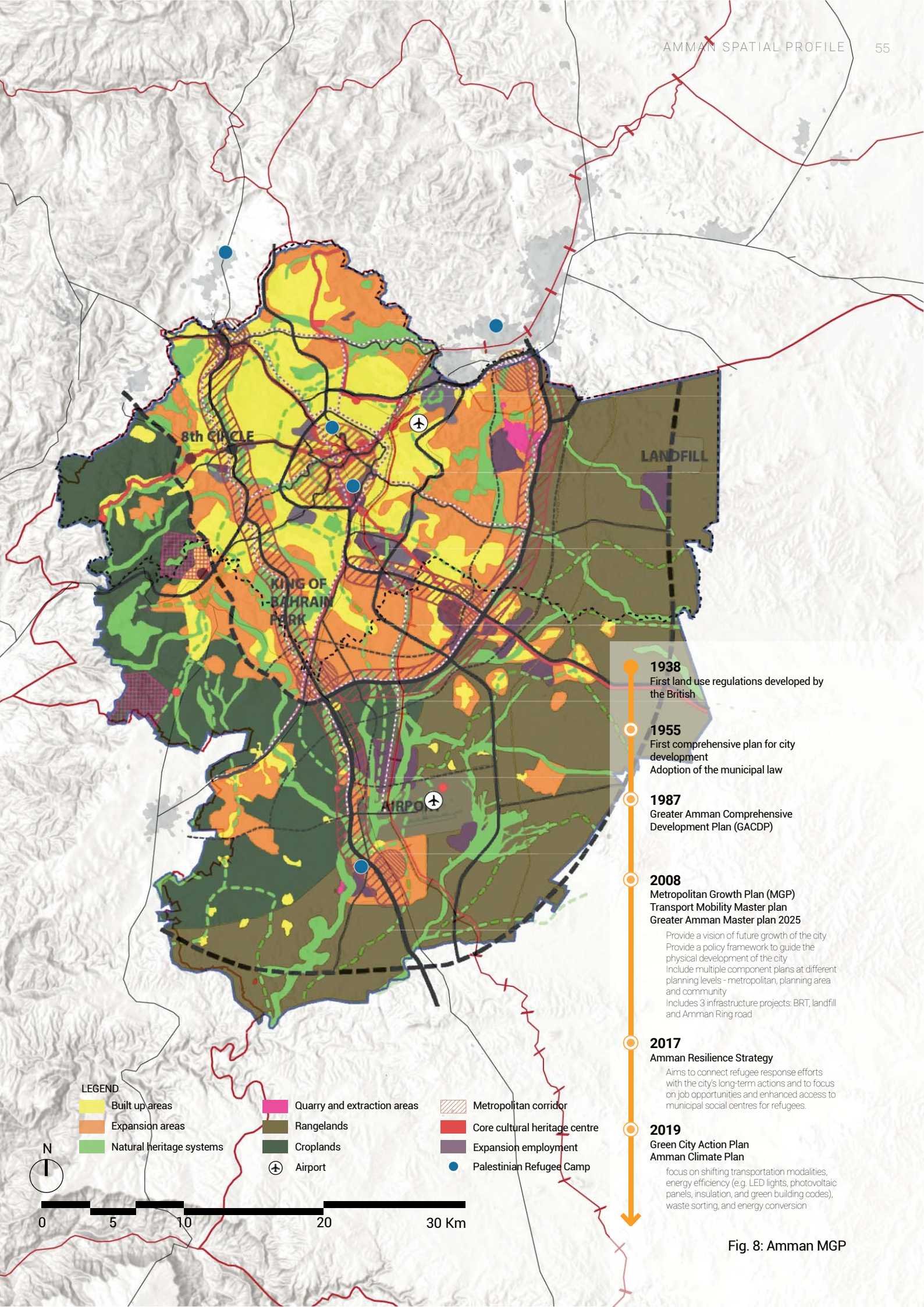
The Amman Green City Action Plan, released in May 2021, was developed based on GAM's effort in improving the environmental performance and taking a more systematic approach to addressing its existing and emerging urban environmental challenges.²³⁶ The plan aims to support the city in identifying, prioritising and addressing the city's most acute climate change and environmental challenges, including: solid waste management, water and wastewater, urban transport and building energy efficiency. As a result, the city has elaborated on 37 initiatives that are now to be implemented until 2025, based on an intensive stakeholder engagement process.²³⁷

USAID CITIES Programme

As for the eight other municipalities outside of GAM, they are supported by MoLA. The USAID CITIES Programme has funded six municipalities within the governorate of Amman to develop a strategic plan and local development plans for the years 2020-2023, which includes the municipalities of Al-Ameriyah, Husban, Na'our, Sahab, Muaqqar and Umm Al-Rasas. These plans were developed through a participatory approach that involved all relevant stakeholders. Through preparing a vision and message for the municipality and coming up with a set of strategic, sectoral, and development goals, the Programme aimed to increase the performance of the municipality and its services, raise the efficiency of work in it and enhance partnerships between the public and private sectors.²³⁸ These plans do not identify any particular actions towards addressing refugees' needs and demands, or their integration into communities.²³⁹

Amman Climate Action Plan

As a first step towards building a sustainable, vibrant future, this plan lays out an approach to creating a carbon neutral Amman, while expanding services and meeting the needs of the rapidly growing city. This inaugural plan sets an interim target of a 40% reduction of greenhouse gas emissions by 2030. While carbon neutrality is a long-term goal, this plan sets out a shared vision for collaboration among the government, private sector, development partners and residents of Amman.²⁴⁰



1938
First land use regulations developed by the British

1955
First comprehensive plan for city development
Adoption of the municipal law

1987
Greater Amman Comprehensive Development Plan (GACDP)

2008
Metropolitan Growth Plan (MGP)
Transport Mobility Master plan
Greater Amman Master plan 2025
Provide a vision of future growth of the city
Provide a policy framework to guide the physical development of the city
Include multiple component plans at different planning levels - metropolitan, planning area and community
Includes 3 infrastructure projects: BRT, landfill and Amman Ring road

2017
Amman Resilience Strategy
Aims to connect refugee response efforts with the city's long-term actions and to focus on job opportunities and enhanced access to municipal social centres for refugees.

2019
Green City Action Plan
Amman Climate Plan
focus on shifting transportation modalities, energy efficiency (e.g. LED lights, photovoltaic panels, insulation, and green building codes), waste sorting, and energy conversion

LEGEND

- Built up areas
- Expansion areas
- Natural heritage systems
- Quarry and extraction areas
- Rangelands
- Croplands
- Metropolitan corridor
- Core cultural heritage centre
- Expansion employment
- Airport
- Palestinian Refugee Camp



Fig. 8: Amman MGP

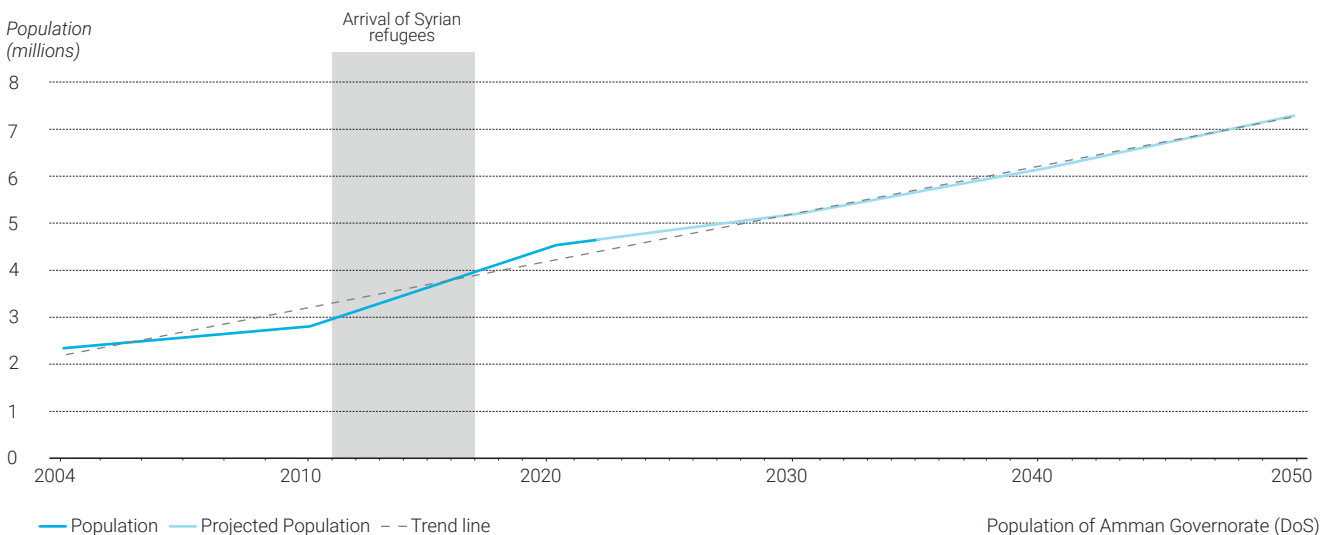
Demographics

As of 2020, the Amman Governorate constitutes 42% of Jordan's total population, reaching 4,536,500 inhabitants, with only 126,300 being rural.²⁴¹ The majority of the population resides within the administrative boundaries of GAM, around 3,816,980 inhabitants as of 2019.²⁴² The census conducted by DOS follows the administrative boundaries of Mol, using the Liwa and not the municipalities. The Liwas with the highest populations are: Marka, Amman Qasaba, Al-Jami'ah, Al Qweismeh and Wadi As-Sir, all of which cover areas that are part of GAM.²⁴³ Al Jizah and Al Muaqqar Liwas have the lowest population and population densities. Both are mostly covered by desert and do not have urban areas, but instead have towns and villages which are small and located along major roads.

Amman Governorate has a population density of 598 people per km², which is approximately 20% and 80% higher than the neighbouring governorates of Al Balqaa and Zarqa respectively.²⁴⁴ However, as the majority of the governorate is uninhabited, the actual population density in urban areas is expected to be much higher. More than half of Amman Governorate's population is aged under 25,²⁴⁵ which increases demands on educational facilities and the dependency rate, and would require careful planning for the future.



Population pyramid of Amman Governorate in 2015 (DOS, 2015)



Population of Amman Governorate (DoS)

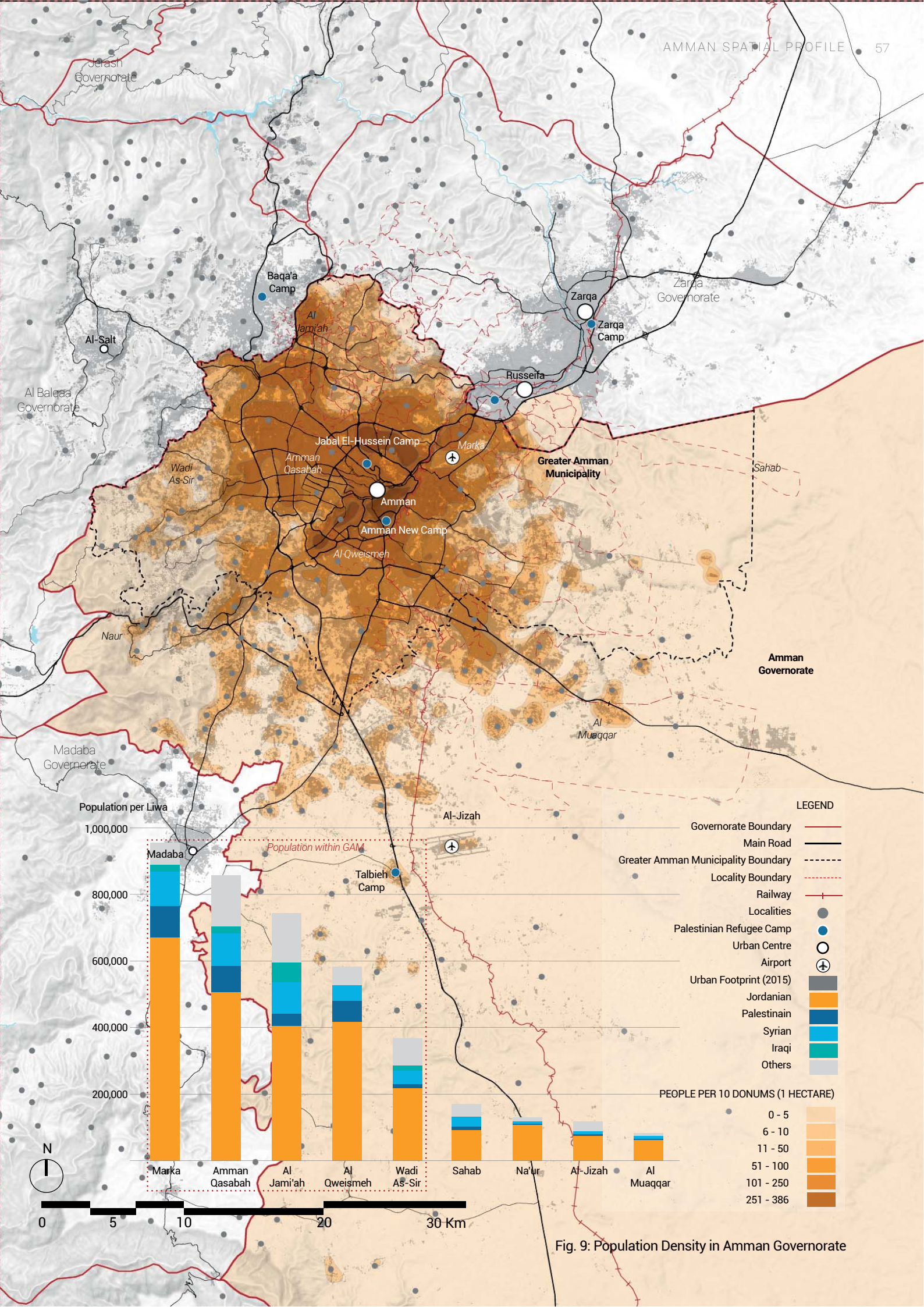


Fig. 9: Population Density in Amman Governorate

Refugees

As of 2015, the total number of Palestinians, Iraqis and Syrians in the governorate of Amman is 1,681,469.²⁴⁶ However, the total number of refugees registered with UNHCR in Amman Governorate as of October 2021 is 273,329, including 198,217 Syrian refugees.²⁴⁷ As for Palestinians, there are 197,397 registered refugees with UNRWA. The refugees vary in terms of location of residence across Amman based on their financial abilities and economic sectors they are active in. Based on disaggregated data on refugees per Liwa, the majority of the refugees are concentrated in areas within GAM. As such, a breakdown for Palestinian, Syrian and Iraqi refugees is shown at GAM level to the right.

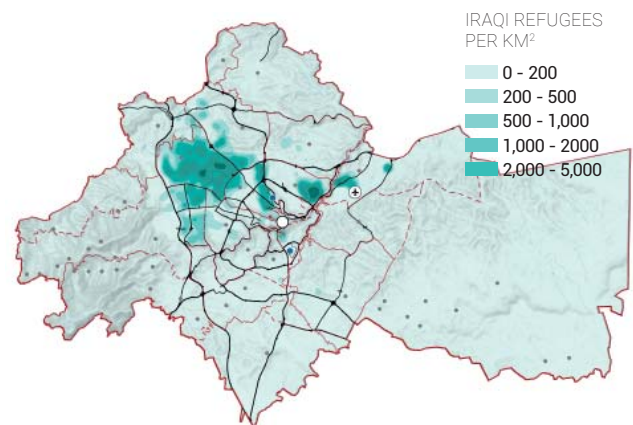
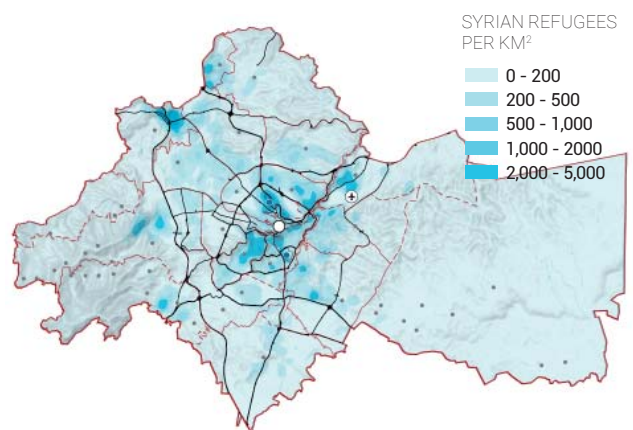
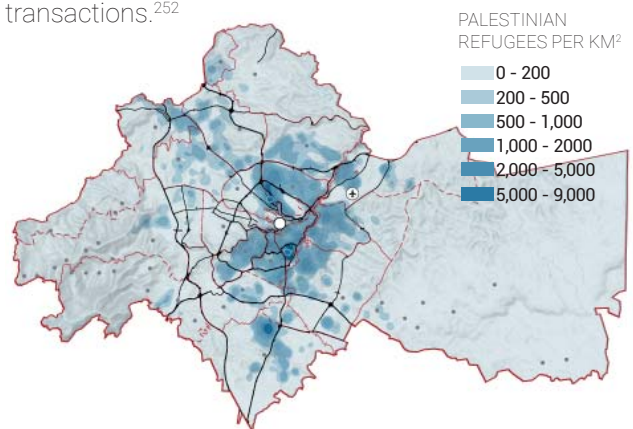
Overall, there are 4 Palestinian refugee camps in the governorate of Amman, 2 of which are official camps within the city of Amman (Amman New Camp and Jabal El-Hussein Camp), and 1 outside of Amman City (Talbieh Camp). It should be noted here that Prince Hassan Camp is considered an unofficial Palestinian refugee camp in Amman city, therefore it is not marked on the map. All of the official Palestinian camps are managed by UNRWA.²⁴⁸ It is important to mention that the vast majority of these refugees have the Jordanian nationality, enabling them to access benefits and employment opportunities and making them less vulnerable.²⁴⁹

The majority of the Palestinian refugee camps are located in the central areas within GAM. This correlates to the location of the two official refugee camps and Prince Hassan Camp, as well as the location of most economic and commercial activities. Palestinians who live in areas around the Palestinian refugee camps bought the land and constructed self-built homes; it is estimated that 59.8% of the population living in areas around the Palestinian refugee camps have done so.²⁵⁰

For Syrian refugees, there are no refugee camps within the city, and all Syrians live in urban areas alongside the host community. Their location reflects their engagement in various economic sectors, particularly industry and agriculture.

As for Iraqi refugees, their concentration in the western districts of Amman reveals that the majority of the refugees are able to afford residing in houses in the wealthier districts. It also reflects their economic engagement in business and commerce, where many own shops in Amman. The 100% increase in real estate

prices in 2005 alone can be attributed to the dramatic increase in the number of land and housing transactions by Iraqis, from 125 transactions in 2002 to 1,811 in 2005, or from JOD4.9million to JOD100million.²⁵¹ Iraqis have continued to be active in Jordan's real estate market, most notably in Amman. According to the DLS 2012-2018 annual reports Iraqis rank first in non-Jordanian real estate deals in terms of both number and value of transactions.²⁵²



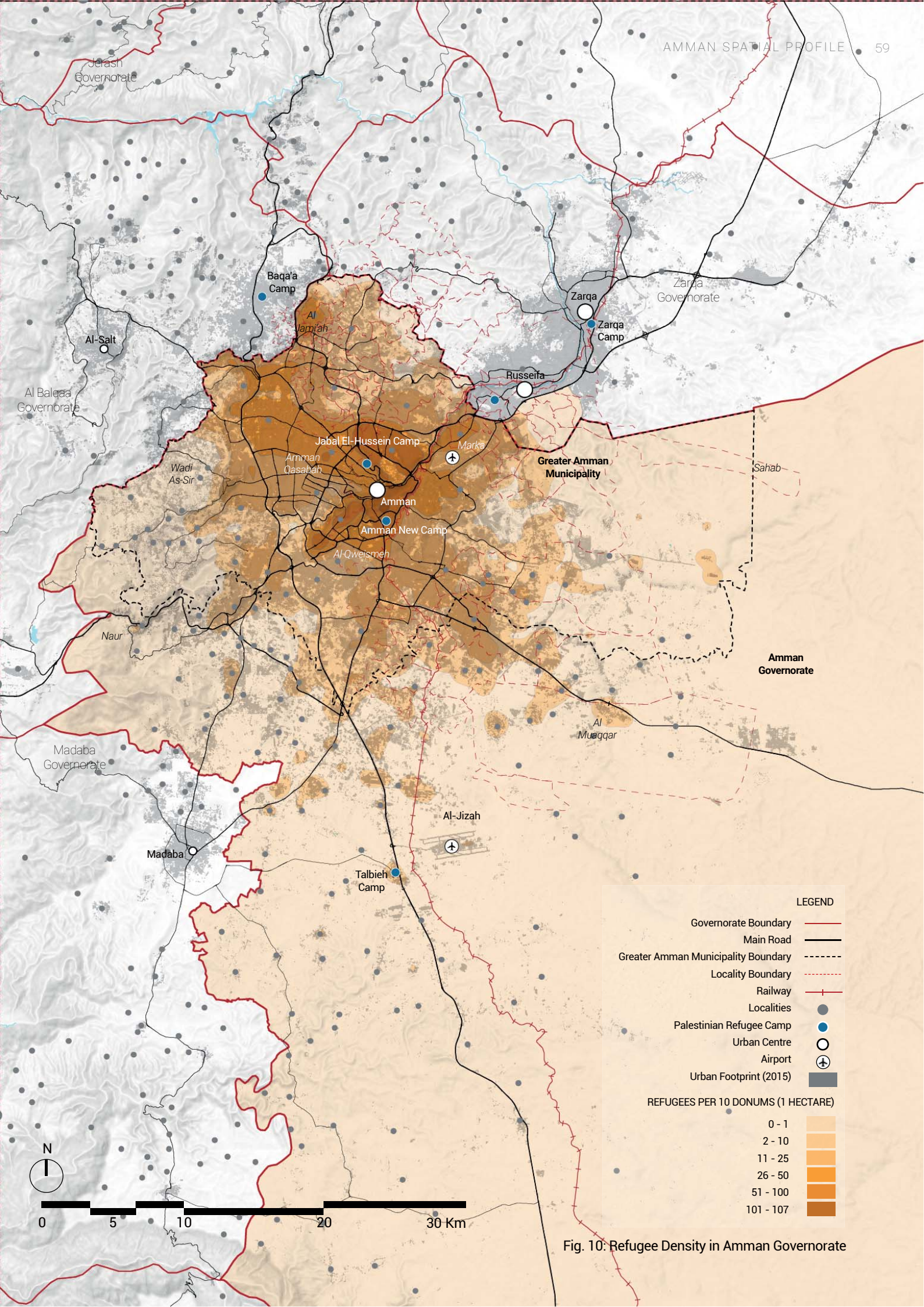


Fig. 10: Refugee Density in Amman Governorate

LEGEND

- Governorate Boundary —
- Main Road —
- Greater Amman Municipality Boundary - - -
- Locality Boundary - · - · -
- Railway + — +
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre ○
- Airport ⊕
- Urban Footprint (2015) ■

REFUGEES PER 10 DONUMS (1 HECTARE)

- 0 - 1 ■
- 2 - 10 ■
- 11 - 25 ■
- 26 - 50 ■
- 51 - 100 ■
- 101 - 107 ■

Regional Infrastructural Access

Water

About 98% of Amman Governorate's households are connected to this piped water system.²⁵³ Only 14.2% of the population rely on the public network for drinking water.²⁵⁴ While the majority, 85.8%, either utilize a water filter or purchase mineral water, revealing the low quality of water publicly supplied.²⁵⁵ In terms of refugees, 99% of Syrian households in Amman have access to a piped water source.²⁵⁶

Water supply for Amman Governorate comes from a variety of sources. 90% of the drinking water supplied to the capital Amman comes from sources distanced 125 to 325 km away,²⁵⁷ which increases the costs of water supply due to transportation and electricity.

In Jordan, water generally comes from groundwater sources, with the exception of west Amman City, which receives water from the King Abdullah Canal.²⁵⁸ The Canal is Jordan's largest canal system, supplying water from the Yarmouk River to 40% of Amman Governorate's water needs, after treatment in the Zai Water Treatment Plant.²⁵⁹ The Disi aquifer project, completed in 2013, provides around 107 million cubic metres annually of drinking water to Amman Governorate, as well as other central and northern governorates.²⁶⁰ The Zarqa Ma'in Water Treatment Plant provides drinking water to an estimated 2.6 million residents in Amman.²⁶¹

Overall, there are supply issues with water access through the public network. Non-revenue water accounts for around 50% of total water consumption;²⁶² in 2014, half of the municipal water losses occurred within the Amman Governorate.²⁶³

Water utilities in Amman, as well as southern and northern Jordan, have reduced water losses from 44% to 26% in eleven distribution zones through USAID-supported reforms and interventions, such as network rehabilitation and installation of smart meters. Through these projects, the reduction is expected to save 7 million cubic meters of water in 2020, equivalent to the demands of 190,000 people annually.²⁶⁴

Solid Waste Management

For solid waste management, GAM generates approximately 1,095,000 tons of solid waste annually, accounting for almost half of the total solid waste generated in Jordan.²⁶⁵ Five dumpsites serve the central region of Jordan, including Amman Governorate: Al-Ghabawi, Madaba, Al-Homra, New Deir Alla and Al-Duleil.²⁶⁶ Al-Ghabawi landfill, operated by GAM, is the largest and only engineered sanitary landfill, while the remaining are operated by the Joint Service Councils.²⁶⁷

Sewerage and Wastewater

The sewerage service covers 90% of the total water subscribers in the capital, with the network reaching 3,243 km by 2017.²⁶⁸ The average amount of wastewater collected annually is 80 million cubic meters. As the majority of the governorate's population reside north of the governorate, Amman relies on wastewater treatment plants (WWTP) located in nearby governorates. Around 95% of the waste is directed to the WWTP in Zarqa Governorate, managed by the BOT Water Authority. The remaining 5% is processed in 5 centralized WWTP in Amman Governorate, managed by Miyahuna: Wadi El Seer, Abu Nsair, Jiza, South Amman and Ein Ghazal.²⁶⁹

Electricity and Energy

The governorate has nine power stations that provide the residents with access to electricity. Overall, there is a good service provision of electricity throughout the governorate, with residents rarely facing any power shortages or cuts.²⁷⁰ Jordan Electric Power Company (JEPCO), a public shareholding company, distributes electricity in Amman, Zarqa, Madaba and Al Balqa governorates.²⁷¹

In terms of heating, 51.2% of households rely on gas for heating (compared to 47.9% at national level), 30.8% of kersone or solar heater (compared to, 31.1% at national level) and 7.5% rely on central heating (compared to 3.7% at national level).²⁷²

As for household appliances, 79.1% have a water heater, (compared to 78.5% at national level), 16.4% use solar heater (compared to 12.2% at national level), 33.4% have an air conditioner (compared to 32.0% at national level).²⁷³

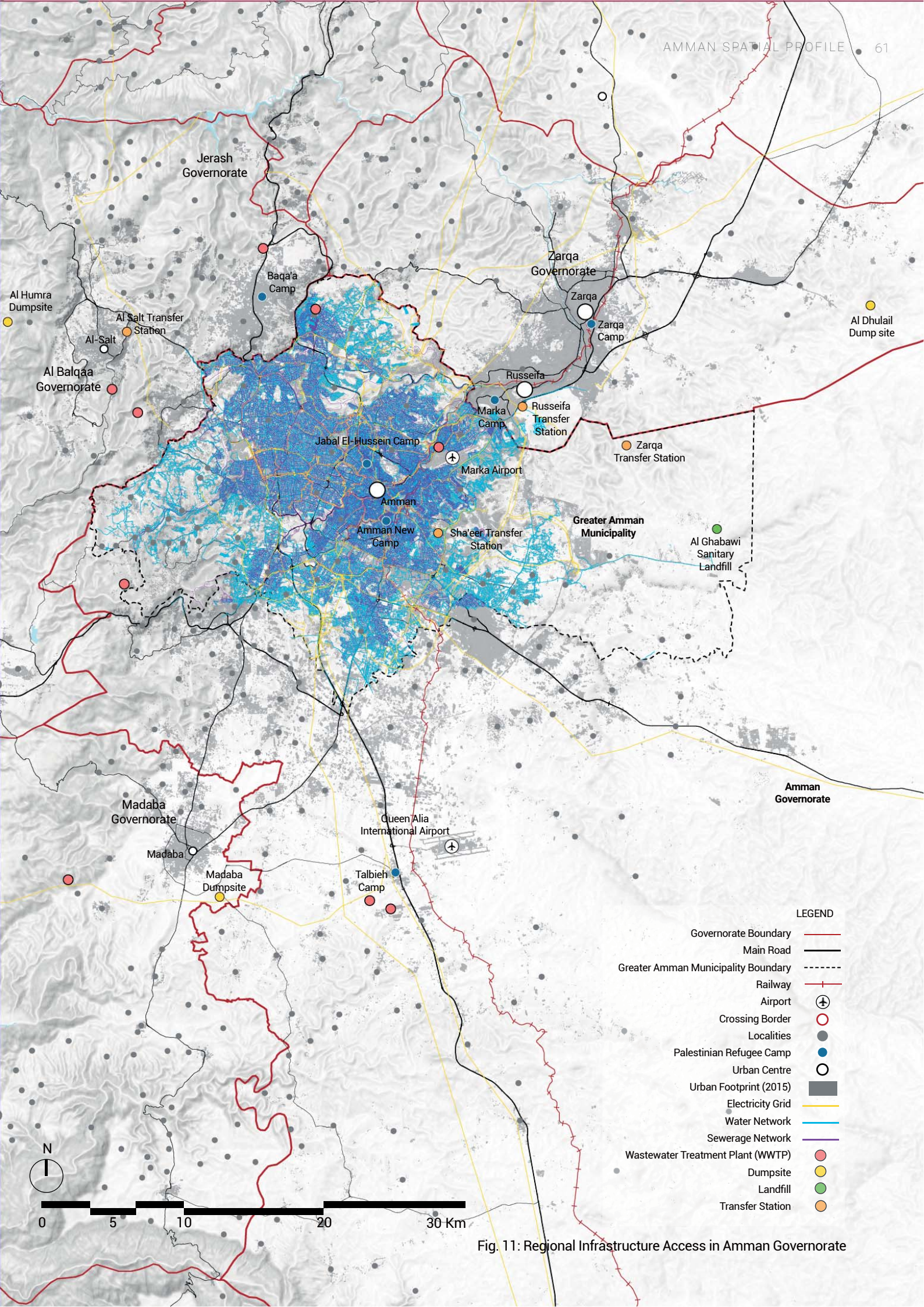


Fig. 11: Regional Infrastructure Access in Amman Governorate

Land Use

In 2007, the Ministry of Municipal Affairs (MoMA), now known as, the Ministry of Local Administration (MoLA), developed a national level land use map. However, this did not include autonomous planning entities that are not under their jurisdiction, including GAM, ASEZA and JVA.

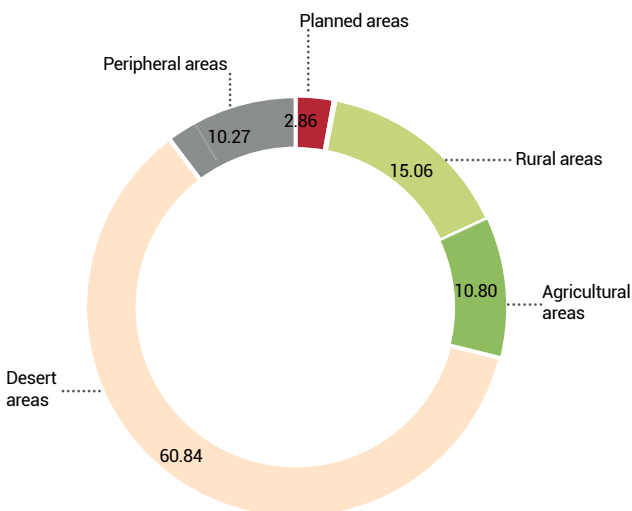
The majority, approximately 61% of the governorate's land use (excluding GAM), is classified as desert areas, followed by rural areas at 15%, agricultural and peripheral areas at 10%, and planned areas at only 3%.

In general, the quality of the Amman city's natural system is severely degraded and presents many opportunities for enhancement. There is limited natural cover remaining in the city and the governorate.

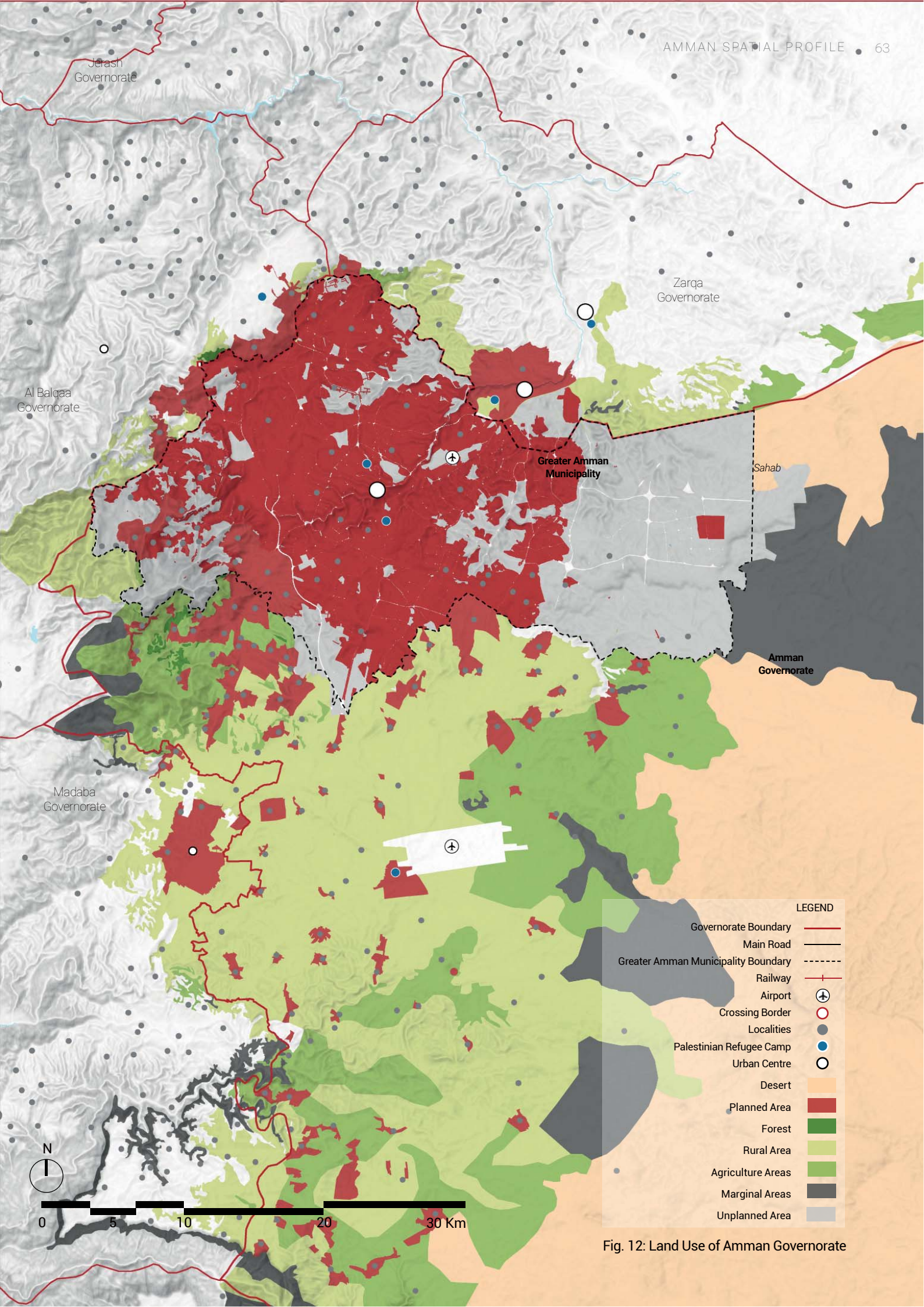
Up to 40% of land within Amman's built-up area is vacant, allowing a large degree of intensification. In addition, certain parts of Amman have already been approved for redevelopment as areas of densification, such as Al-Abdali.

As described earlier, the Palestinian and Syrian refugees are mostly located in highly urbanised areas, either in refugee camps or out, but mostly around industrial and commercial areas. This is due to easy access to livelihoods and services.

The Decentralization Law of 2015, gave power to the members of the elected municipal councils outside of GAM. These councils are now pushing to zone additional land as they are under direct pressure from landowners to benefit from the land gains. As such, the head of the planning department for each municipality is under pressure from elected local councils.²⁷⁴



Classification of land in Amman Governorate (excluding GAM) (MoLA, 2007)



LEGEND

- Governorate Boundary ————
- Main Road ————
- Greater Amman Municipality Boundary - - - - -
- Railway —+—+—+—
- Airport ⊕
- Crossing Border ○
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre ○
- Desert ■
- Planned Area ■
- Forest ■
- Rural Area ■
- Agriculture Areas ■
- Marginal Areas ■
- Unplanned Area ■



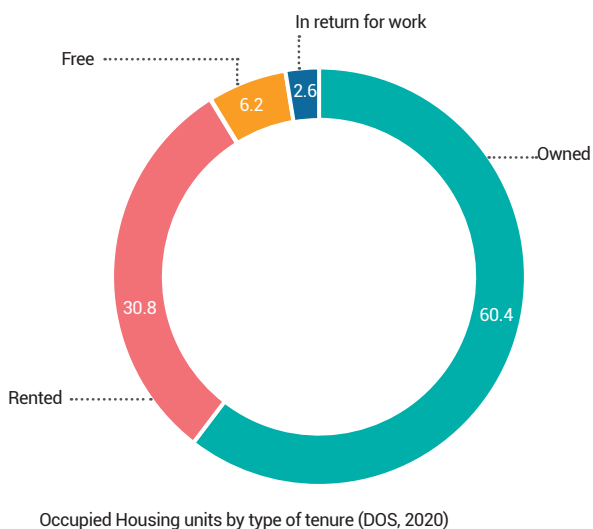
Fig. 12: Land Use of Amman Governorate

Housing

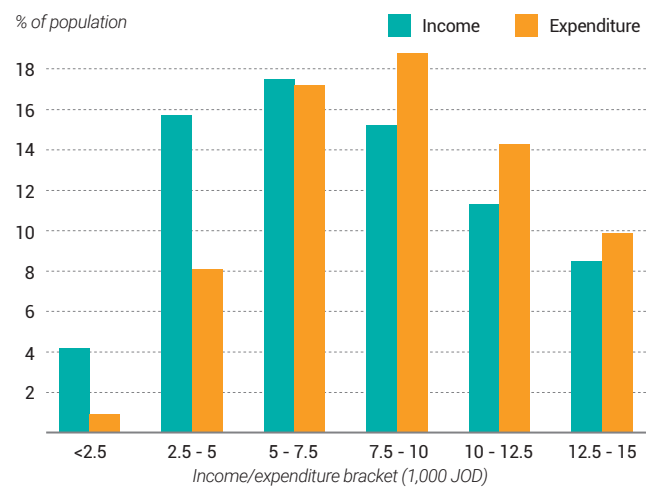
In Amman Governorate, an estimated 60.4% of households reside in their own property whereas 30.8% reside in rental property, 6.2% in free housing, and 2.6% are provided housing in return for work.²⁷⁵ According to the Metropolitan Growth Plan, around 45% of new housing units within the urban envelope will be accommodated within the built-up area,²⁷⁶ while 55% of new housing units within the Urban Envelope will be located in Settlement Expansion Areas.²⁷⁷ Amman has the highest average housing area and number of rooms in comparison to Irbid and Zarqa governorates, where the average housing unit is 138.1 m²,²⁷⁸ and the number of rooms per house is 4.3.²⁷⁹ Amman and Irbid have the lowest overcrowding rate, at 1.2 persons per room in dwelling unit,²⁸⁰ compared to the Zarqa governorate, as shown in the table.

In terms of affordable housing, it is limited and has become a critical issue due to inflation in land, construction and energy prices.²⁸¹ With the rental controls removed in 2010,²⁸² there is an inflation in land, construction and energy prices. The high demand for affordable housing is further complicated by 30,000 new families entering the housing market each year. With the average household in Amman Governorate earning an income of 576 JD per month, many households spend beyond their means on purchasing a new house or renting.²⁸³

As aforementioned, the HUDC is the sole government agency responsible for housing and the umbrella under which the Jordanian housing sector operates. The map reveals the spatial location of the HUDC's implemented initiatives for land plots and apartments that were distributed to low-income Jordanian citizens. Most of these initiatives



are located at the periphery of the planned areas within the governorate, which may limit the residents' access to basic infrastructure networks and public facilities. The last implemented initiative was in 2012, whereby HUDC's role began transitioning to be more policy focused.²⁸⁴



Distribution of households by annual household income and expenditures (DOS, 2020)

Governorate	Overcrowding Rate (persons-per-room in dwelling unit)	Average Number of Rooms	Average of Housing Area (m ²)
Amman	1.2	4.3	138.1
Syrian Refugees	1.7	2.7	96.7
Palestinian Refugees	1.4	3.5	126.0
Zarqa	1.4	3.7	118.4
Syrian Refugees	1.7	2.7	95.7
Palestinian Refugees	1.6	3.3	106.4
Irbid	1.2	4.0	136.8
Syrian Refugees	1.8	3.1	103.3
Palestinian Refugees	1.4	3.5	118.9

Average of Housing Area and Number of Rooms and Overcrowding Rate by Governorate

Source: DOS/ Household Expenditures & Income Survey 2017 and FAFO and MOPIC/The Living Conditions of Syrian Refugees in Jordan 2017-2018.

Governorate	Apartment	Traditional House	Caravan	Improved housing
Amman	94	6	-	-
Irbid	75	25	-	1
Zarqa	84	16	-	-
Mafrq	45	43	1	12
Other gov.	55	43	-	2
Camps	-	-	99	1
All	55	16	27	2

The Percentage of the Type of Housing by Governorate
Source: DOS

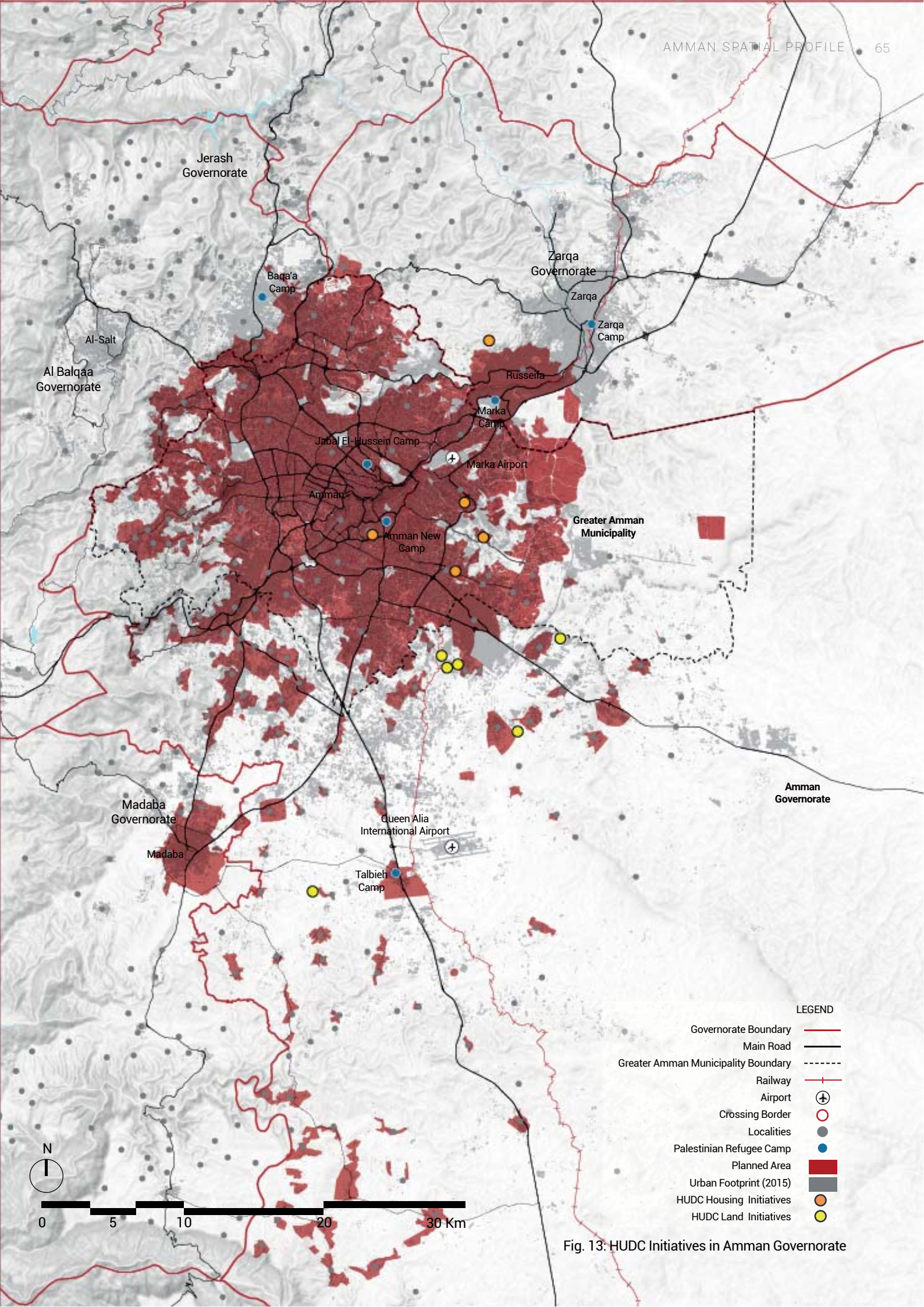


Fig. 13: HUDC Initiatives in Amman Governorate

LEGEND

- Governorate Boundary —
- Main Road —
- Greater Amman Municipality Boundary - - - -
- Railway —+—
- Airport ⊕
- Crossing Border ○
- Localities ●
- Palestinian Refugee Camp ●
- Planned Area ■
- Urban Footprint (2015) ■
- HUDC Housing Initiatives ●
- HUDC Land Initiatives ●

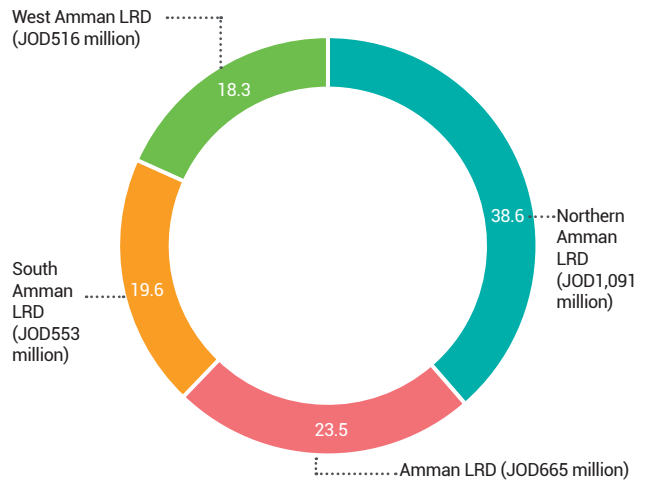
Real Estate Market

According to the DLS annual reports for the years 2012-2018, Amman Governorate Land Registration Directorates (LRDs) accounted for approximately 76%, 75%, 75%, 74%, 72%, 71% and 69% of the Kingdom's real estate market size from 2012 until 2018 respectively.²⁸⁵ The trend shows a slight decrease in the governorate's real estate market size. However, it remains extremely high. The disaggregated data is illustrated in the table below.

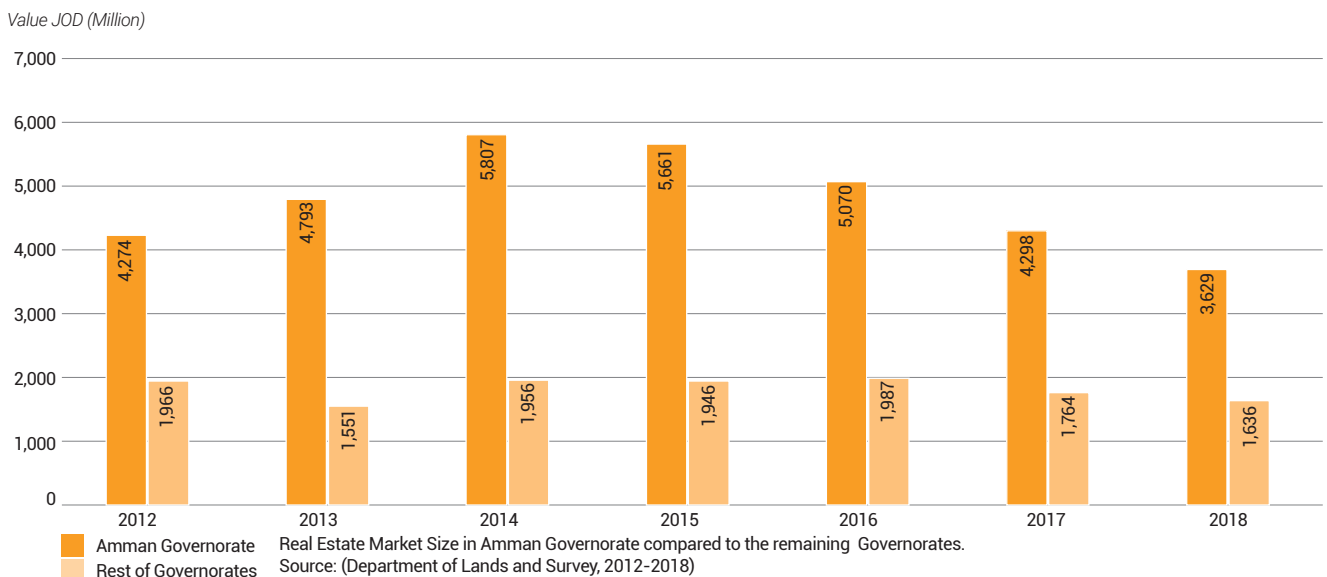
The share of market revenues recorded by the main centre and Amman LRD's correlates to the market size. Amman Governorate LRD's recorded 76% of total revenues, at JOD242,496,216 in 2012, 75% totalling to JOD264,501,726 in 2013, 74% totalling to JOD313,196,523 in 2014, 73% totalling to JOD274,289,972 in 2015, 71% totalling to JOD235,003,656 in 2016, 69% totalling to JOD214,739,680 in 2017 and 66% totalling to JOD176,407,594 in 2018.²⁸⁶

Across all years apart from 2016, the northern Amman LRD ranked first, east Amman LRD came in second, followed by west Amman LRD and fourth came South Amman LRD. In 2016, South Amman LRD ranked third and west Amman LRD ranked fourth.²⁸⁷

East Amman is a popular area for refugees and immigrants alike, where prices are more affordable than those in West Amman. In West Amman, rental prices for a two-bedroom apartment can range between \$900-\$1400 per month. Rental prices are much cheaper in East Amman, and within reach for the majority of the local population. According to reports, however, there is much more availability of spacious, expensive apartments in Amman than affordable ones.²⁸⁸



Real estate market size for Amman Governorate LRDs in 2018
Source: DLS Annual Report 2018



Real Estate Market Size in Amman Governorate compared to the remaining Governorates.
Source: (Department of Lands and Survey, 2012-2018)



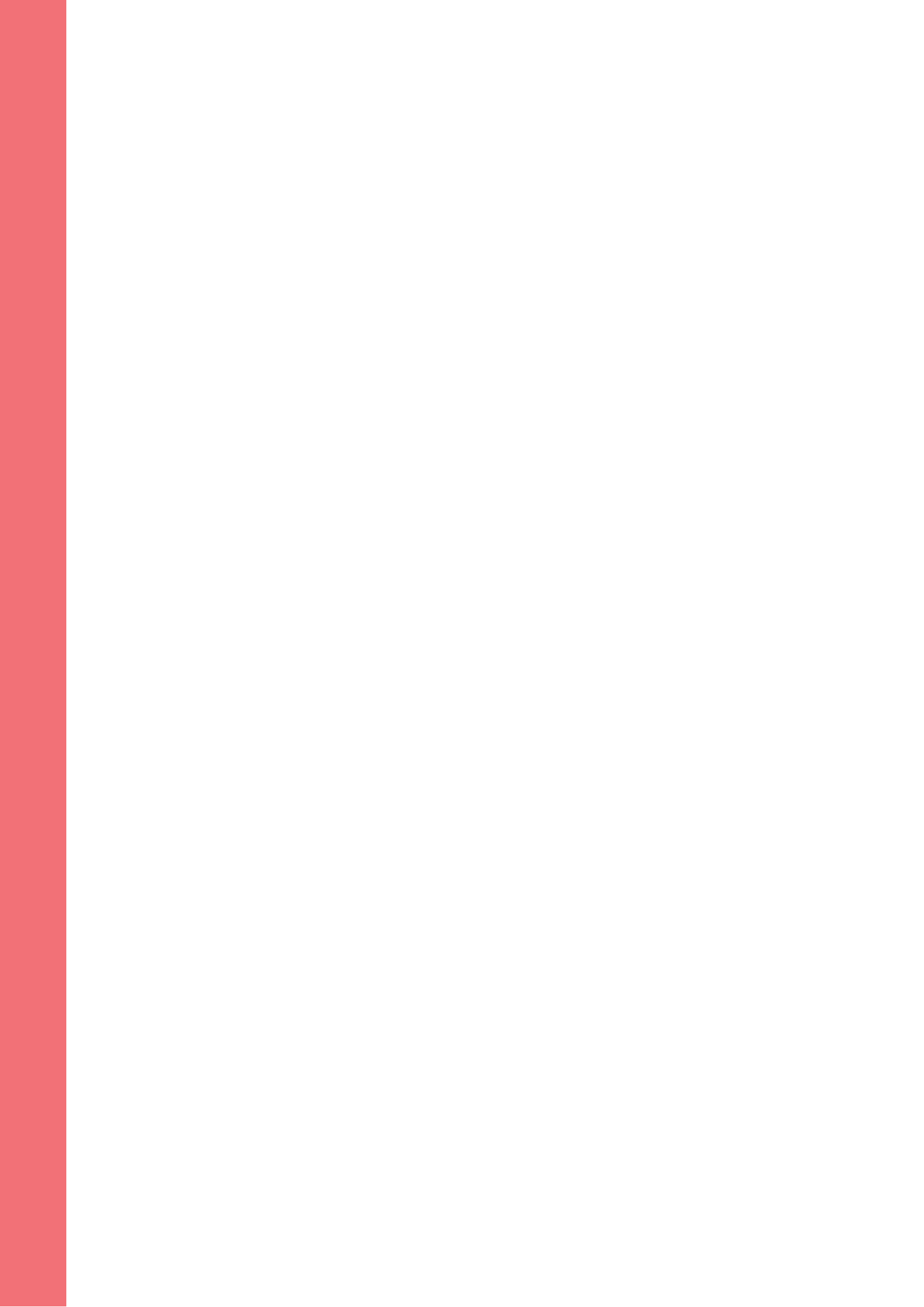
شركة صلاح أبو شمله
كراج العنسي اخوان
مركز
محمدا الخطيب
تقطع غيار السيارات

مركز
محمدا الهماري
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عصام للرديترا

YPR VE Vinter
GS P
DAEWOO HYUNDAI CHEVROLET
MITSUBISHI

KIA KIA
MITSUBISHI



03

CITY CONTEXT

Administration & Governance Context

Amman Municipality was created in 1909.²⁸⁹ In 1914, the city of Amman was made the administrative centre (head) of the Amman District, when the population at that time was only 1,500-2,000 people.²⁹⁰ In 1921, Amman was designated as Jordan's capital. Greater Amman Municipality (GAM) was created in 1987.²⁹¹

GAM is divided into 22 districts. Each district is a small municipality offering all services required by citizens directly and without referring to the Central Municipal Offices, excluding zoning and planning functions, which are carried out centrally in the Municipality main offices.²⁹²

In recognition of the continuous expansion of the city, GAM boundaries were extended in 2007 to include five additional districts, doubling the size of GAM to 1,680km².²⁹³ However, GAM was downsized again in 2011 to include the previous 22 districts, while the additional districts of Na'ur, Husban & Um al Basateen, Sahab, Al-Muwaqqar, and Al Jizah were placed back under MoLA's administration

GAM has substantial service delivery responsibilities, including but not limited to; roads, bridges and underpasses; street-lighting and traffic management; refuse removal and disposal; public transport; agriculture; public markets; social and cultural services; spatial planning; economic development; and business licensing. However, electricity, water and wastewater, fall under the jurisdiction of the Jordanian Electric Power Company Limited (JEPCO) and Jordan Water Company/Miyahuna respectively. It is responsible for providing municipal services for all the societal segments within its municipal boundaries regardless of their status of residency, to include both Jordanians and non-Jordanians.

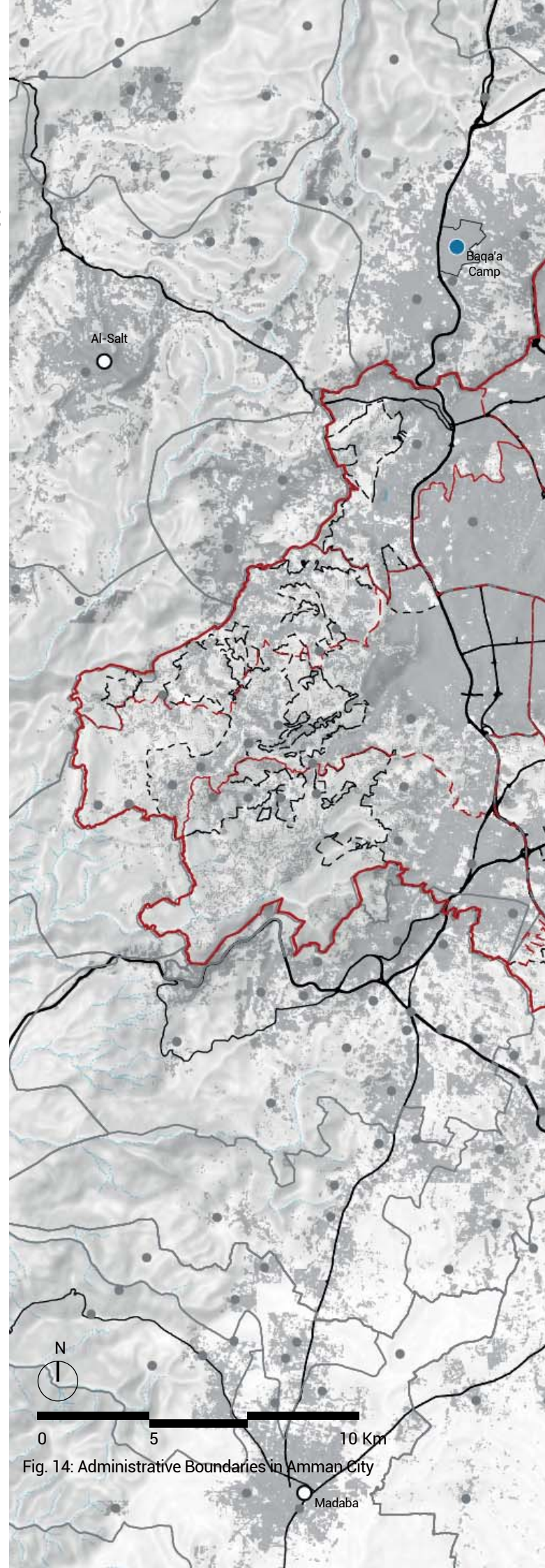
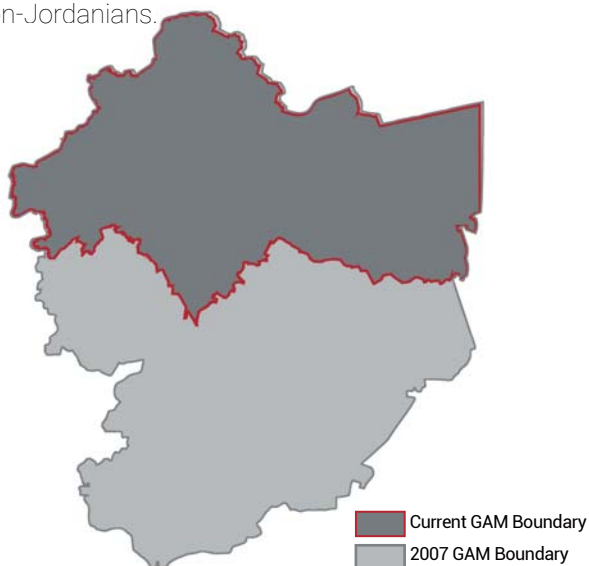
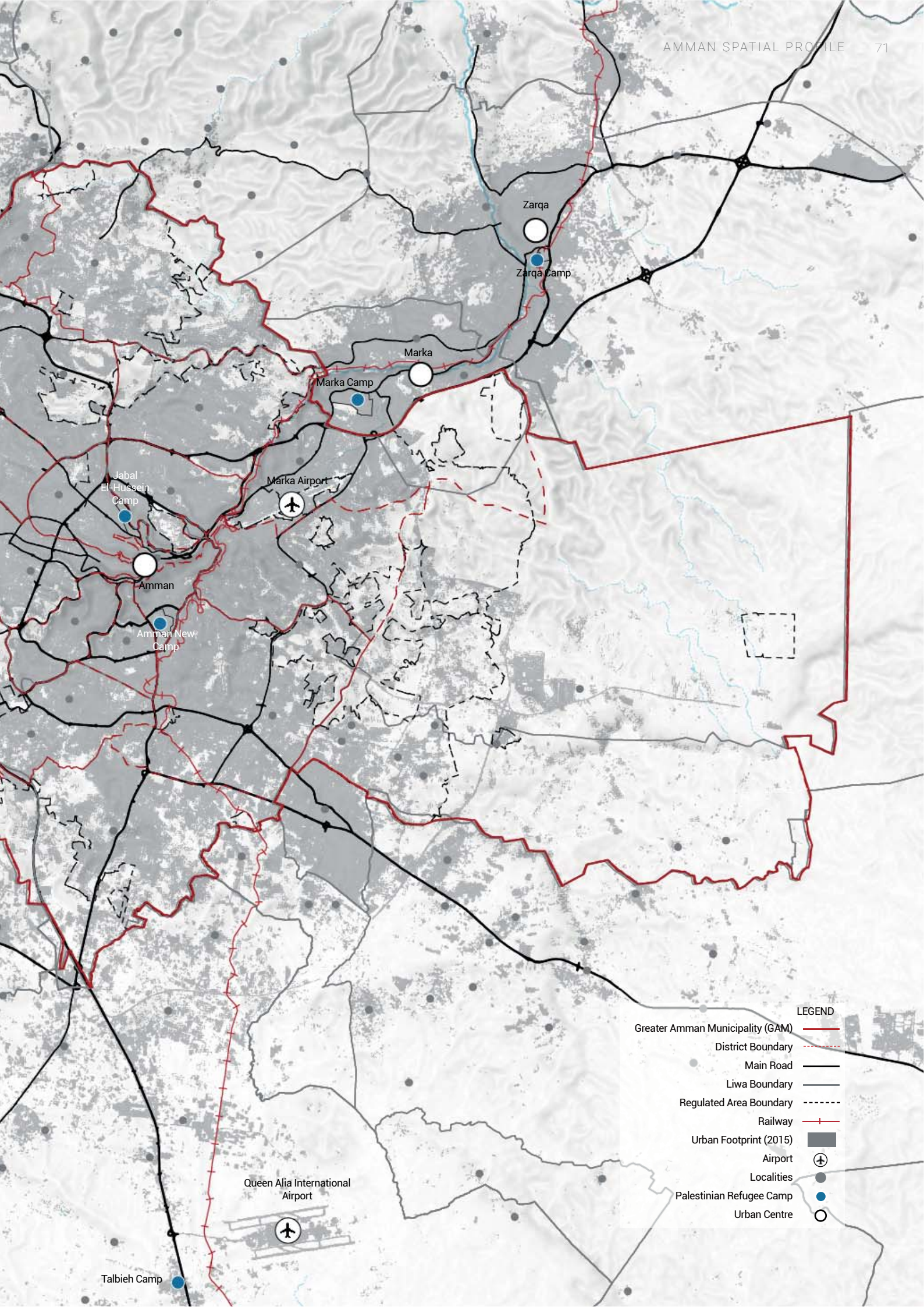


Fig. 14: Administrative Boundaries in Amman City



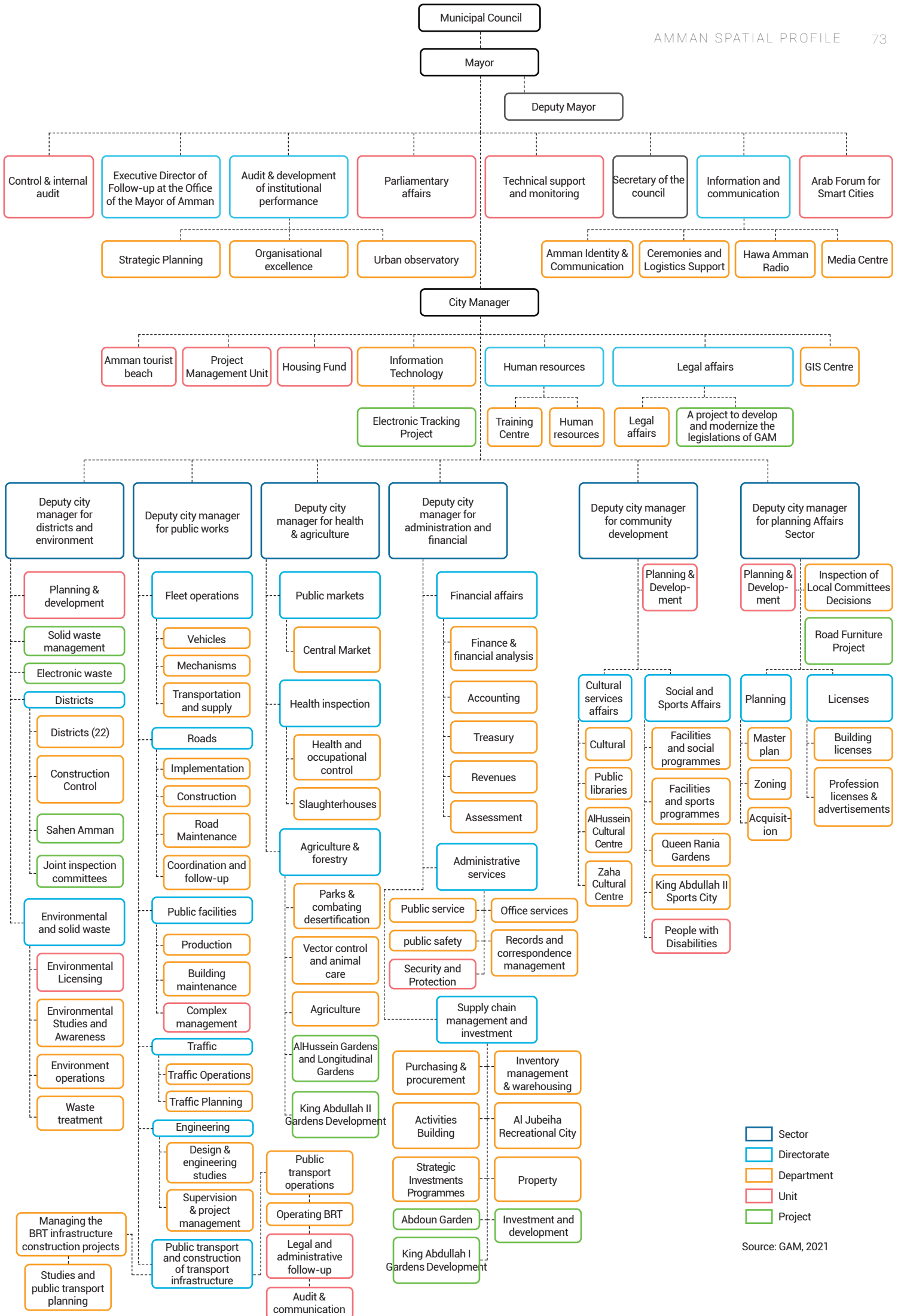
LEGEND

Greater Amman Municipality (GAM)	
District Boundary	
Main Road	
Liwa Boundary	
Regulated Area Boundary	
Railway	
Urban Footprint (2015)	
Airport	
Localities	
Palestinian Refugee Camp	
Urban Centre	

GAM is financially independent and autonomous in terms of urban planning. A large percentage of its revenues are self-generated through service taxes, fees, and investment projects, while the remaining comes from loans. GAM has the power to sign Memorandums of Understanding (MoU) with national institutions and international donors and has the authority to formulate its own legislation and enact it.

GAM is managed by a Municipal Council, which is the highest authority in the municipality. Headed by the mayor, the council serves 4 year term. Members include 22 elected citizens of Amman, 6 elected woman quota members, and 10 assigned officials from commercial and economic dignitaries, as well as other service departments in Amman. 12 committees emanate from the board, which are authorized by the board to facilitate the management of the Municipality. Currently, more than 24,000 staff are employed and organized into six administrative units.²⁹⁴

GAM is currently working on updating the Metropolitan Growth Plan (MGP), as well as other department-specific action plans.



- Sector
- Directorate
- Department
- Unit
- Project

Source: GAM, 2021

Demographics and Urban Growth

Amman has a long history of tolerance towards refugees and migrants, having accommodated various waves of refugees following the Palestinian-Israeli conflict in 1948, the Arab-Israeli War in 1967, the Gulf Wars in the 1990s and early 2003, the recent Iraq war, and ongoing Syrian conflict. The city grew rapidly from a first recorded area of 2km² in 1925, to around 19km² in the 1940s, to 29km² in 1961. By 1967, the city's population swelled to over 500,000 people, spread over an area of around 42km². By the late 1980s, Amman's population rose to around 1.5 million, with an area of around 530km². The city continued to expand, growing to 2.5million over 680km² by the mid-2000s to a metropolis of 800km² to date, with an urban area of 630km².²⁹⁵

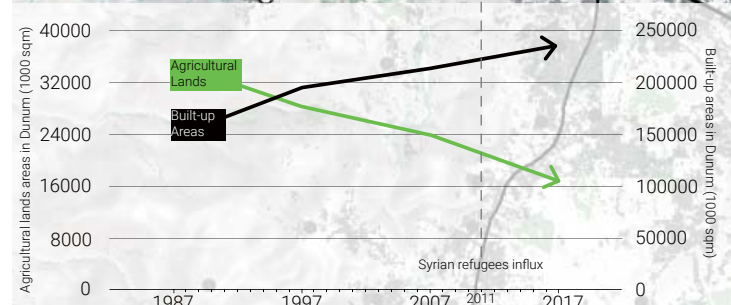
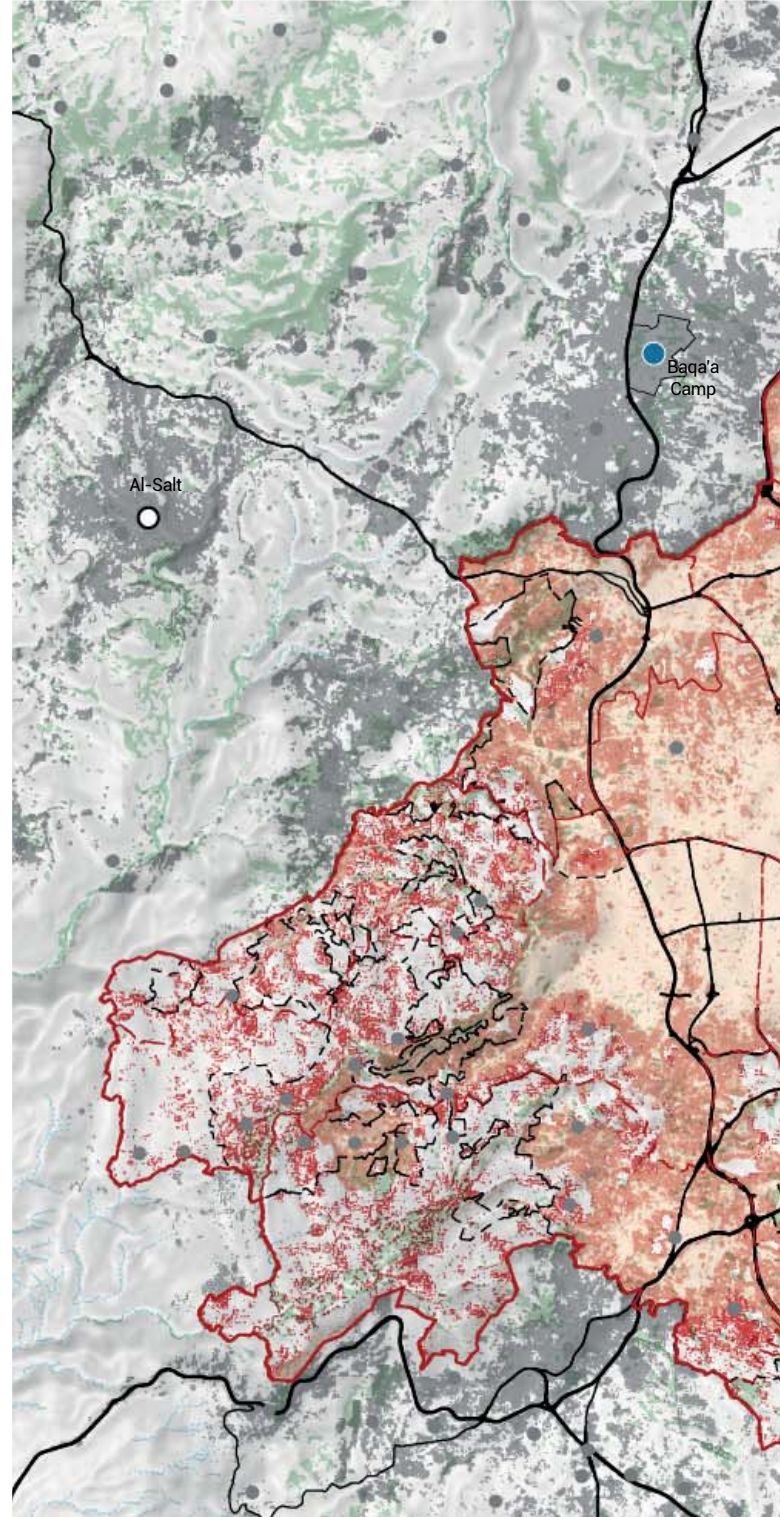
Over the past three decades, the urban area has increased rapidly in Amman, with an average annual rate of increase of 2.03%. Urban growth in Amman generally occurred along transport routes away from the core of Amman, and as a result, this growth led to the expansion of urban areas at the expense of other types of land use/cover classes, particularly vegetation areas.²⁹⁶

In quantitative terms, the urban area increased 61.73%, from 147.08km² in 1987 to 237.86 in 2017. Another significant change is the continuing decline in the vegetation area within GAM which occupied 35.22km² in 1987, and decreased to 16.40km² by 2017, signifying a decrease of 18.82 km²; which represents a decrease of 53.54%.²⁹⁷

The decrease in vegetation and increase in built up area can be an indicator to the fact that, 64% of Amman's annual carbon emissions of 7.5 million tons of CO² are attributed to buildings.

Moreover, the population of the city is estimated to grow 2.2% annually, reaching 6.4 million by 2025, and requiring 1.3 million housing units.²⁹⁸ Despite international technical assistance, Amman's infrastructure has not kept up with the pace of its demographic and urban growth rate. The sharp rise in the city's population has contributed to an 83% increase in public debt, 30% increase in youth unemployment, and a 40% increase in demand for water, as well as a 17% increase in rental costs.²⁹⁹

While the influx of refugees has been a major factor affecting the population growth, rural-urban migration has continued to affect Amman, with Amman City hosting all urban population within the Governorate; Amman City has a population of 3,701,600 as opposed to 103,000 rural population within the Governorate.³⁰⁰



Changes in the urban area and vegetation exclasses between 1987 and 2017
Source: Al-Bilbisi, Hussam (2019) Spatial Monitoring of Urban Expansion Using Satellite Remote Sensing Images: A Case Study of Amman City, Jordan

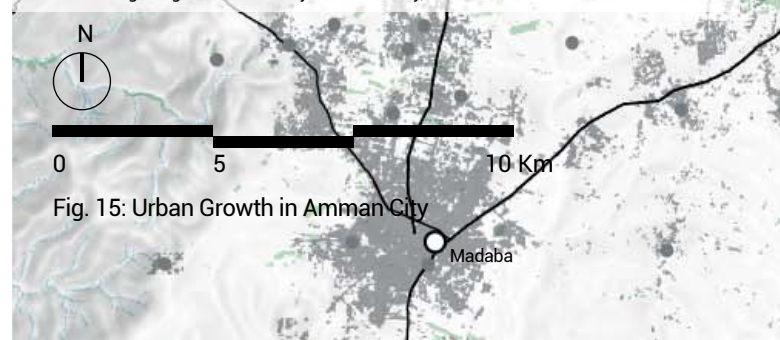
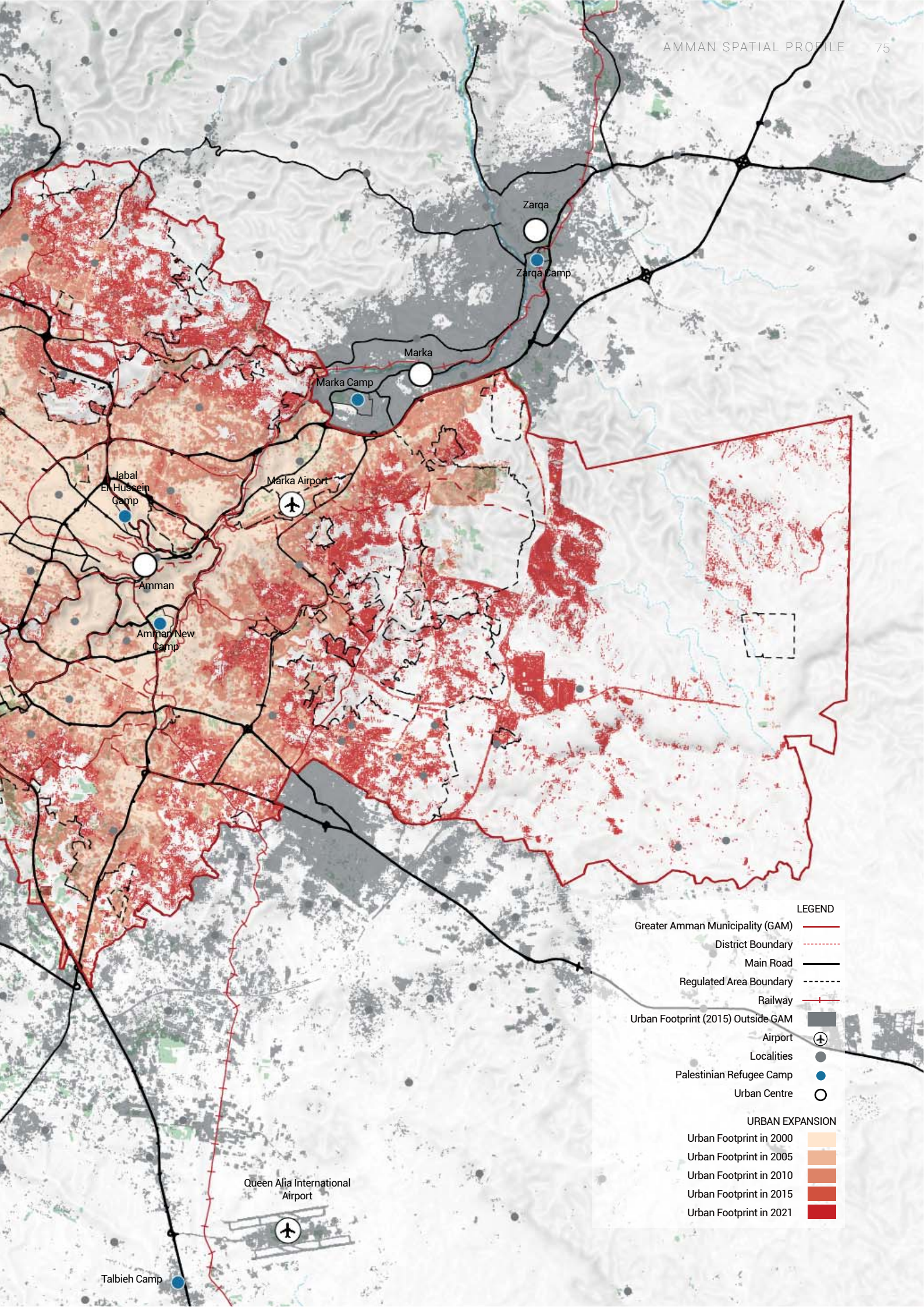


Fig. 15: Urban Growth in Amman City



LEGEND

- Greater Amman Municipality (GAM) —
- District Boundary - - - - -
- Main Road —
- Regulated Area Boundary - - - - -
- Railway + + + + +
- Urban Footprint (2015) Outside GAM
- Airport ✈
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre

URBAN EXPANSION

- Urban Footprint in 2000
- Urban Footprint in 2005
- Urban Footprint in 2010
- Urban Footprint in 2015
- Urban Footprint in 2021

Talbieh Camp

Queen Alia International Airport

Jabal El-Husseini Camp

Amman

Amman New Camp

Marka Airport

Marka Camp

Marka

Zarqa

Zarqa Camp

Population Density & Distribution

In 2015, the population within GAM reached 4,077,450. The population growth is due to various factors, including rural-urban migration, concentration of economic activities and services in the capital, but most importantly the influx of refugees.

There are more males than females in the city, with a 46.6:53.4 female to male ratio. The average population density within GAM is 25,000 people/km², with the highest population density observed in Marka at 48,000 people/km², and the lowest population density of 1 person/km² in Ohoud.

As one moves further out of the city centre (Al Madina), the population gradually decreases, leading to a decrease in the population density.

The areas with higher population density correspond to the areas with higher refugee presence, including Basman, Al Yarmouk and Ras El Ain. Refugees tend to settle in Basman and Al-Nasr districts, which are highly accessible to all services within the district and in nearby districts. The areas also offer a relatively lower cost of living than other districts of Amman. This increase in population has led to an increased pressure on infrastructure networks in these areas as the capacity was not designed originally to accommodate the increase in population.

Within the southeast of the city centre in the district of Al-Qwaismeh, plots are smaller and more built-up, reflecting a higher population density. The district also includes Al-Wehdah Palestinian refugee camp.

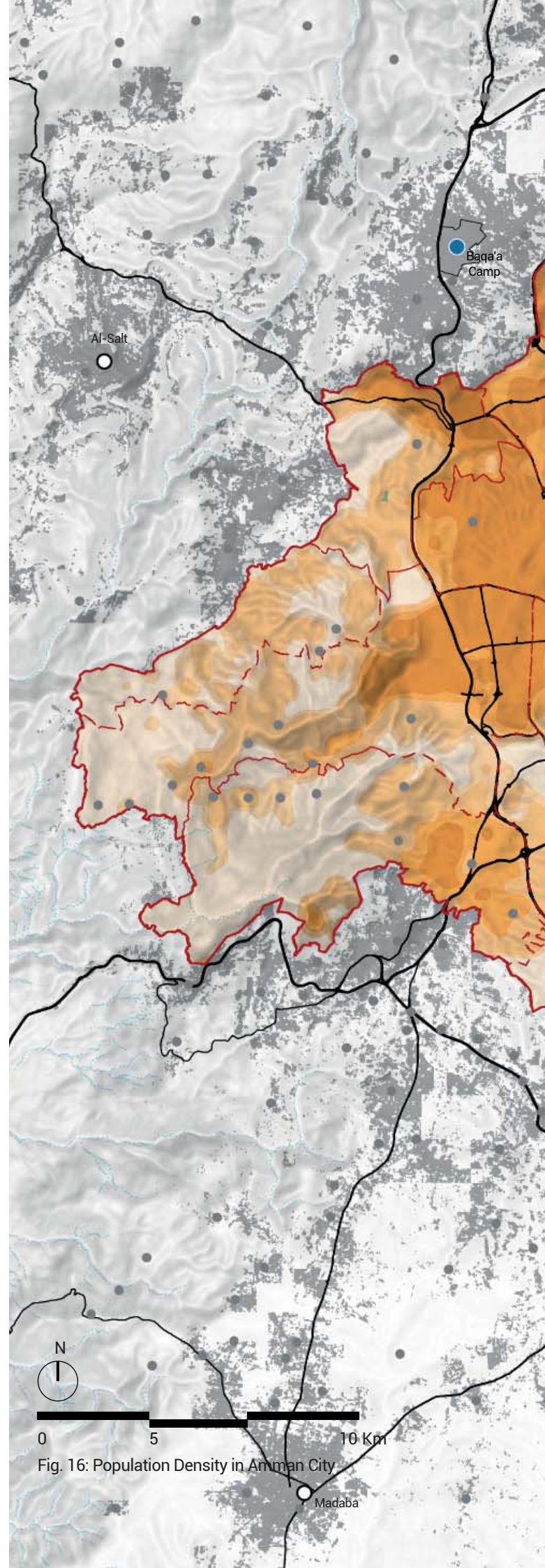
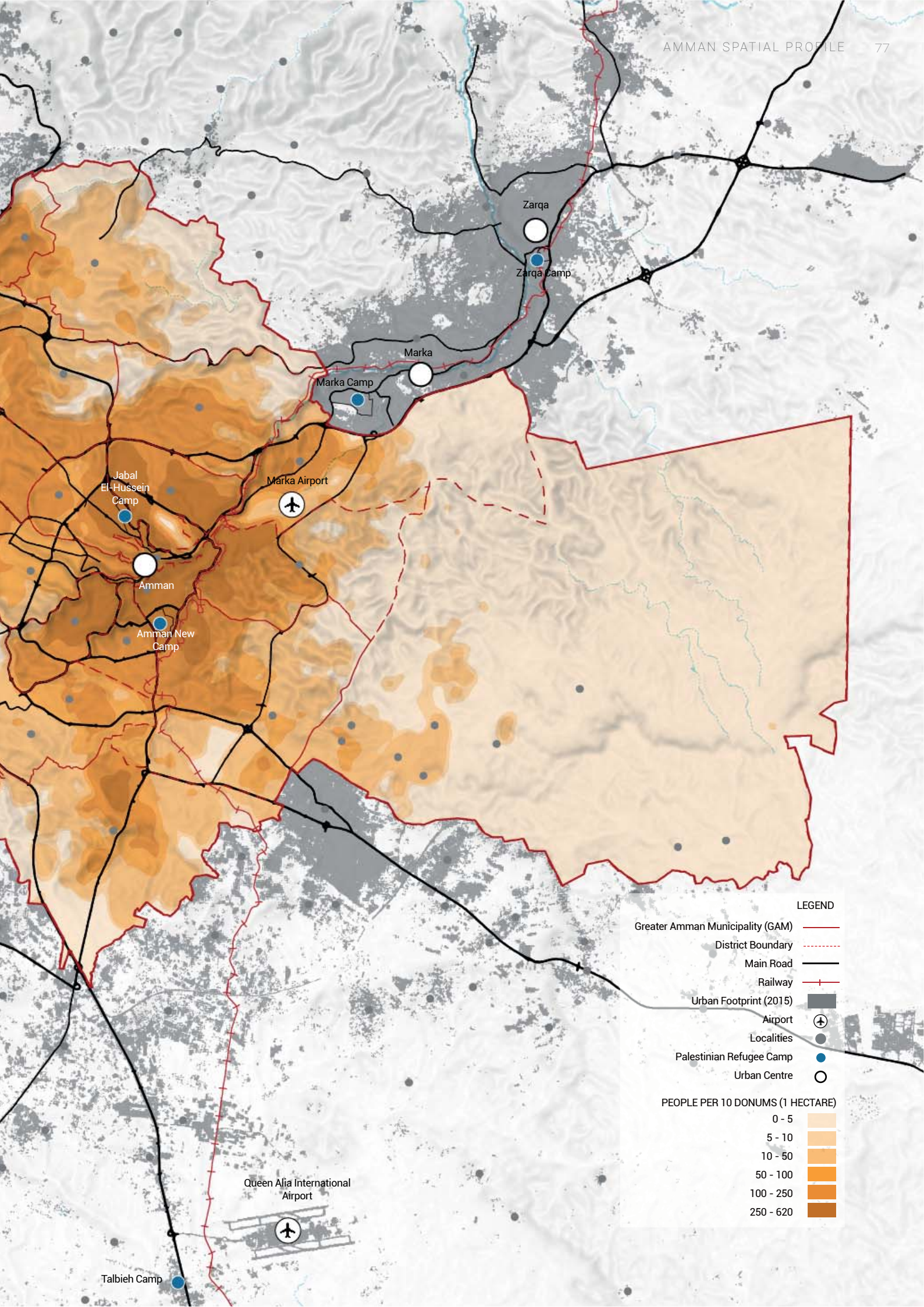


Fig. 16: Population Density in Amman City



LEGEND

- Greater Amman Municipality (GAM) ————
- District Boundary - - - - -
- Main Road ————
- Railway —+—+—+—
- Urban Footprint (2015) ■■■■
- Airport ⊕
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre ○

PEOPLE PER 10 DONUMS (1 HECTARE)

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 250
- 250 - 620

Migration Context

Amman, as a city and as a gathering point for refugees, represents a possibility for refugee integration that includes greater access to rights and services.

Within Amman, a fourth of the population has refugee status; there are 1,080,716 Palestinian refugees, 193,361 Syrian refugees, 121,000 Iraqi refugees and 27,000 Yemeni refugees.³⁰¹ One seventh of the refugee population lives in refugee camps in Amman, and the rest live in overcrowded housing and informal areas around camps in the central and eastern part of the city.³⁰²

Despite the complications that accompany urban living for many refugees, Amman remains a desirable place for many refugee groups to seek stability. The freedom of movement and sense of dignity the city affords refugees are a draw, compared to refugee camps or more rural locales away from services and community established networks of extended family and friends, better housing options, greater accessibility to services, and the possibility of finding work also make Amman a desirable place for refugees to seek stability and rebuild their lives.³⁰³

With the various migration and settlement patterns in Amman, there is a clear social and spatial disparity between central and eastern parts of Amman and the western parts. Wealthier populations have settled in the western parts of the city, which have higher altitude. This is further evident when looking at residential plots, whereby residential classification A, which has the smallest percentage of built-up area over a plot of land are located in the western areas of the city, whereby residential classification C&D, which have higher percentage of built-up area, are located in the east of the city.

These patterns are also evident in terms of refugees. Iraqis tend to settle in West Amman, where homes are large. Palestinians and Syrian concentrations, on the other hand, is around the centre of Amman, where the population density is higher, and land use classification C&D are mostly prevalent.

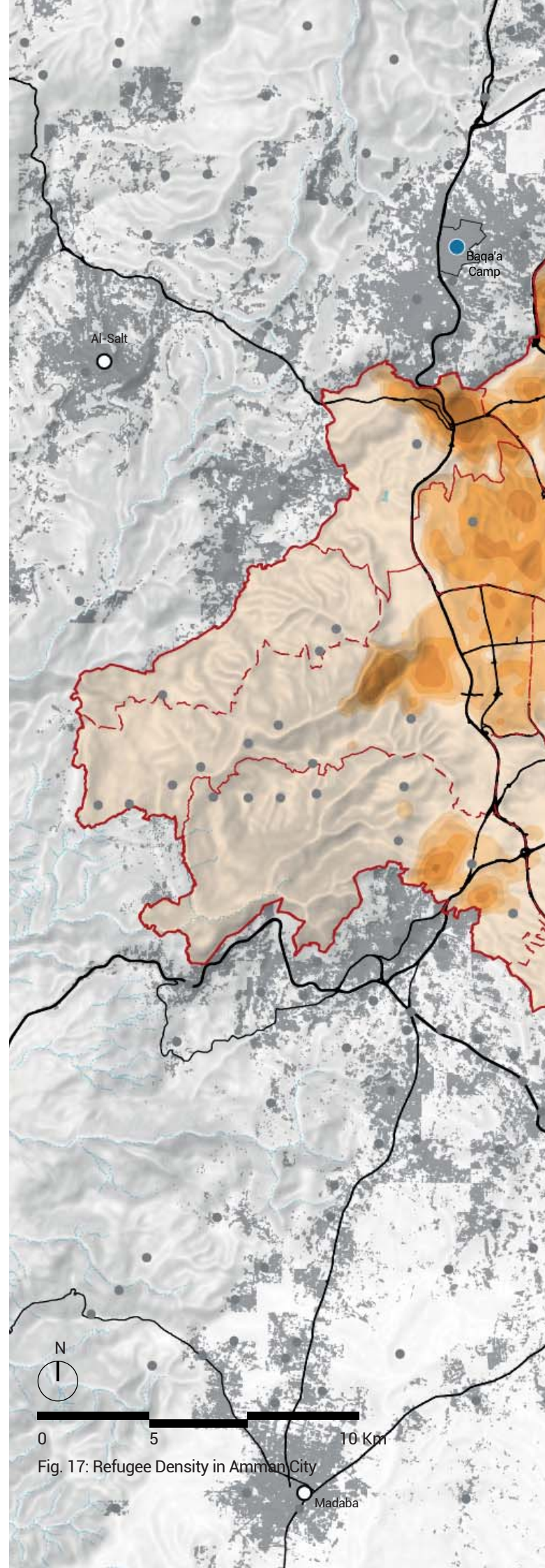
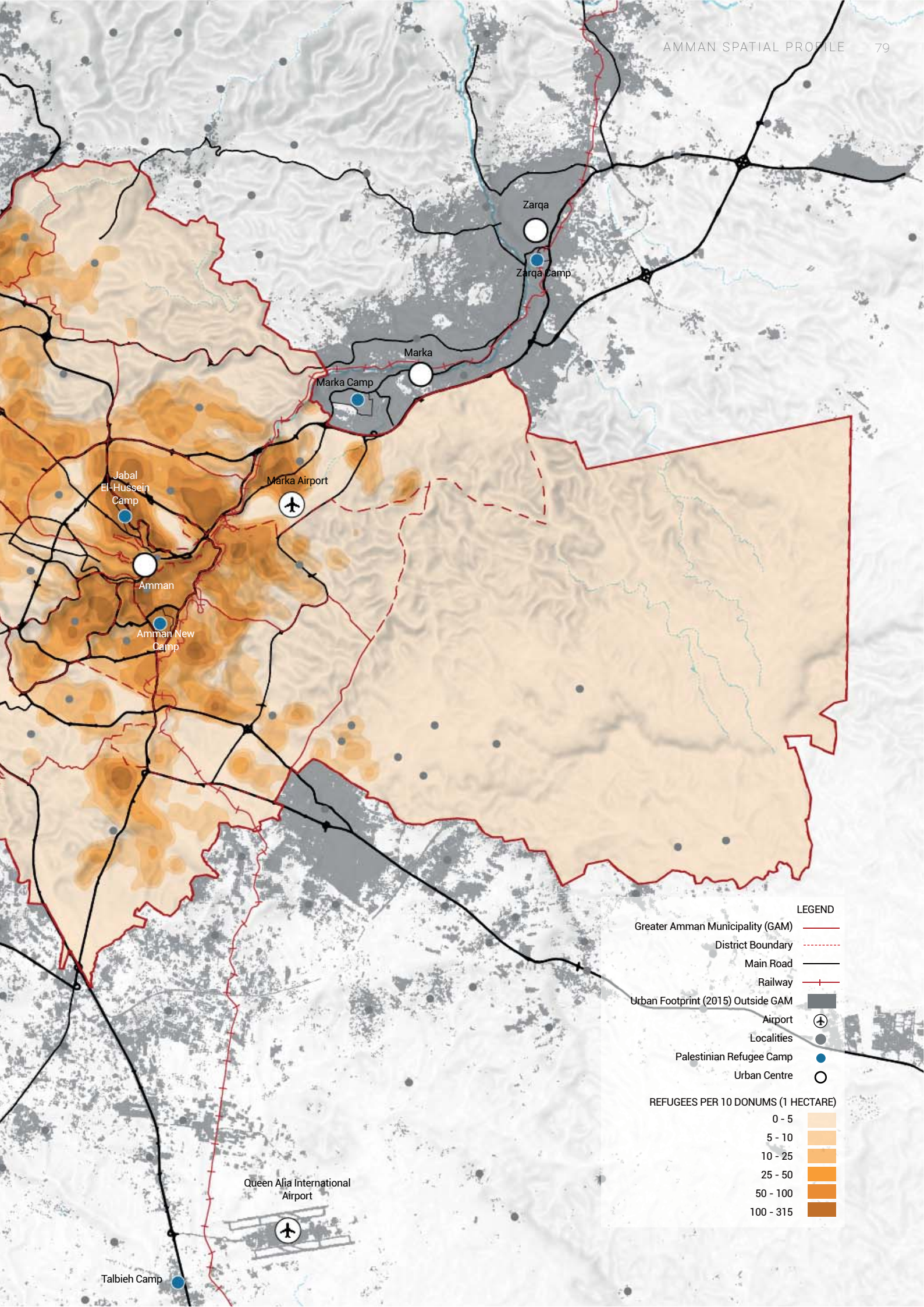


Fig. 17: Refugee Density in Amman City



LEGEND

- Greater Amman Municipality (GAM) —
- District Boundary - - -
- Main Road —
- Railway + + +
- Urban Footprint (2015) Outside GAM
- Airport ✈
- Localities
- Palestinian Refugee Camp
- Urban Centre

REFUGEES PER 10 DONUMS (1 HECTARE)

- 0 - 5
- 5 - 10
- 10 - 25
- 25 - 50
- 50 - 100
- 100 - 315

Within the city, there are two official and one unofficial Palestinian refugee camps:

- Amman New Camp: known as Wehdat camp, was established in 1955 on an area of 0.48km² in Southeast Amman.³⁰⁴ It is the second most populous refugee camp in Jordan, with over 58,759 refugees.³⁰⁵ A high population density and intricate arrangement of bazaars and kiosks has amplified major disorganisation on crowded streets and has little room left for the development of green areas or playgrounds for children.³⁰⁶ Many of its structures are in poor condition and in need of replacement or comprehensive rehabilitation. The limited amount of space in the camp has led residents to expand their homes vertically, failing to adhere to local regulations or obtaining the appropriate building permits.³⁰⁷ Unemployment is approximately 24% and 15% for females and males respectively.³⁰⁸ It ranks second of the ten refugee camps in poverty level, with 34% of its residents living below the national poverty line.³⁰⁹
- Jabal El-Hussein Camp: established in 1952 over an area of 0.42km²,³¹⁰ hosts 8,000 individuals.³¹¹ Over time, residents replaced temporary tents with concrete shelter to evolve into a bustling urban community.³¹² With more than 32,355 refugees living in the camp, consequently, overcrowding has become a serious issue, there is no space available for the construction of additional buildings, green spaces or recreational facilities.³¹³
- Prince Hasan Camp: is considered an unofficial Palestinian refugee camp established in 1967 on an area of 96km² within Al-Naser district (5km away from Amman city centre), with a population of 9408 inhabitants (1600 families).³¹⁴ There are 700 residential units in the camp, two UNRWA schools, and no UNRWA health care centres, only private ones.³¹⁵ Many of the camp's structures are in poor conditions.





Land Use

Greater Amman's footprint has reached 237.86 km² in 2017. Amman's land coverage is expected to increase by 14% between 2015 and 2030, equivalent to 41.44 km². 17km² of the expansion will happen outside planned areas, leading to a loss of arable land in the South and East of Amman. The majority of land in Amman is privately owned; GAM owns only 20% of land within its boundaries.³¹⁶ In terms of land use distribution, residential land use comprises the highest percentage at 37%. Green and open spaces, on the other hand, constitute around 2% of planned areas. Public open space per capita is 2.5m². Commercial land use in Amman follows main roads, and a concentration of commercial use is seen north-west and west of Al-Madina district, which include Shmeisani and Al Abdali, and Sweifieh respectively.

Residents of Amman suffer an unaffordable housing market, where the population growth and influx of refugees has contributed to a 17% increase in rental costs.³¹⁷ Moreover, only 10% of households are able to afford buying houses above 100 m² without spending more than 30% of their monthly income.³¹⁸ Consequently, a staggering 57% of vacant units nationwide were concentrated within Amman increasing the vacancy rate to 23% in 2015.³¹⁹ It is important to note that the residential zones of Jordan are categorised into seven main types: Residential types A, B, C, and D, as well as agriculture residential, rural residential, and residential with special regulation. Residential type A category represents the least affordable typology while residential type D is the most affordable one. The most prevalent type in Amman is C, followed by B then A and lastly D.

Around 52% of the land within GAM boundary is unplanned; these lands are under the jurisdiction of the master planning department within GAM. Unplanned areas are unclassified, since GAM is autonomous and managed under the Prime Ministry, its boundaries were excluded from MoLA's 2007 national level land use map, which classified unplanned areas into agriculture, rural, desert, peripheral areas. These areas are not serviced with any infrastructure networks. Therefore, before approving any proposed development on unplanned land, GAM's master planning department conducts studies and classifies the land as they see appropriate. If approved, service networks are extended into the area, making it very costly.

Palestinian refugee camps remain excluded from municipal land use and development plans, despite the fact, that they are now permanent and well-established communities within the social and urban fabric of Amman, in which their shelters are connected to municipal services and inhabitants pay service tax.³²⁰ Although land use layers for Palestinian refugee camps are often missing, most of the camp's land use is considered residential, as land plots were granted by the government and fully designated to be used for shelter when the camp was established.³²¹

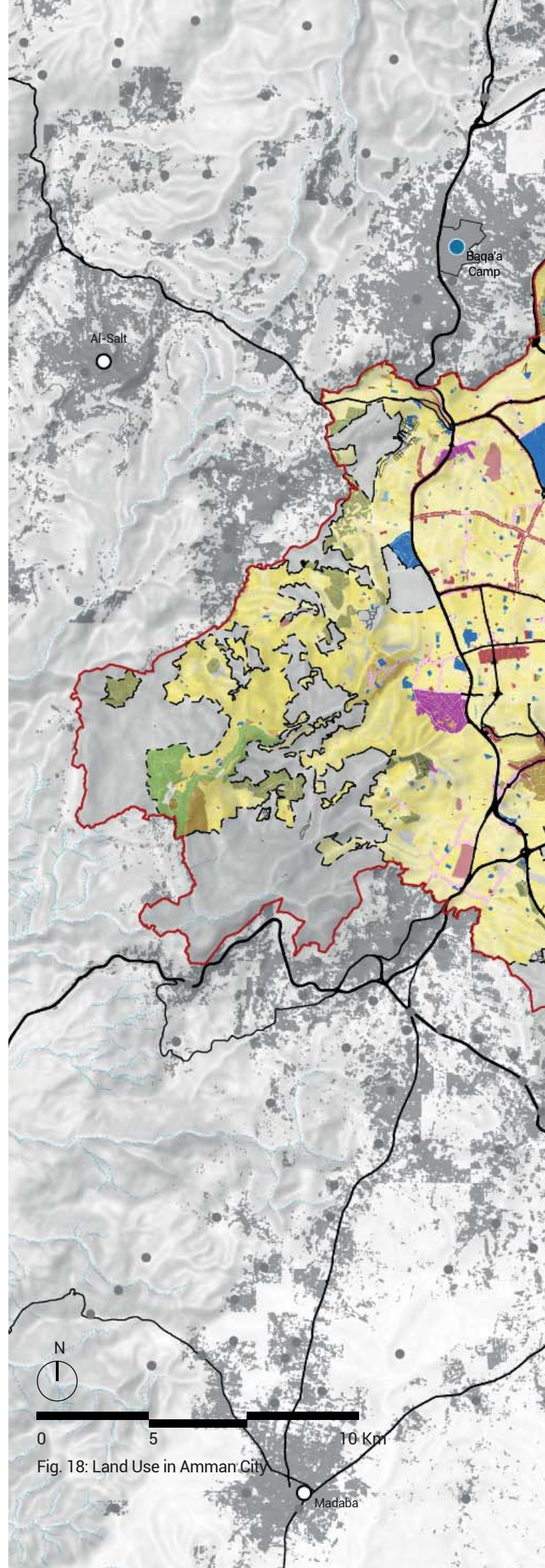
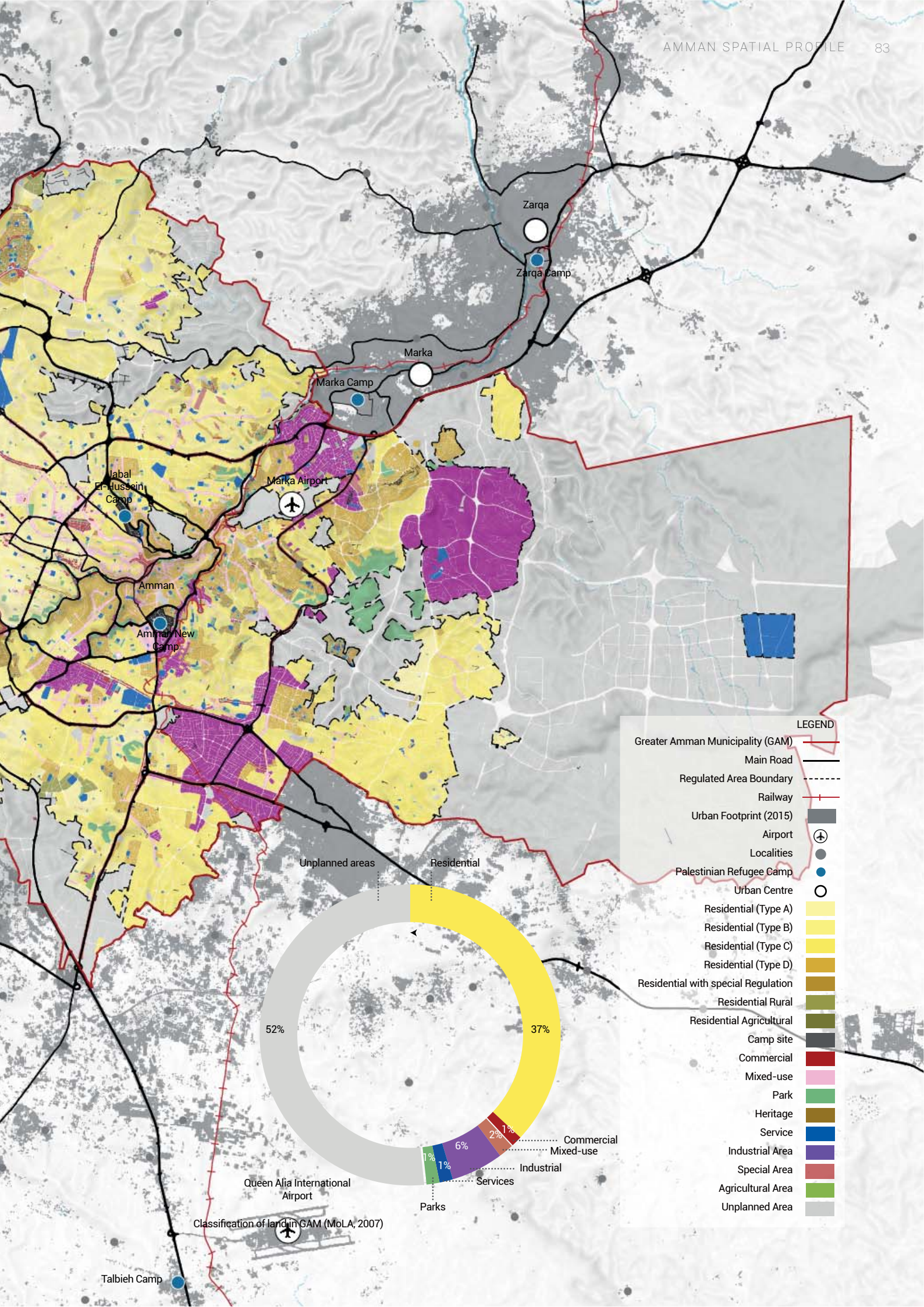
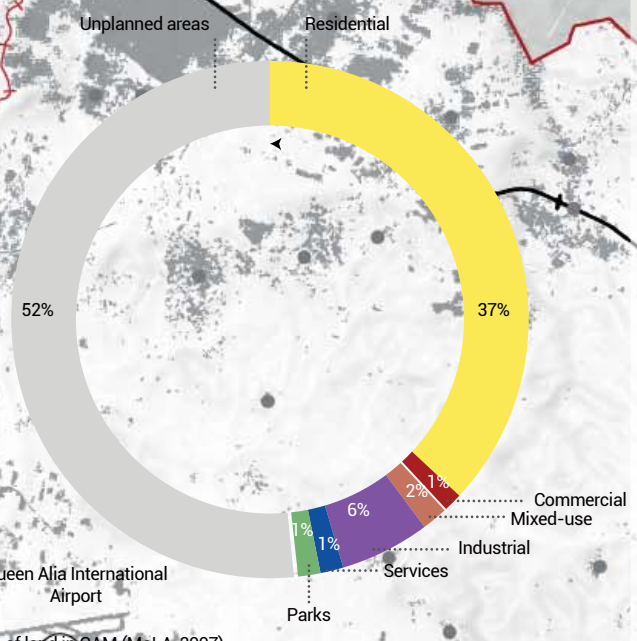


Fig. 18: Land Use in Amman City



LEGEND

- Greater Amman Municipality (GAM) [Red dashed line]
- Main Road [Black solid line]
- Regulated Area Boundary [Black dashed line]
- Railway [Red line with cross-ticks]
- Urban Footprint (2015) [Grey shaded area]
- Airport [Circle with airplane icon]
- Localities [Grey dot]
- Palestinian Refugee Camp [Blue circle]
- Urban Centre [White circle]
- Residential (Type A) [Light yellow]
- Residential (Type B) [Yellow]
- Residential (Type C) [Light orange]
- Residential (Type D) [Orange]
- Residential with special Regulation [Dark orange]
- Residential Rural [Light green]
- Residential Agricultural [Green]
- Camp site [Dark grey]
- Commercial [Red]
- Mixed-use [Pink]
- Park [Light green]
- Heritage [Brown]
- Service [Blue]
- Industrial Area [Purple]
- Special Area [Red]
- Agricultural Area [Green]
- Unplanned Area [Grey]



Talbieh Camp

Queen Alia International Airport

Unplanned areas

Residential

Amman

Amman New Camp

Jabal El-Hussein Camp

Marka Airport

Marka Camp

Marka

Zarqa

Zarqa Camp

Local Economic Activity

Major economic centres are divided into direct and indirect economic sectors, whereas commercial and industrial facilities which contribute directly to the area’s economy are classified as direct economic sector, while facilities such as banks, education and medical centres are classified as indirect economic sector.

Approximately 82% of formal companies with a declared capital of more than JD500,000 are registered in GAM.³²² It is also estimated that the municipality accounts for 55% of the country’s total employment.³²³ Despite that, unemployment in Amman is high – around 18.6%³²⁴ - especially amongst women and young people.

Although rural areas continue to have the highest poverty rates, linked to a long-term decline in the agricultural economy, the highest numbers of poor people are concentrated in Amman, driven by low wages and high costs of living, many are falling into the ‘working poor’ category. As many work in insecure conditions in the informal sector.³²⁵ The majority of refugees work informal jobs, and many work in close proximity to their place of living. In GAM approximately 55% of informal jobs fall under the food & beverage and fabric/garment sectors.³²⁶

Recent legislative changes mean that Syrian refugees will now receive identity cards, helping them to access the formal job market. However, refugees are competing for jobs with 390,000 Egyptian workers and 140,000 Asian domestic workers³²⁷

The current main Economic Activity for Amman Governorate (Percentage Distribution) is as follows:

Economic Activity	Percentage Distribution
Wholesale and retail trade; repair of motor vehicle and motorcycles	19.1%
Public administration and defence; compulsory social security	15.1%
Manufacturing	12.7%
Education	9.7%
Transportation and storage	7.8%
Construction	6.8%
Human health and social work activities	5.6%

Main Current Economic Activity for Amman Governorate
 Source: <http://dosweb.dos.gov.jo/wp-content/uploads/2017/08/Unempl.pdf>

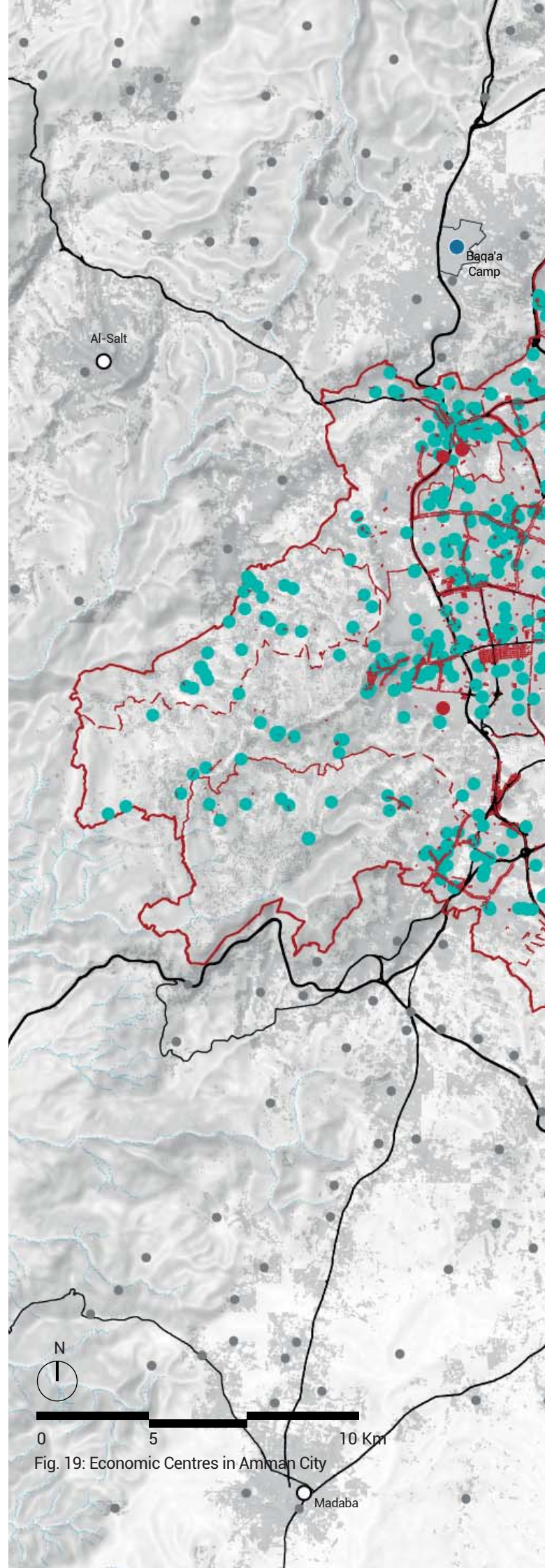
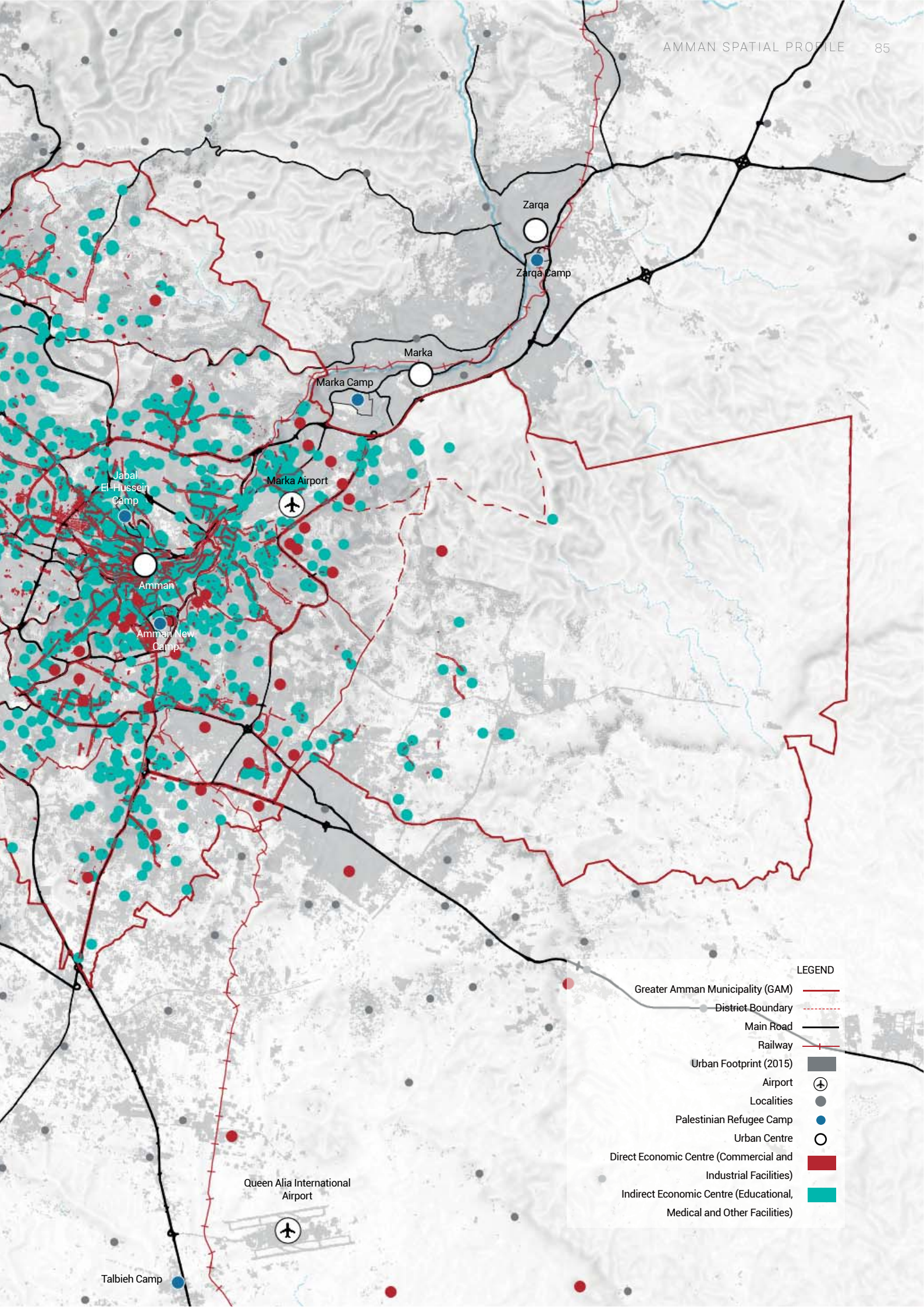


Fig. 19: Economic Centres in Amman City



LEGEND

- Greater Amman Municipality (GAM) —
- District Boundary - - -
- Main Road —
- Railway + + +
- Urban Footprint (2015)
- Airport ✈
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre ○
- Direct Economic Centre (Commercial and Industrial Facilities) ●
- Indirect Economic Centre (Educational, Medical and Other Facilities) ●

Talbieh Camp

Queen Alia International Airport

Jabal El-Hussein Camp

Amman

Amman New Camp

Marka Airport

Marka Camp

Marka

Zarqa

Zarqa Camp

Commercial Sector:

Amman is home to 48% of the economic and commercial institutions at the national level.³²⁸ The main sectors include banking, information technology, and pharmaceutical companies. The city has seen an increase in wide commercial business transactions and the increase in establishing shopping centres, i.e. malls and large commercial centres. There are various athletic and cultural centres available as well.

Industry Sector:

Amman accounts for approximately 80% of the country's industries.³²⁹ Industrial areas were built haphazardly without following regulations. This has changed since GAM updated Act No. 28 of 2018 Planning and Building Regulations, issued pursuant to Article (67) of the Cities, Villages, and Buildings, Law No. (79) of 1996. Major industrial areas include Sweileh and Abu-Alanda, and light industrial areas include areas such as Al-Bayader, Sweileh, and Al-Qweismeh.

Tourism Sector:

In terms of the national tourism sector, Amman is a dominant location, holding 75.2% of all direct employment in the sector. This is due to the attractive tourism environment and available infrastructure, such as hotels of different ratings, and especially the presence of 5-star hotels. Main tourist attractions in Amman include the downtown, Roman amphitheatre, Amman citadel, Rainbow street, multiple museums and art galleries.

Home based businesses:

With the exception of the GAM, home-based businesses are still unable to obtain licenses in Jordan.³³⁰ Up until April 2020, GAM had issued a total of 351 licenses for home-based businesses since regulations were amended in 2017, which reduced costs and simplified procedures to allow more people to start businesses.

The municipality has given district governors the authority to issue licenses for home-based businesses without having to refer to organisational committees, with exception to food related businesses that require approval from the Jordan Food and Drug Administration. GAM consider licence procedures a priority that should be completed within three days from the date of application submission.

Home-based businesses have been categorised into four areas; intellectual (49 professions), handicrafts (10 professions), food preparation (6 professions) and home services (6 professions).

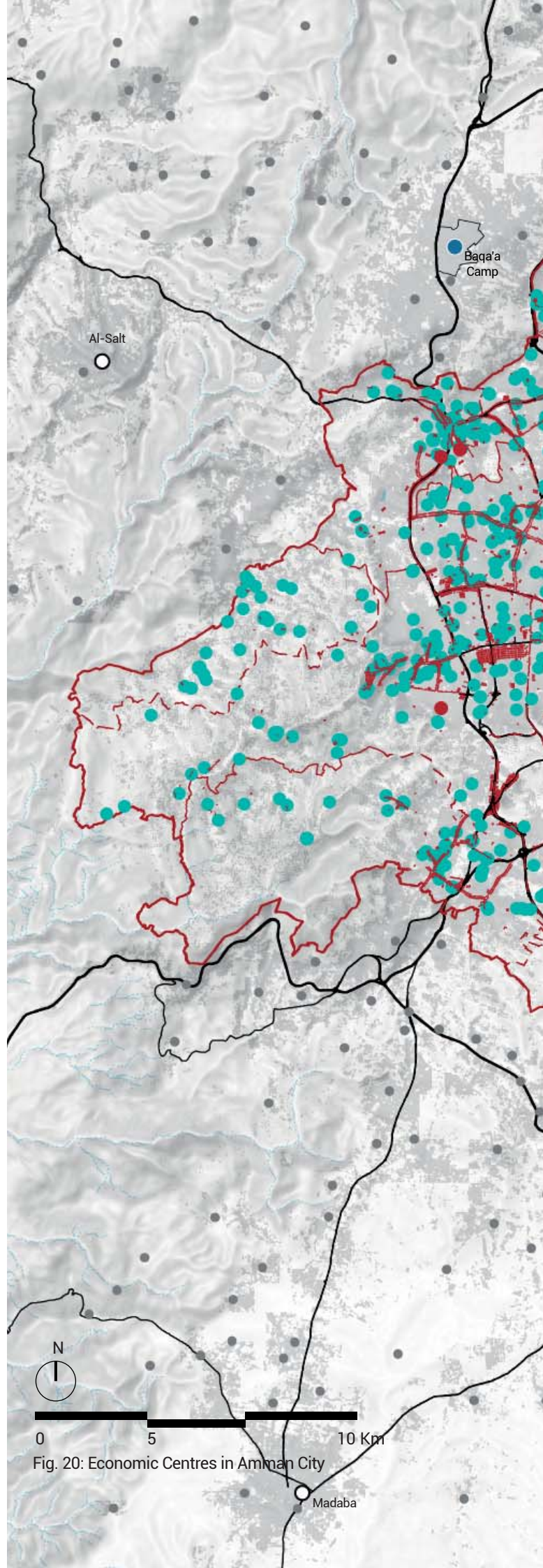
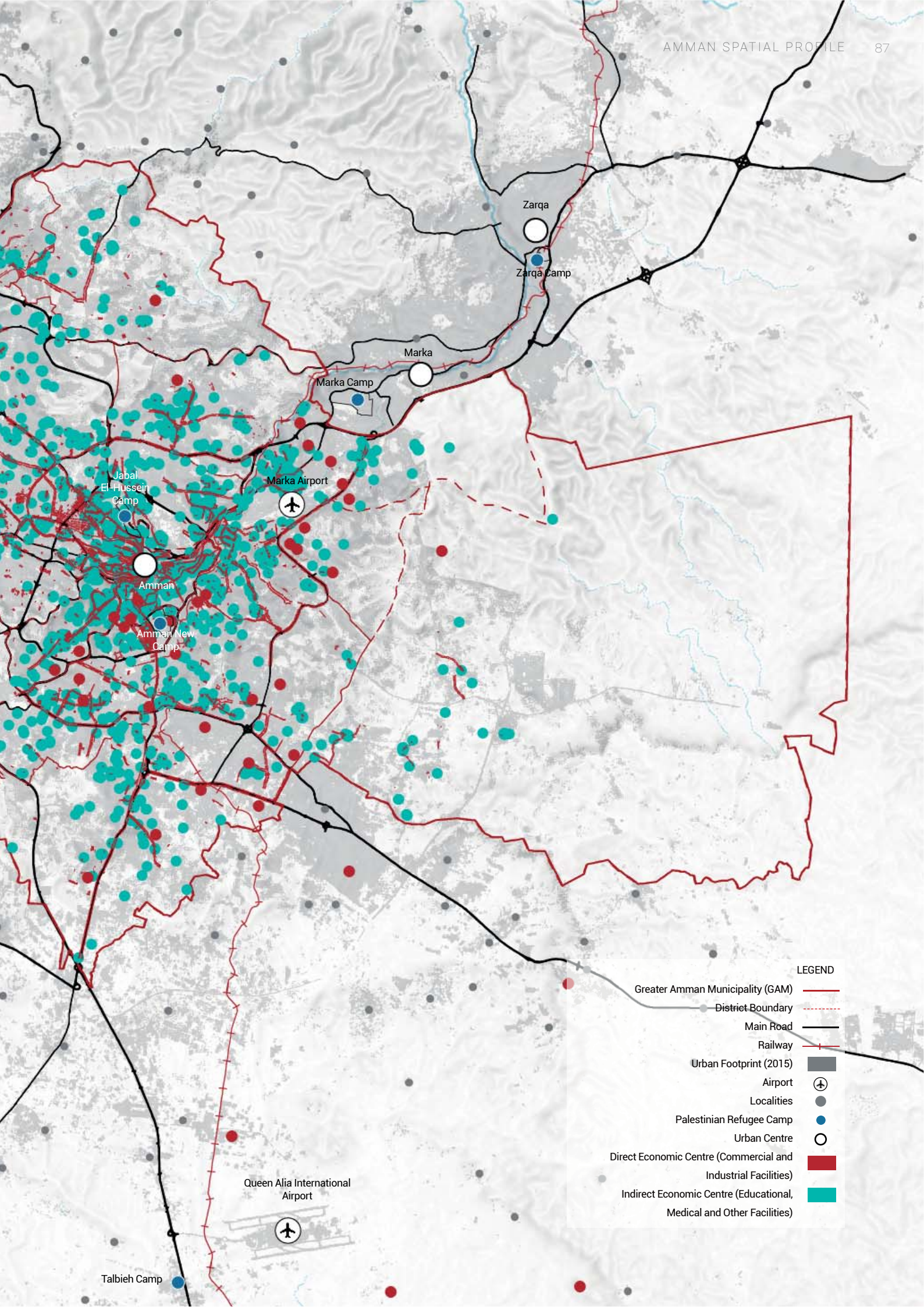


Fig. 20: Economic Centres in Amman City



LEGEND

- Greater Amman Municipality (GAM) —
- District Boundary - - -
- Main Road —
- Railway + + +
- Urban Footprint (2015)
- Airport ✈
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre ○
- Direct Economic Centre (Commercial and Industrial Facilities) ●
- Indirect Economic Centre (Educational, Medical and Other Facilities) ●

Talbieh Camp

Queen Alia International Airport

Jabal El-Husseini Camp

Amman

Amman New Camp

Marka Airport

Marka Camp

Marka

Zarqa

Zarqa Camp

Refugee Employment³³¹

A decade into the Syrian crisis, according to the East Amman Area-Based Livelihoods Assessment conducted by DRC and REACH in 2017, humanitarian agencies active in Jordan have shifted their focus to seeking durable solutions for refugees. This may be achieved through livelihoods initiatives that centre on enhancing economic resilience and self-reliance. However, there are many obstacles that limit refugees as well as vulnerable Jordanians to access livelihood opportunities. Mobility in terms of physical access, or the lack thereof, to transport services was identified as one of the key obstacles.

On the demand side of the labour market, most employers seem to prioritise finding staff who live locally, as there are growing concerns about staff punctuality and commitment to the job if they travel far distances, making it timely and expensive. Transport costs are estimated between JOD50 JOD and JOD150 monthly, traveling to places within GAM and further. For Syrians living in Amman, the mean monthly income is JD288,³³² making travel extremely unaffordable.

Key barriers to mobility differ between vulnerable Jordanians and Syrian refugees. While low wage levels represent a barrier to mobility for Jordanians by restricting their ability to afford travel for work opportunities. For Syrian refugees, it is the low wages and the difficulty of obtaining work permits, as they face the fear of being caught working or travelling for work without work permits. However, it should be noted that work permits should not necessarily be seen as a guarantor of decent work but rather one component that opens up more work opportunities by facilitating mobility.

For those who can afford or do decide to travel for work, Raghadan Bus Station, serves as the hub for traveling within Amman and to other urban centres. Routes from Raghadan allow you to travel to Marka, Khalda and other parts of west Amman. As well as, Sahab, Mafraq, Madaba or Zarqa. Living in the downtown area, means it is accessible by foot, for those who do not live within walking distance, it is usually accessed by the servis (shared taxi) network.

Moreover, there is a preference among Syrians to work close to home, either in the neighbourhood they reside, or in adjacent neighbourhoods, as they also feel safer in areas that they are geographically familiar with and where they have contacts and networks within the community.

Many employers highlighted specific roles that they believe individuals of particular nationalities are more suited to, according to their skills and experience. Positions requiring technical skills are more commonly assigned to Jordanian (assumed as being more educated than Syrians or Egyptians) while those involving extensive soft skills such as communications or hospitality skills are assigned to Syrians.

Consequently, there is a mismatch of skills on the labour market, as Syrians cannot necessarily access the sectors they have experience working in due to government restrictions and employer preferences, and are often forced to look for lower-skilled jobs. As a result, low-skilled Jordanians are in direct competition with foreign workers on the labour market and this drives wages down. Further, many educated Jordanians struggle to find opportunities because of the poor condition of the labour market and the high skilled job saturation in Jordan. In the end, a large proportion of the working-age population is in a position of vulnerability on the labour market.

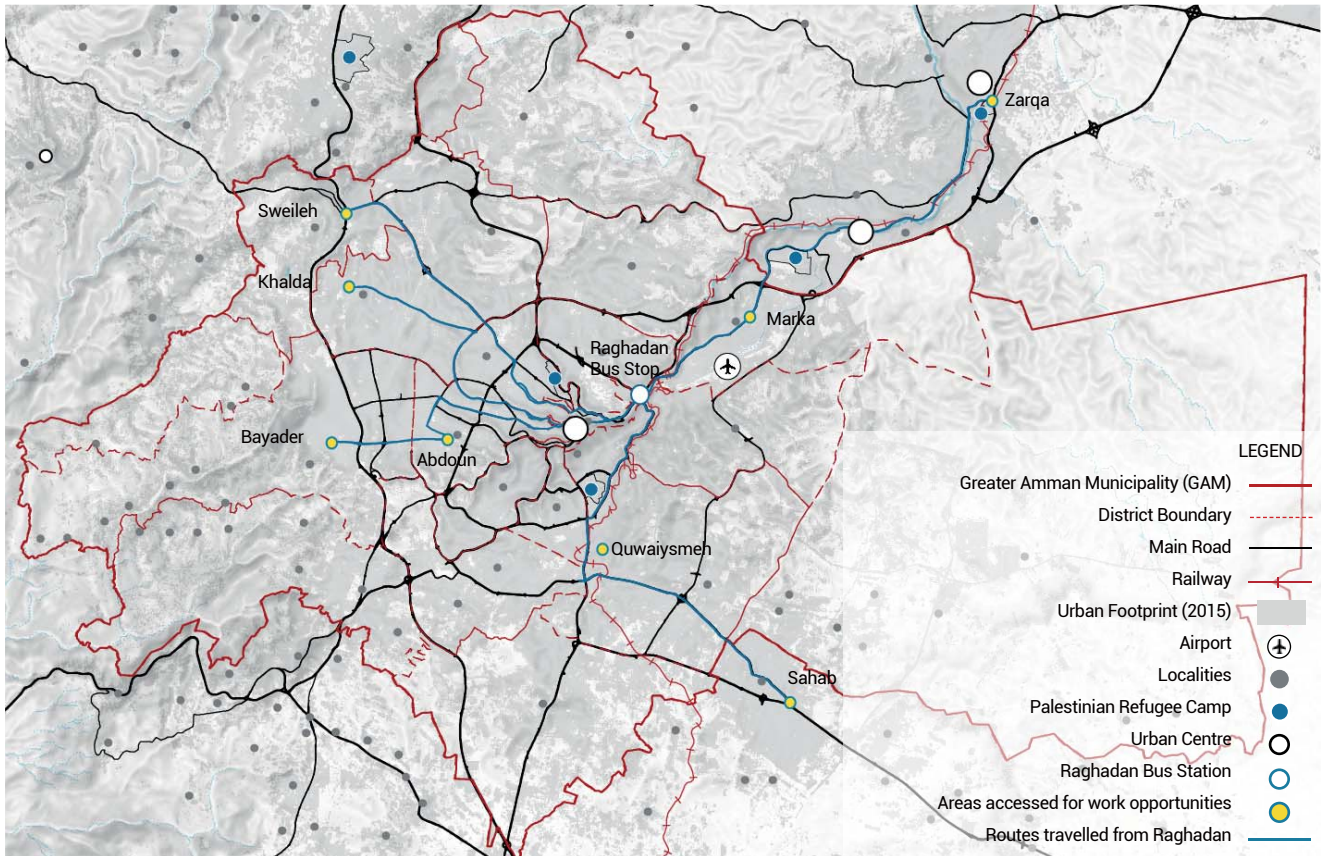
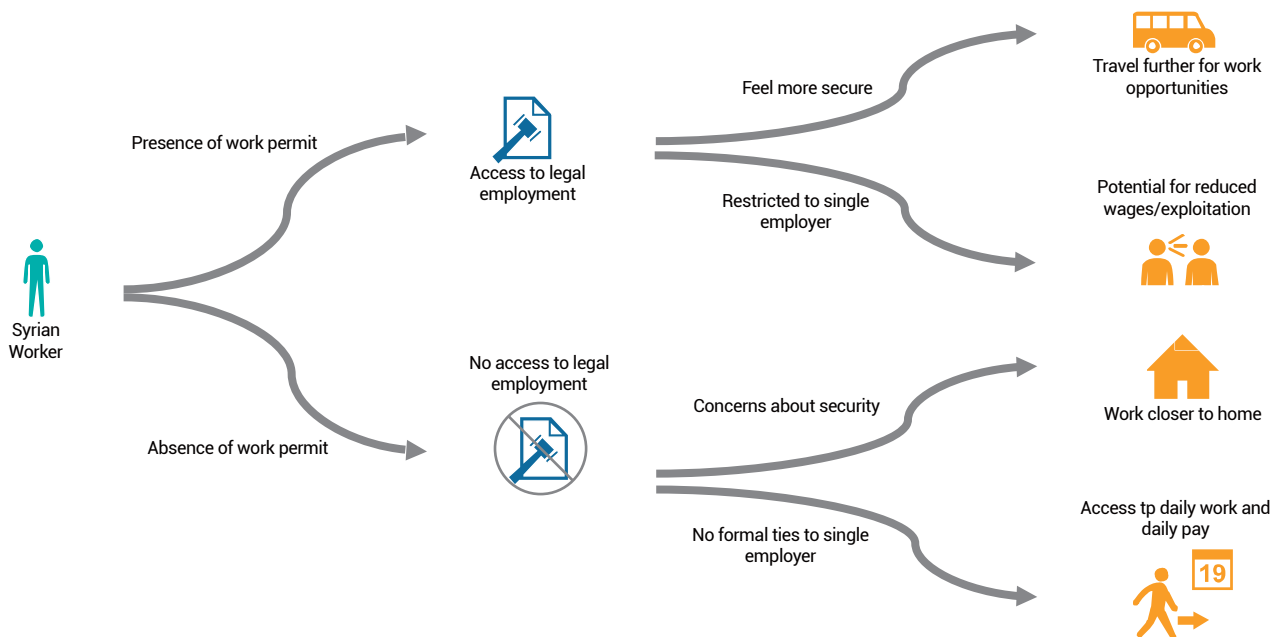


Fig. 21: Examples of Bus Routes Taken from Raghadan Bus Station to Access Work Opportunities
 Source: East Amman Area-Based Livelihoods Assessment, DRC REACH, 2017



Work permit considerations faced by Syrians
 Source: East Amman Area-Based Livelihoods Assessment, DRC REACH, 2017

Natural Hazards

The key natural hazards that Amman is vulnerable to include flash floods, earthquakes, soil erosion, urban heat island effect, and drought. According to a flood hazards mapping, the districts of Amman are among the most vulnerable to flash floods due to the increasing population and high concentrations of Syrian refugees, which exert pressure on social services and infrastructure for water and sanitation, drainage, and waste management. The unusually heavy rains often lead to flooding in lower-lying areas of the city, and its elevation exposes it to hazardous blizzards. This has affected schools, transportation, the power grid, and access to quality basic services, while additionally exacerbating the vulnerabilities for the poorest groups of Jordanians and Syrian refugees. Since Downtown Amman is topographically one of the city's lowest areas, it is especially prone to severe flash floods. Frequent flash flood in Downtown Amman have been attributed to the following causes:

- High density urbanisation and impervious surfaces over the majority of the whole watershed. This decreases the infiltration, which, in turn, increases the peak flow and flooding volume.
- Severe terrain and steep slopes resulting in flash floods and supercritical flow with high velocities.
- All arterial roads (especially the main ones) have been developed over the main routes of wadis, which intensifies the effect of flooding on all roads.
- Urbanisation has encroached along the wadis, leading to water flowing over the surface.
- The existing drainage systems are undersized and insufficient.
- The main drainage culvert system "Saqf Elsail" has limited capacity that has been overwhelmed and surcharged in many rainfall events in the past.³³³

Downtown Amman has been exposed to flooding in previous years, especially during two significant occurrences that caused severe damages. The high velocities expose people to extreme risks while substantial water depths cause destruction to slopes, vehicles, and houses.³³⁴ The 2019 flash-flood event caused significant material losses in the target area. Businesses in the area suffered losses resulting from water damage to inventory, structural damage to their buildings and loss of business.³³⁵

Jordan is highly vulnerable to earthquakes, with Amman being in Zone 2A, according to the seismic zoning map. This risk of earthquakes disproportionately affects the vulnerable populations living in refugee camps and older parts of the city, which have higher population densities and more vulnerable structures. The areas that are most heavily affected include Ras el -Ain, al- Yarmouk, Basman, Al-Naser, and Al-Abdali.³³⁶

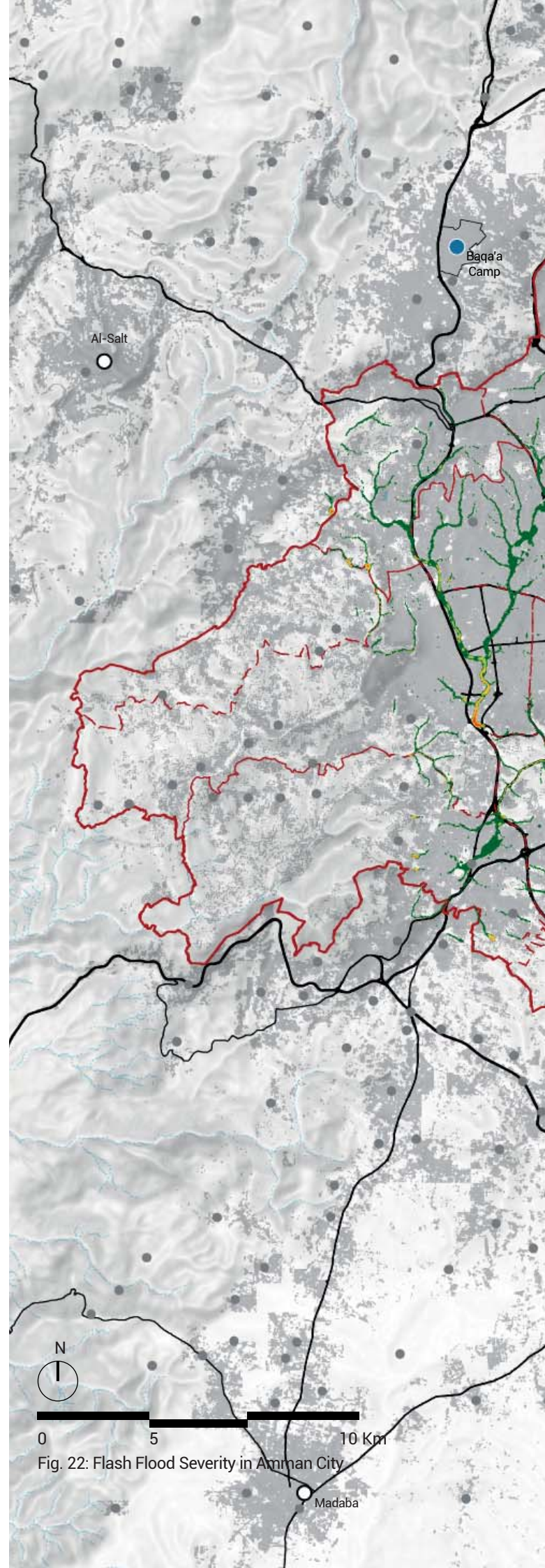
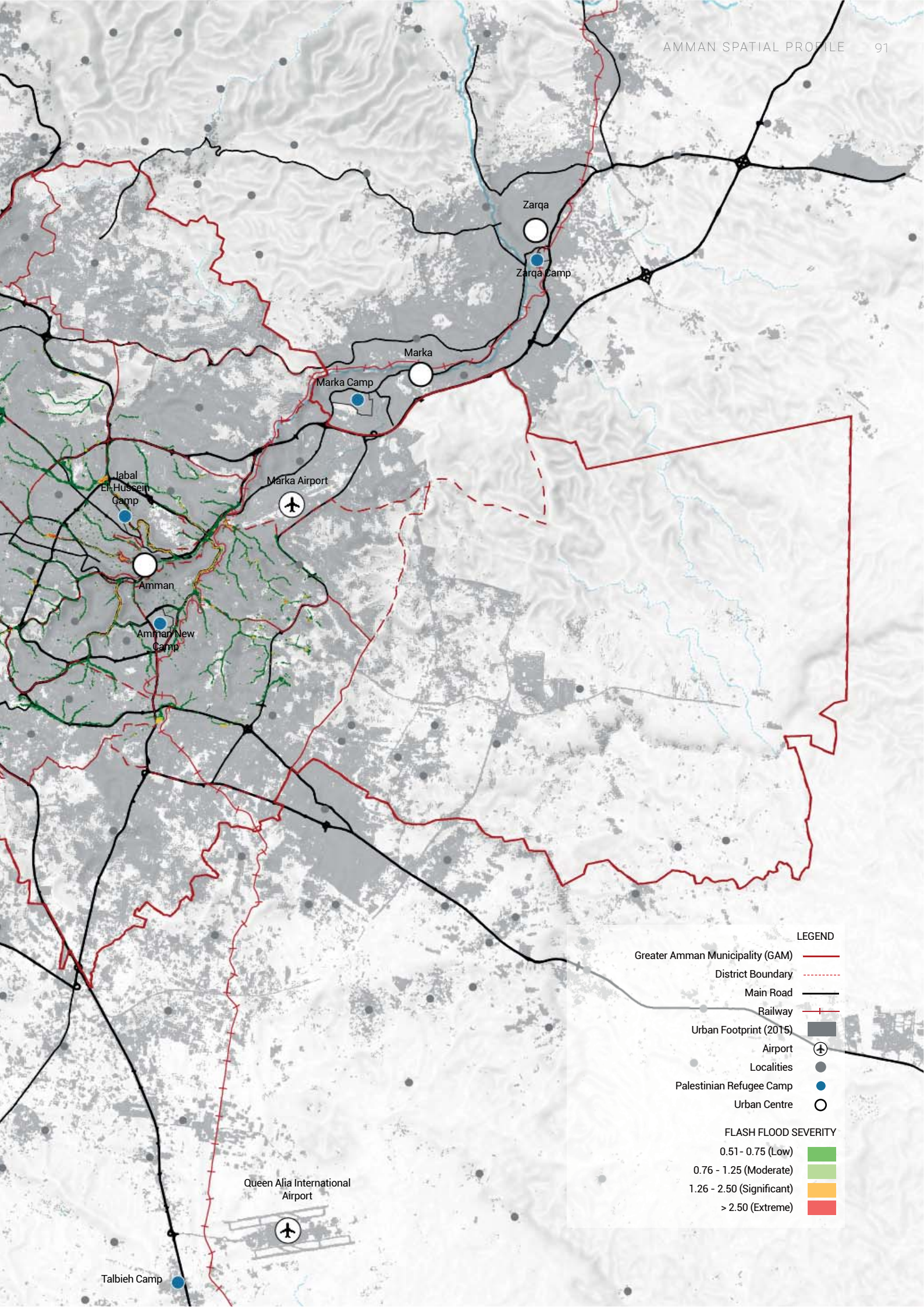


Fig. 22: Flash Flood Severity in Amman City



LEGEND

- Greater Amman Municipality (GAM) ————
- District Boundary - - - - -
- Main Road ————
- Railway —+—+—+—
- Urban Footprint (2015) ■■■■
- Airport (✈)
- Localities (●)
- Palestinian Refugee Camp (●)
- Urban Centre (○)

FLASH FLOOD SEVERITY

- 0.51 - 0.75 (Low) ■■■■
- 0.76 - 1.25 (Moderate) ■■■■
- 1.26 - 2.50 (Significant) ■■■■
- > 2.50 (Extreme) ■■■■

Talbieh Camp

Queen Alia International Airport

Jabal
El-Husseini
Camp

Amman

Amman New
Camp

Marka Airport

Marka Camp

Marka

Zarqa

Zarqa Camp

Transport and Mobility

Amman faces challenges in mobility; people's extreme reliance on private modes of transport to move throughout the city has generated severe congestion.³³⁷ While the dependence is partly explained by cultural factors, it is also aggravated by poor public transport service.³³⁸ This has been further exacerbated by the influx of refugees, which put pressure on the city's transport systems, as well as other infrastructure.³³⁹ Mobility in Amman governorate is also very costly, constituting around 16.4% of a household's income.³⁴⁰

Historically, investments in infrastructure have focused solely on public works, such as roads and bridges, instead of public transportation.³⁴¹ As a result, the city has well-managed road, tunnel and bridge infrastructure, but lacks a reliable public transport system. The current public transport network in Greater Amman is underdeveloped, unreliable and lacks a well-structure hierarchy of transport modes and services.³⁴²

Overall, a total of 6.5 million trips are made daily within GAM,³⁴³ and around 1 million from outside GAM.³⁴⁴ This has increased traffic congestion within the city, and as a result led to increased air pollution, reduced pedestrian accessibility and dominance of vehicular roads. In 2010, there were 800,00 cars in Amman, and with an annual increase of 8-10%, the number is estimated to reach 2 million by 2025.³⁴⁵ It is estimated that there are 350 vehicles for every 1,000 people in Amman, and 78% of registered vehicles in Jordan are in Amman.³⁴⁶

Inadequate mobility options within the city has resulted in major environmental, economic and social challenges for Amman. The decline in attractiveness of public transport as a travel option has led to increased reliance on private transport, and in turn caused increased car congestion and demand on parking.³⁴⁷ As a response to these challenges, goal A of the Amman resilience strategy focuses on improving the mobility systems; one of the key performance indicators for the Amman Resilience Strategy is to increase the use of public transport by 40% by 2025.³⁴⁸

Non-motorized transport

There is limited use of non-motorized modes of transport across the city, mostly due to the physical environment: sidewalks are not continuous throughout the city with

many physical obstacles that lead to people having to walk on the street, the bus stops lack consideration in terms of comfort and signage, and crossing facilities for pedestrians are really limited. This makes Amman a pedestrian unfriendly city.³⁴⁹

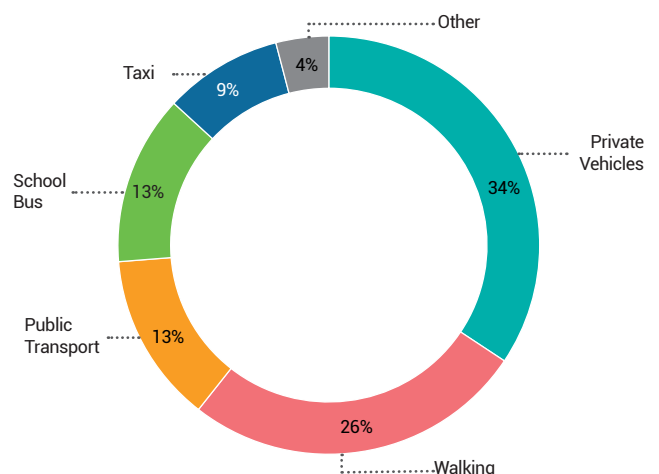
Public transport

Public transport in Amman only constitutes 13% of the modal share, of which 8% use taxis and 5% use buses.³⁵⁰ Users who rely on the public transport system are often those with an average monthly income of less than JODs 400 and do not own a car.³⁵¹ There are various routes throughout the city, and it is common for users to have to take two or three different buses to reach their destination.³⁵² Payment systems are not integrated, and users must pay for each bus trip individually.³⁵³

Public transport lines are managed by various authorities according to the geographical areas covered.³⁵⁴ Routes within the city of Amman are managed by the Greater Amman Municipality, while routes that connect Amman to other governorates and beyond GAM are managed by Land Transport Regulatory Commission (LTRC).³⁵⁵ Both GAM and LTRC regulate the routes, while the ownership and operation of these vehicles belong to private establishments, including both companies and individuals.³⁵⁶

There are 275 public transport routes within GAM: 85 shared taxi (service) routes, 67 coaster routes, 97 routes for large buses, and 26 routes for Amman bus.³⁵⁷

In terms of the vehicles, Amman now accommodates



Persons per transport mode in Jordan
Source: <http://library.fes.de/pdf-files/bueros/Amman/16656.pdf>

3,000 service taxis, 200 medium sized buses and 400 large buses.³⁵⁸ The daily capacity of the fleet is around 332,000 passengers for one-way trips.³⁵⁹

All coaster buses are privately run, mostly by individuals. Each operator receives a permit issued by the local authority to run a particular route.³⁶⁰ The price of each ticket is determined by the local authority, and is typically 0.3 JOD for a ticket.³⁶¹ While drivers typically operate fixed routes, the service offered is flexible and mostly demand-driven.³⁶² As a result, bus drivers do not follow fixed schedules.³⁶³ There are no formal bus stops for coaster buses.³⁶⁴

Amman Bus, a new bus operator was launched in June 2019 and aims at providing efficient public transport services to residents of Amman.³⁶⁵ During the first phase, buses operating through the project cover 55 destinations across 23 routes.³⁶⁶ The bus is unique in offering modern means of payment, as people are able to buy prepaid rechargeable cards which can be obtained from different points of sale in Amman.³⁶⁷ There are plans to continuously expand the bus network, with 150 more vehicles and 34 new routes.³⁶⁸

A Bus Rapid Transit system was proposed for Amman in order to reduce congestion, through the use of unique buses and a segregated bus lane.³⁶⁹ Construction commenced in 2008, to be suspended later in 2011.³⁷⁰ Construction finally resumed in 2015 and was recently launched in July 2021.³⁷¹ The project included the construction, planning and equipping of two BRT dedicated corridors, with a total length of 25km and a cost of around USD 250 million, of which two-thirds was financed by the Agence Francaise de Developement (AFD).³⁷² The BRT route that is currently operational, which covers a distance of 16 kilometers, connects Sweileh to Ras Al-Ain, and the rest of the routes are

under construction.³⁷³ There is also Amman -Zarqa BRT project that intends to expand the BRT further to connect Amman to Zarqa.³⁷⁴ The infrastructure works for the Amman-Zarqa BRT is currently under construction.

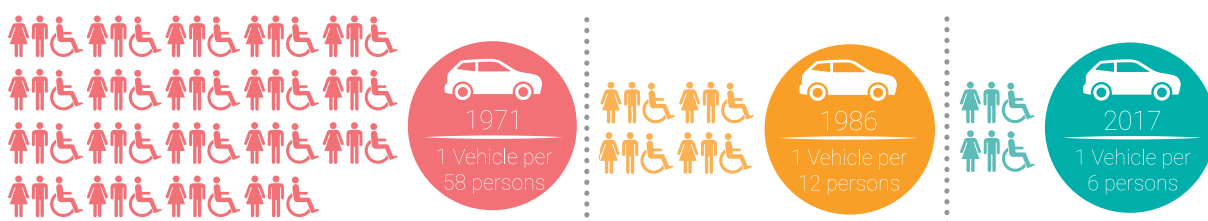
Since its launch, more than 25,000 people have used the system.³⁷⁵ It is expected that 140 buses will eventually carry more than 315,000 passengers per day and aims to increase the use of public transport from 13% to 20% within its first year of operation.³⁷⁶

Vulnerability

In Amman, 40% of employed Syrian refugees spend around JODs 1-3 on transportation daily to get to work.³⁷⁷ Only 2% of Syrians in Amman own a car, while 5% rent one.³⁷⁸

The lack of financial resources allocated to transport is one of the key factors limiting the movement of refugees towards work opportunities.³⁷⁹ For many who are willing to travel significantly further than Amman for work, the provision of transport or an allowance for transportation is needed to cover the high costs associated with transportation.³⁸⁰

Transport terminals include Raghadan, South, and North terminals for travel in and out of Amman. For those who do not live within walking distance, the stations can be accessed by the service taxi networks.³⁸¹ Due to the high volume of passengers that travel through Raghadan bus terminal, the buses are often at full capacity for the majority of the journey.³⁸²



Persons per vehicle in Jordan
Source: <http://library.fes.de/pdf-files/bueros/Amman/16656.pdf>

Amman Resilience Strategy proposes that the urban mobility observatory monitors the movements of displaced and marginalized residents in order to identify barriers to their freedom of movement, such as a lack of transportation options within a marginalized neighbourhood, or fear of discrimination or violence while riding public transport.³⁸³ GAM is also currently finalizing their Gender Action Plan for Equitable Mobility, to ensure equitable access to public transportation for women.

An expanded survey about walk time access to the nearest public transport conducted as part of the Transport and Mobility Master Plan for Amman shows that access to public transport is good, with an average walk time of 9 minutes.³⁸⁴ The 85% of results is 15 minute walking distance.³⁸⁵

The public transportation network within Amman covers most of the densely populated areas of GAM but does not extend far beyond the city centre. The network is severely lacking in the newly developed residential areas that were recently built on the outskirts of the city, where medium and low-income households live. There is good access to bus stops at a 15-minute walking radius within the city, with only a few areas on the outskirts of the city with limited access.

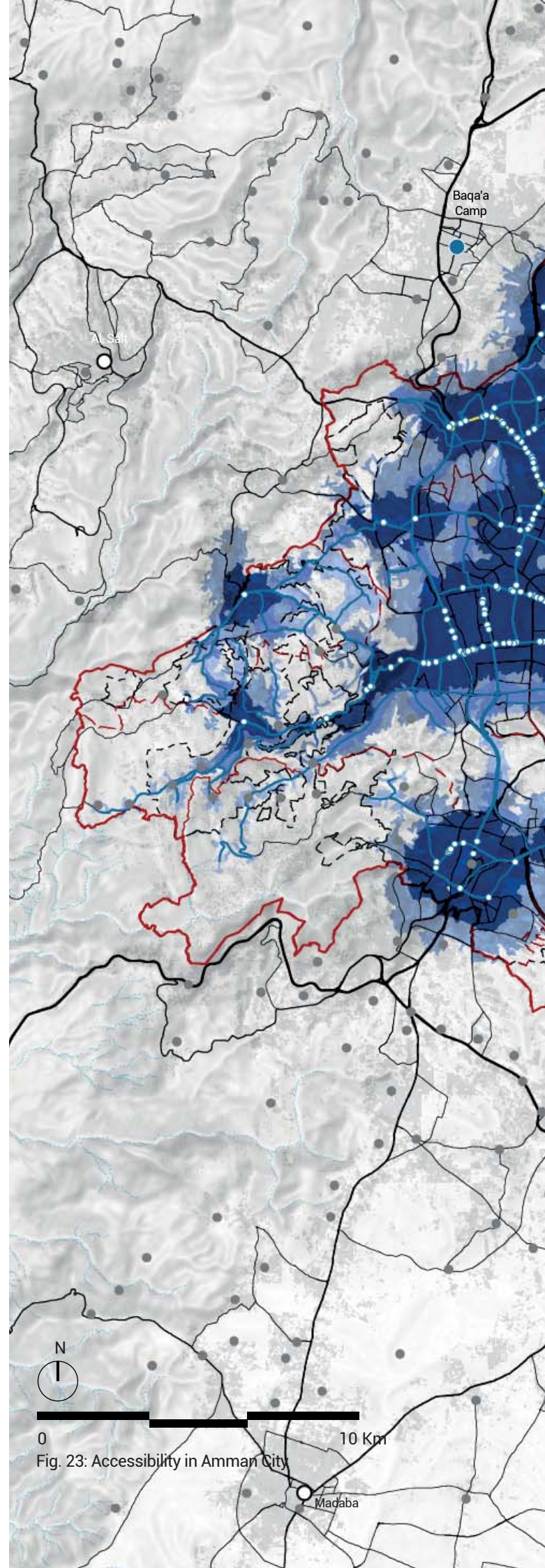
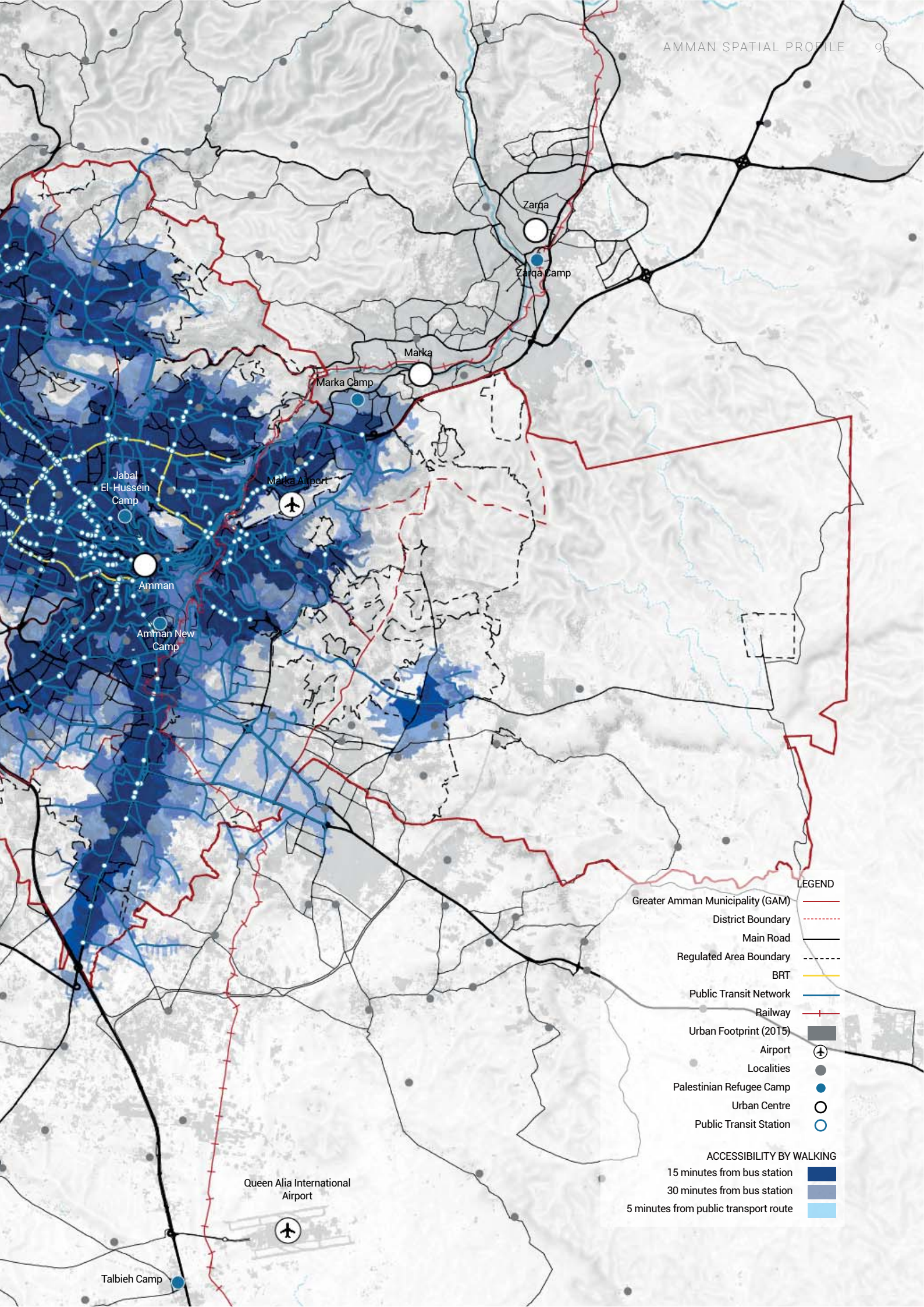


Fig. 23: Accessibility in Amman City



LEGEND

- Greater Amman Municipality (GAM) — Solid red line
- District Boundary — Dashed red line
- Main Road — Solid black line
- Regulated Area Boundary — Dashed black line
- BRT — Yellow line
- Public Transit Network — Blue line
- Railway — Red line with cross-ticks
- Urban Footprint (2015) — Grey shaded area
- Airport — Circle with airplane icon
- Localities — Grey dot
- Palestinian Refugee Camp — Blue dot
- Urban Centre — White circle
- Public Transit Station — Blue circle

ACCESSIBILITY BY WALKING

- 15 minutes from bus station — Dark blue shaded area
- 30 minutes from bus station — Medium blue shaded area
- 5 minutes from public transport route — Light blue shaded area

Planned Infrastructure Investments

In this section, we look at planned infrastructure investments, most information was extracted from Amman GCAP,³⁸⁶ and verified through meetings with GAM.

Infrastructure Investments

Approximately 44% of GAM's capital expenditure in 2016 was allocated to infrastructure projects.

Major Urban Development Projects

In Amman, ILCA is working on improving the green infrastructure network through a project that embodies the elements of green infrastructure, and thus demonstrates alternatives to urban greening. Additionally, newly constructed and improved recreational areas contribute to the improvement of the residents' quality of life in Al-Nasr and Badr Districts, implemented by GIZ, with a fund of 5,000,000 Euros from The Federal Ministry for Economic Cooperation and Development (BMZ). The project was completed in 2021.

Major Transportation and Urban Mobility Projects

There are various potential projects to enhance the transport sector and urban mobility, such as: developing solar-powered bus stands, expanding integrated bus networks, low-emission bus fleets, conducting a pilot project to promote active mobility, installing Intelligent Transport Systems (ITS), and implementing a SMART on-street parking system.

Major Waste Management Projects

A Mechanical Biological Treatment (MBT) system is currently under construction, which stabilizes and separates waste unsuitable for recycling, extracting recyclable materials, and producing recoverable solid fuel (SRF) for industrial thermal applications. This project consists of developing a facility for the treatment of mechanical-biological waste with an initial production capacity of 239 tons/day in a single shaft. A training centre will be established at the Ghabawi landfill. This is aligned with Strategic Objective 7 from Amman Green City Action Plan, which is to incorporate

circular principles into waste management, as well as Strategic Objective 8, which is to reduce the amount of waste sent to landfills by 12% by 2030. The project is funded by KfW and costs 15,000,000 Euros.

Additionally, GAM will upgrade and expand the Al-Shaer waste transfer station, including the road network, to improve on-site vehicle coordination. This includes the addition of two hydraulic waste presses with a capacity of 90 tons per hour, a weighing station, several containers, an administration building, as well as all civil, electrical, and mechanical works. The project is currently within the feasibility study phase. The project cost is 6,500,000 Euros and is being funded by the PPP municipal budget. Furthermore, to increase the capacity of Ghabawi Landfill, GAM will establish a sixth cell. The financing mechanism is a loan of 7,800,000 Euros, with the funding source being the municipal budget and EBRD Donor Agencies. The expected project end date is 2022.

Through the development of the Ain Ghazal treatment plant, GAM will modernize and expand the existing wastewater treatment facility. The facility will be upgraded to double the current treatment capacity to meet demands toward the design horizon of 2045. The capital expenditure is 11,750,000 Euros and the project is funded by the Sovereign loan from the European Bank for Reconstruction and Development. The project is now in the feasibility study phase.

Moreover, the Ghabawi Sanitation Facility Construction will develop a new septic tank degassing and wastewater treatment plant with a capacity of 22,500 m³/day, which will replace the existing facility currently located in the Ain Ghazal Treatment Plant. This will serve approximately 840,000 citizens. Expected to end in 2023, the project is funded by a Sovereign loan co-financed by the EBRD, and other donors, with a capital expenditure being 29,610,000 Euros.

Additionally, the Climate and Resource Protection through Circular Economy in Jordan pilot project aims

to reduce pressure on landfills through sorting from the source. Currently under construction, this project will focus on three neighbourhoods in GAM through a grant of 4,000,000 Euros from BMZ. There is also a potential project that will serve waste management, which includes improving the Al-Sha'er station for waste transportation.

Climate Change and Sustainability Projects

GAM will lead the investment in the development of a large grid-scale solar farm with Jordan Electric Power Company (JEPco) between 20 and 50 MW. This will be dependent on a feasibility study to identify suitable locations. This is aligned with Strategic Objective 1 of the Amman Green City Action Plan, which focuses on increasing renewable energy supply by 25% by 2035 to improve energy diversity, independence, and resilience. The capital expenditure for this initiative is between 26,000,000–65,000,000 Euros, with funding from PPP, municipal budget, International Financial Institutions, and the Jordan Renewable Energy and Energy Efficiency Fund (JREEEF) for impoverished communities. The expected end date is in 2026.

Additionally, the GAM LED project aims to install, operate, maintain, and manage an energy-efficient street-lighting solution. This project will replace around 25,000 existing street-lighting systems with energy-efficient light emitting diode (LED) lamps, as well as a monitoring system and a street-light control centre. The capital expenditure of this initiative is estimated to be 18,500,000 Euros and is being financed through sub-sovereign lending to GAM by EBRD. According to the Amman Green City Action Plan, the project's timeline is between 2021–2024.

The financing of smart meters and batteries project, undertaken in partnership with JEPco, includes two components; the first is smart meters whereby JEPco has already installed approximately 170,000, and aims to deploy 150,000 smart meters annually over the next 4 years. The second is investing in battery storage units to stabilise the network and increase its grid's capacity to absorb additional distributed PV systems. JEPco

plans to invest in small-scale batteries with each battery holding approximately 10 MWh of storage capacity. The donor agencies are the UNFCCC Adaptation Fund, GEF Climate Investment Fund, and the Pilot Programme for Climate Resilience (PPCR). The capital expenditure is 22,000,000 Euros and the Amman Green City Action Plan estimates the project's time line to be from 2021–2023.

Furthermore, the Expansion of the Existing Landfill Gas Recovery (LFG) System project endeavours to design and build a no. 4 cell biogas system and connect it to the existing system with operation. The project is funded by EBRD with a cost of 6,484,586 Euros and is expected to be completed in 2021.

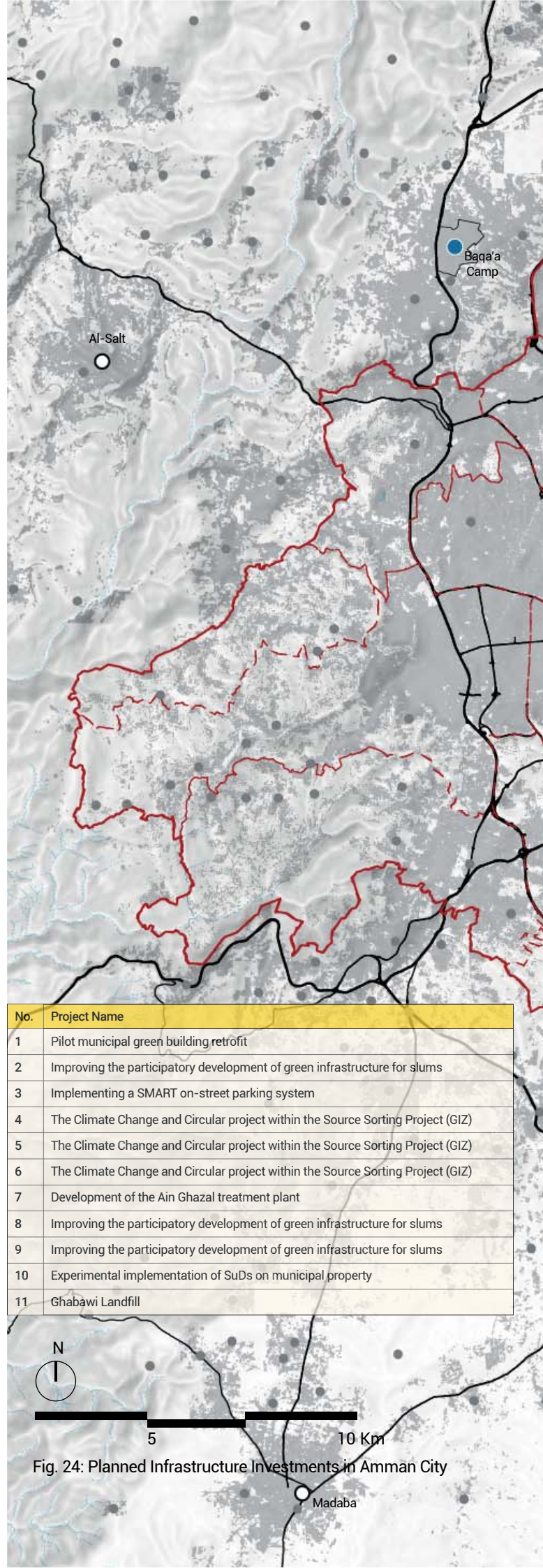
Meanwhile, other potential projects related to the climate change and sustainability include: upgrading and expanding access to water and wastewater networks, the implementation of nature-based solutions for the Russeifa lagoon, as well as the development of a sustainable recreational area, investing in expanding green spaces, and improving the participatory development of green infrastructure for the disadvantaged areas in Amman.

Storm-water Management Projects

The city will incorporate the principles of Sustainable Drainage Systems (SuDS) into all existing and planned publicly owned buildings, to support the W4 merging of WSUD and SUDS. Through UN-Habitat's Flash Floods Resilience project, funded by the Government of Japan, 120 suitable sites for pilot projects were identified in the Flood Risk Assessment and Hazard Mapping Study. This endeavours to help reduce the effects of floods and droughts while additionally helping secure a more reliable water supply. For the agriculture component of this Programme, water resources development systems will focus on dry and drought-resistant agriculture. Overall, this aims to reduce the flood risk in critical areas by 50% by 2040. Between the years 2021-2030, GAM is seeking potential funding between 9,400,000–13,710,000 Euros for this project.³⁸⁷

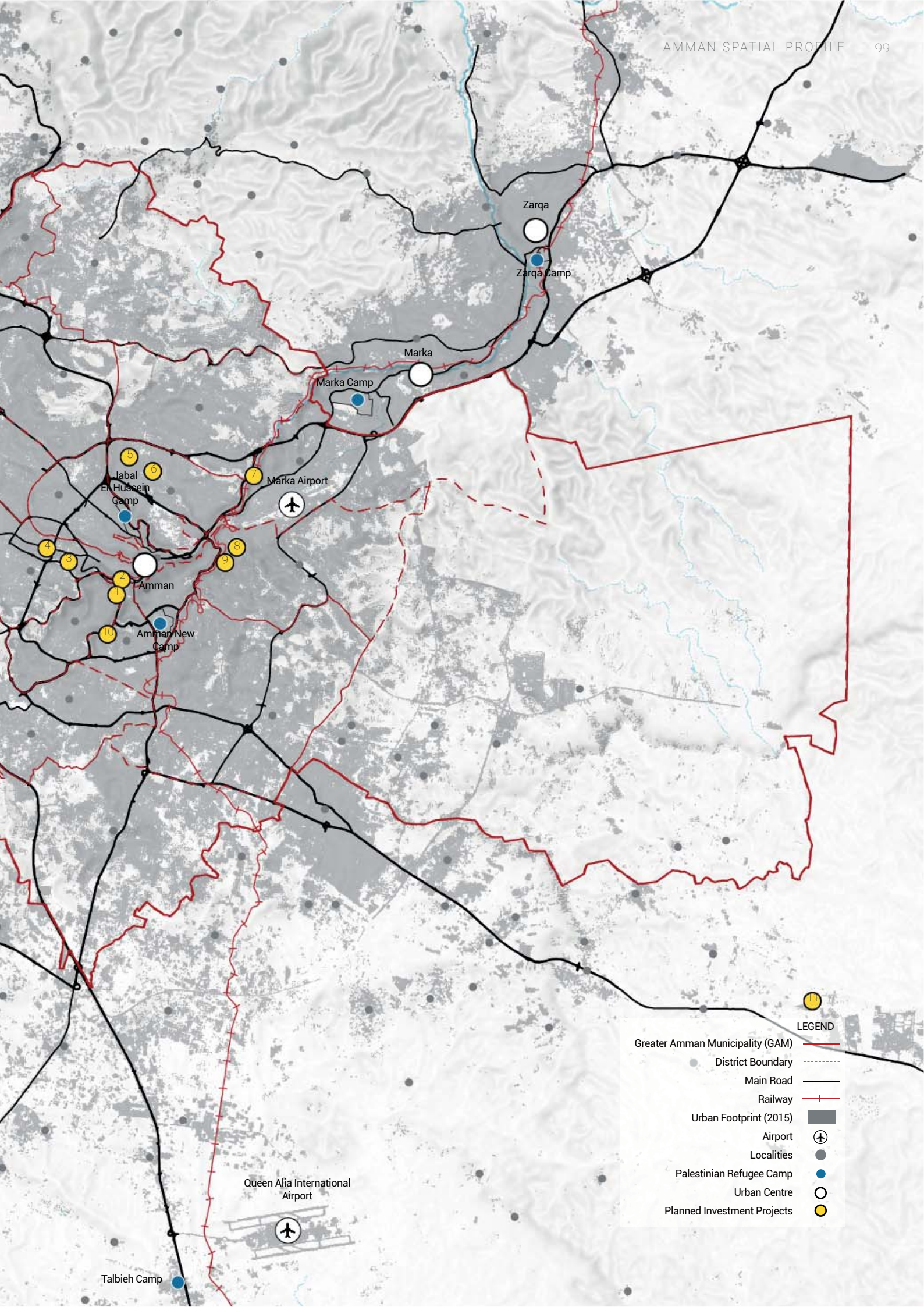
Additionally, under UN-Habitat’s Flash Floods Resilience project, the Al-Zohour green triangle pilot flood control project, is being implemented approximately 3km southwest of downtown Amman. It is a storm-water detention concept that consists of two main mechanisms: an underground concrete tank (~500m²) and a Bioretention area (~2000m²). The proposed systems are more sustainable than conventional drainage methods because they can mitigate many of the adverse effects of urban storm-water runoff to the environment. The project costs 400,000 USD.

Furthermore, there is another potential project that will serve storm-water management, which includes developing water conveyance and/or storage to reduce flood risks.



No.	Project Name
1	Pilot municipal green building retrofit
2	Improving the participatory development of green infrastructure for slums
3	Implementing a SMART on-street parking system
4	The Climate Change and Circular project within the Source Sorting Project (GIZ)
5	The Climate Change and Circular project within the Source Sorting Project (GIZ)
6	The Climate Change and Circular project within the Source Sorting Project (GIZ)
7	Development of the Ain Ghazal treatment plant
8	Improving the participatory development of green infrastructure for slums
9	Improving the participatory development of green infrastructure for slums
10	Experimental implementation of SuDs on municipal property
11	Ghabawi Landfill

Fig. 24: Planned Infrastructure Investments in Amman City



LEGEND

- Greater Amman Municipality (GAM) —
- District Boundary ●
- Main Road —
- Railway +—
- Urban Footprint (2015)
- Airport ✈
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre
- Planned Investment Projects

Access to Basic Services

Overall, GAM residents are well connected to basic service networks, such as water, sewerage, storm-water, electricity, and telecommunication.

Access to Energy and Electricity

Around 99.3% of Amman's population have an authorised connection to electricity, whereby there is an estimated 1.2 million subscribers. Households consume around 46% of the provided electricity, followed by the industry, which consumes 22%, and the commercial sector, which consumes 15%. Meanwhile, water pumping consumes 15% and street-lighting consumes 2%. Additionally, renewable energy sources generate around 15% of the energy produced. 54 GWh of electrical energy is generated by hydro units, 123 GWh generated by wind energy, 4 GWh generated by biogas, and 2 GWh generated by solar energy.³⁸⁸

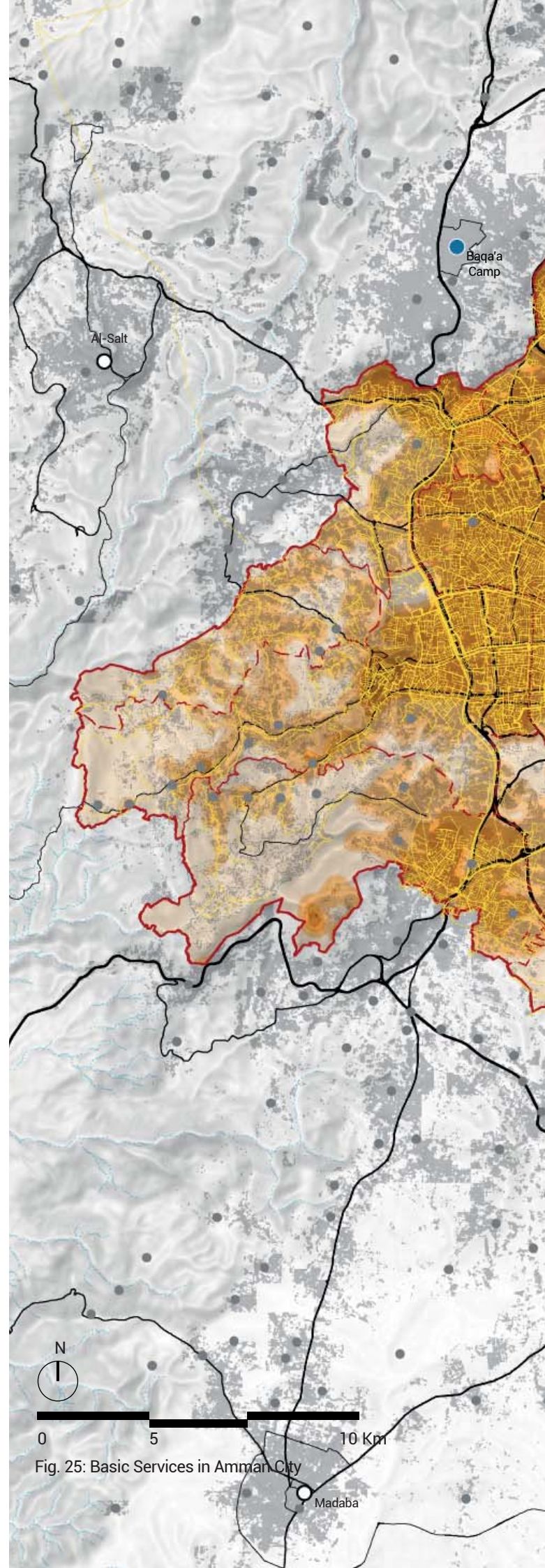
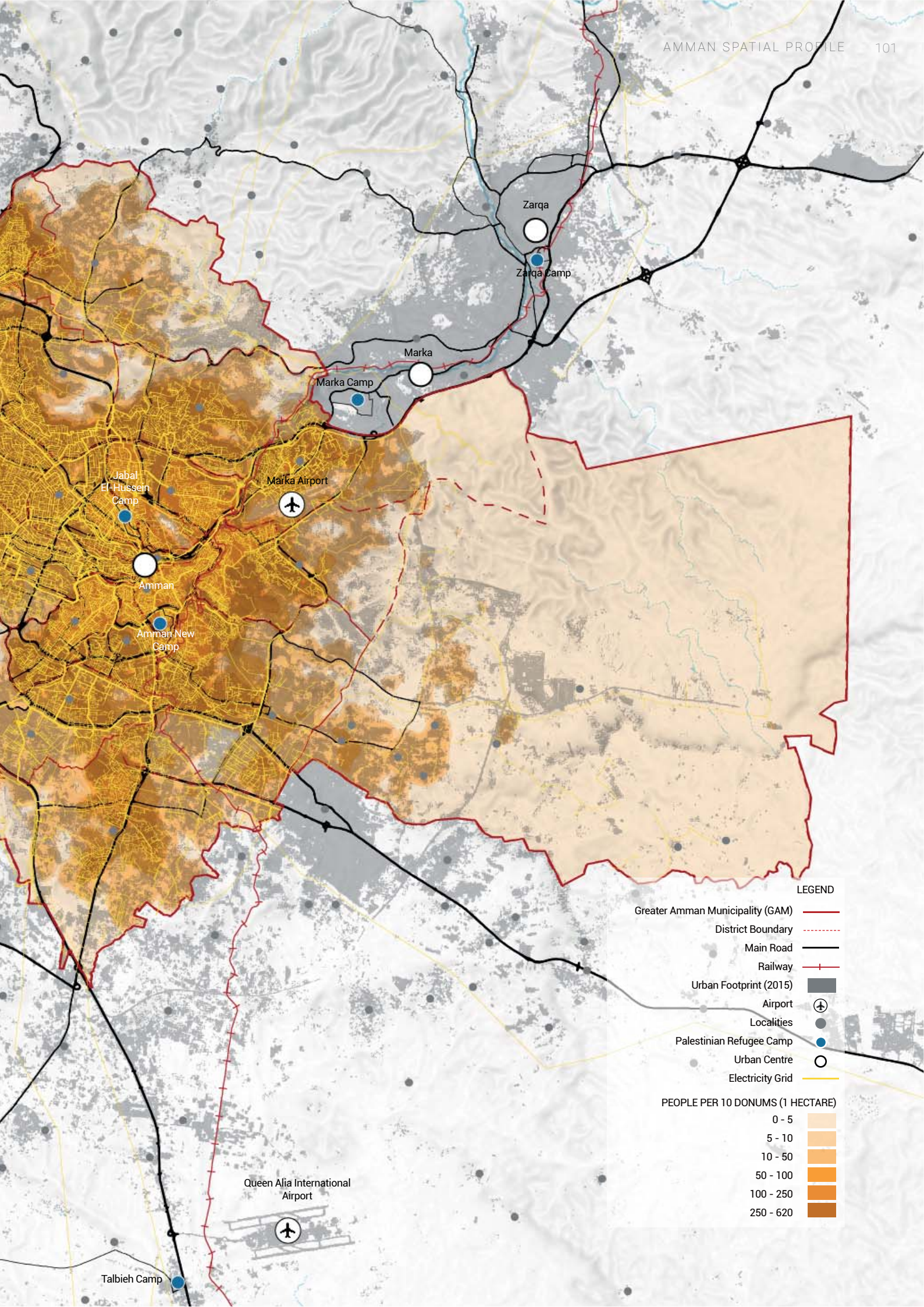


Fig. 25: Basic Services in Amman City



LEGEND

- Greater Amman Municipality (GAM) —
- District Boundary - - - - -
- Main Road —
- Railway + + + + +
- Urban Footprint (2015)
- Airport ✈
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre
- Electricity Grid —

PEOPLE PER 10 DONUMS (1 HECTARE)

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 250
- 250 - 620

Talbieh Camp

Queen Alia International Airport

Jabal El-Hussein Camp

Amman

Amman New Camp

Marka Airport

Marka Camp

Marka

Zarqa

Zarqa Camp

Access to water

Amman's piped water system is operated by the state-owned private company Miyahuna, whose supply is regulated by the Water Authority of Jordan (WAJ).³⁸⁹ Approximately 98% of Amman's households are connected to this piped water system.³⁹⁰ However, as the sharp rise in the city's population has contributed to a 40% increase in demand for water,³⁹¹ with water consumption in GAM being estimated at 72.75 litres daily per capita,³⁹² the supply intermittency greatly reduces the value of this service to consumers. Since 2005, the weekly supply durations have gone down by almost one half³⁹³ to an annual average of 37.15 hours per week of continuous water supply per household (h/week).³⁹⁴

To cope with the shortages and the intermittency of the water supply it is the norm for households to store water in tanks. Most households have roof-top and, sometimes, basement storage tanks, with an average capacity of 3.12 m³ among low-income households and 16.24 m³ among high-income households.³⁹⁵ Additionally, it is estimated that 37% of water becomes non-revenue water.³⁹⁶

Furthermore, Amman households pay for piped water and wastewater according to an increasing block tariff, consisting of step-by-step increase per-unit charges and fixed charges for different quantity blocks.³⁹⁷ The expenditures for piped water supply and disposal amount to about 1% to 1.5% of household incomes.³⁹⁸ However, due to possible health risks, much of the population is likely to abstain from using piped water for drinking purposes.³⁹⁹ Meanwhile, alternative water sources often include filling the in-house storage with water from private tanker operators, buying 10–20 L bottles from water stores, filtering piped or tanker water, or buying 1–2 L water bottles from retail stores.⁴⁰⁰

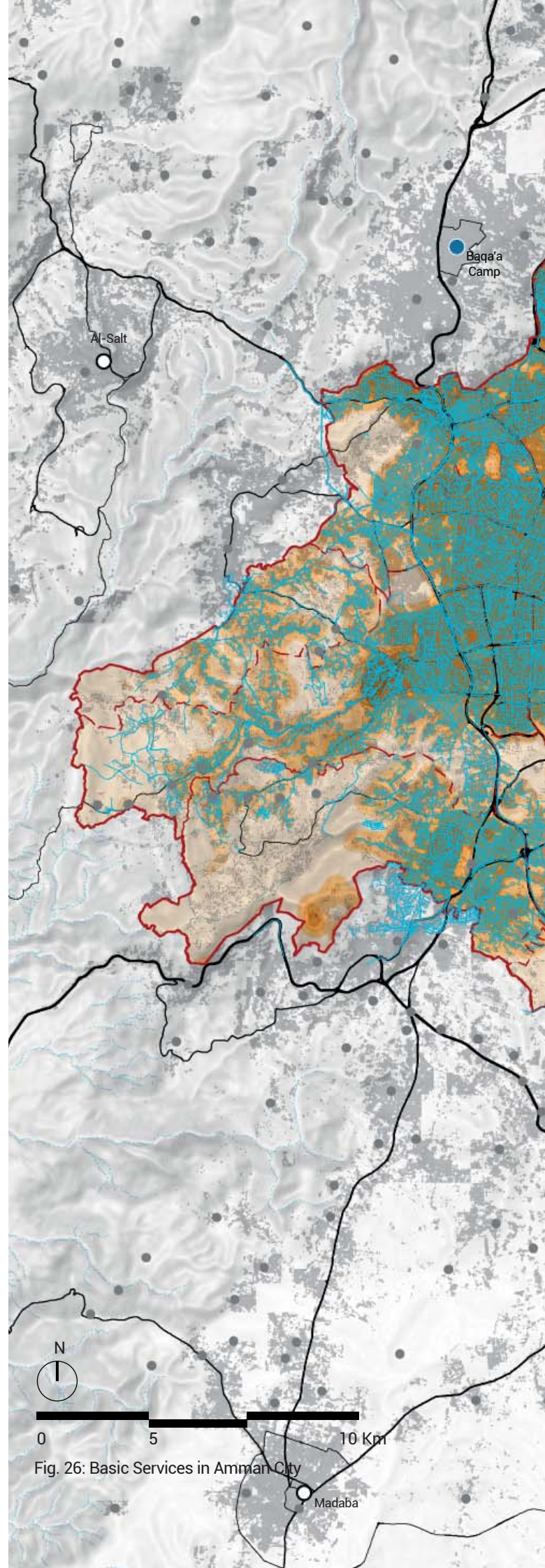
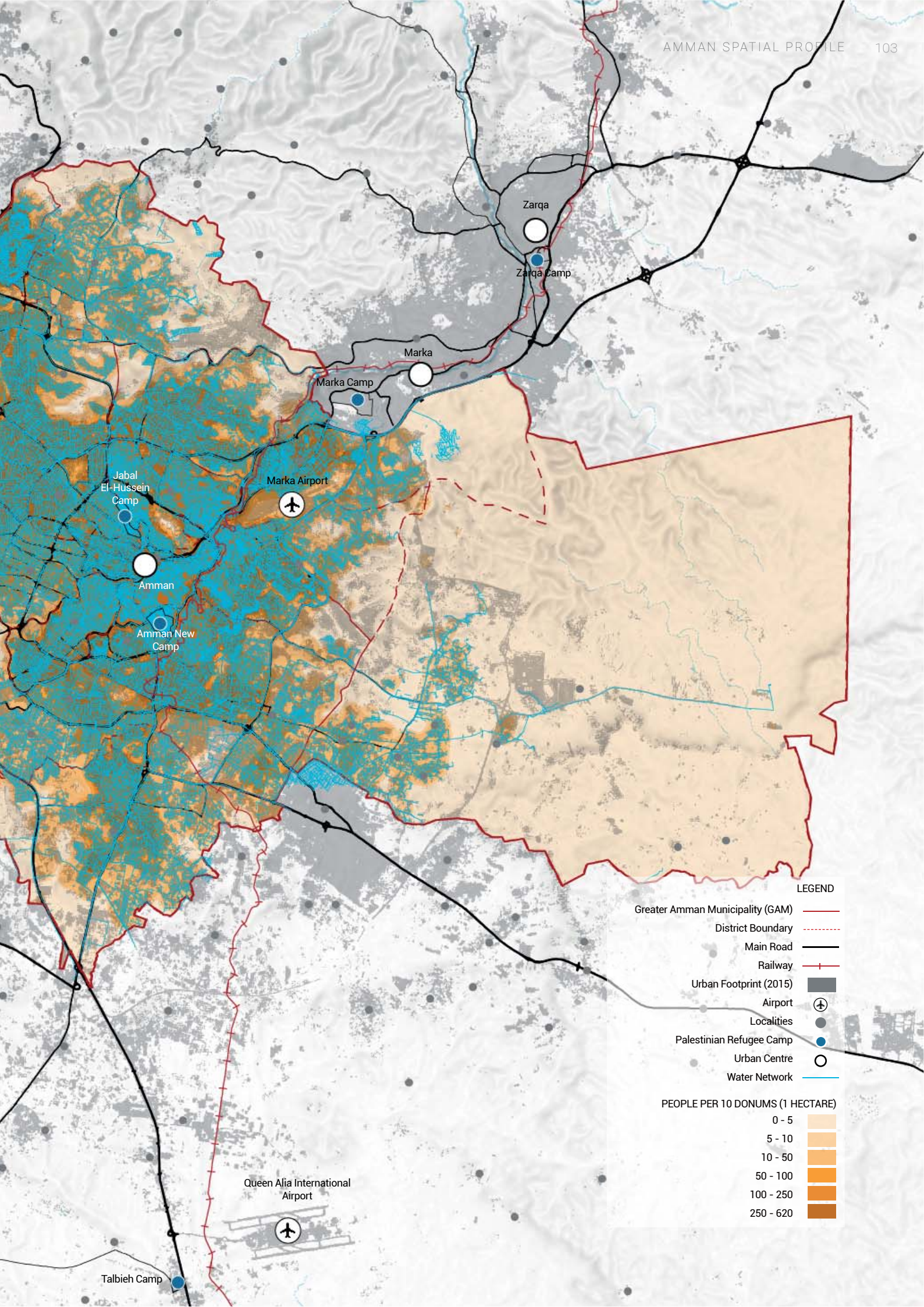


Fig. 26: Basic Services in Amman City



LEGEND

- Greater Amman Municipality (GAM) ————
- District Boundary - - - - -
- Main Road ————
- Railway —+—+—+—
- Urban Footprint (2015) ■■■■
- Airport ⊕
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre ○
- Water Network ————

PEOPLE PER 10 DONUMS (1 HECTARE)

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 250
- 250 - 620

Access to sewerage network

An estimated 79.4% of the GAM population is served by wastewater collection, with evidence suggesting that those who do not have access to piped sewerage will often have access to septic tanks instead.⁴⁰¹

Solid Waste Management

GAM is responsible for undertaking all waste management operations within its boundaries⁴⁰² and 99% of the population are served by the Municipal Solid Waste (MSW) collection.⁴⁰³ In 2015, waste generation in GAM was around 2,500 – 2,700 tonnes per day, reaching up to 3000 tonnes per day in the month of Ramadan and during Eid celebrations.⁴⁰⁴ However, the Influx of Syrian refugees resulted in an increase of 1000 tonnes of waste per day.⁴⁰⁵ Currently, the total solid waste generation is 379.6 kg/year/capita.⁴⁰⁶

GAM's daily collection services operate throughout 22 districts. The collected waste is generally taken to the East Amman Transfer Station and then transferred in trucks to the Ghabawi landfill, which is in the Uhod District and around 40 km East of the city centre.⁴⁰⁷ The proportion of MSW that is sorted and recycled by the type of waste (e.g., paper, glass, batteries, PVC bottles, and metals) is limited to 3%.⁴⁰⁸ It has been estimated that the remaining lifespan of the current landfills is 16 years before they have reached their capacities.⁴⁰⁹

Storm-water Drainage Network:

A 2012 study found that more than 60% of the roadways in the selected sites within the city of Amman face problems during intense rainfall due to the poor conditions of the exiting drainage systems.⁴¹⁰

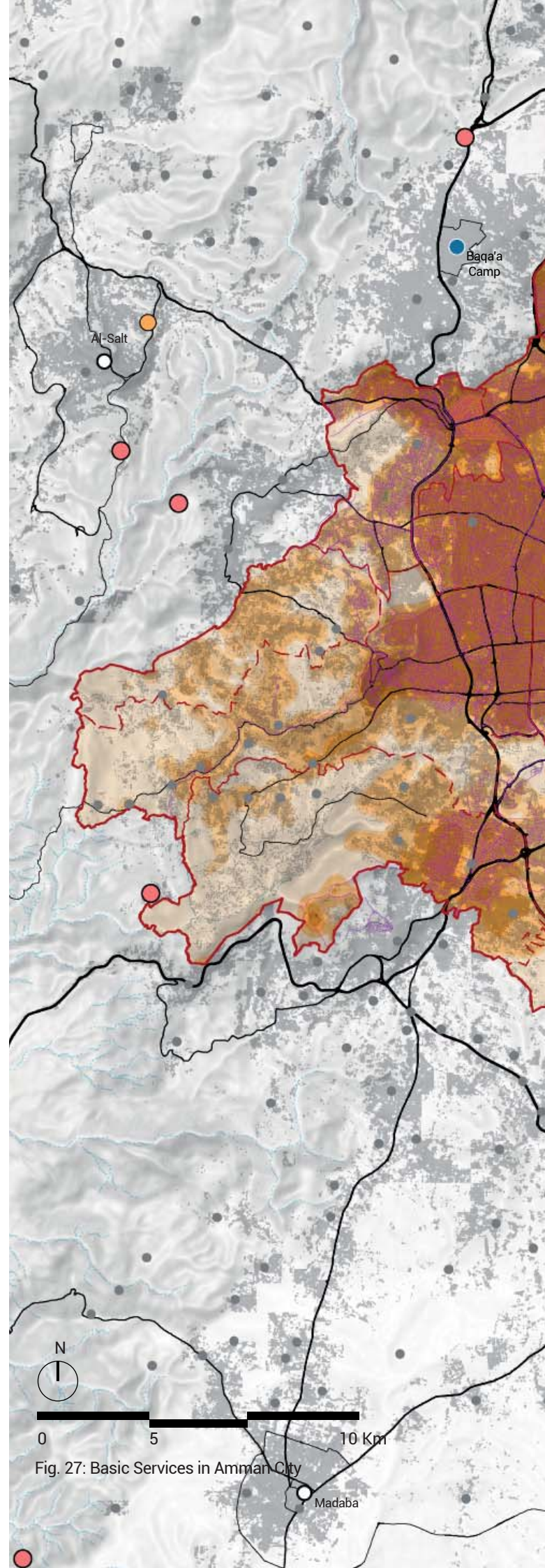
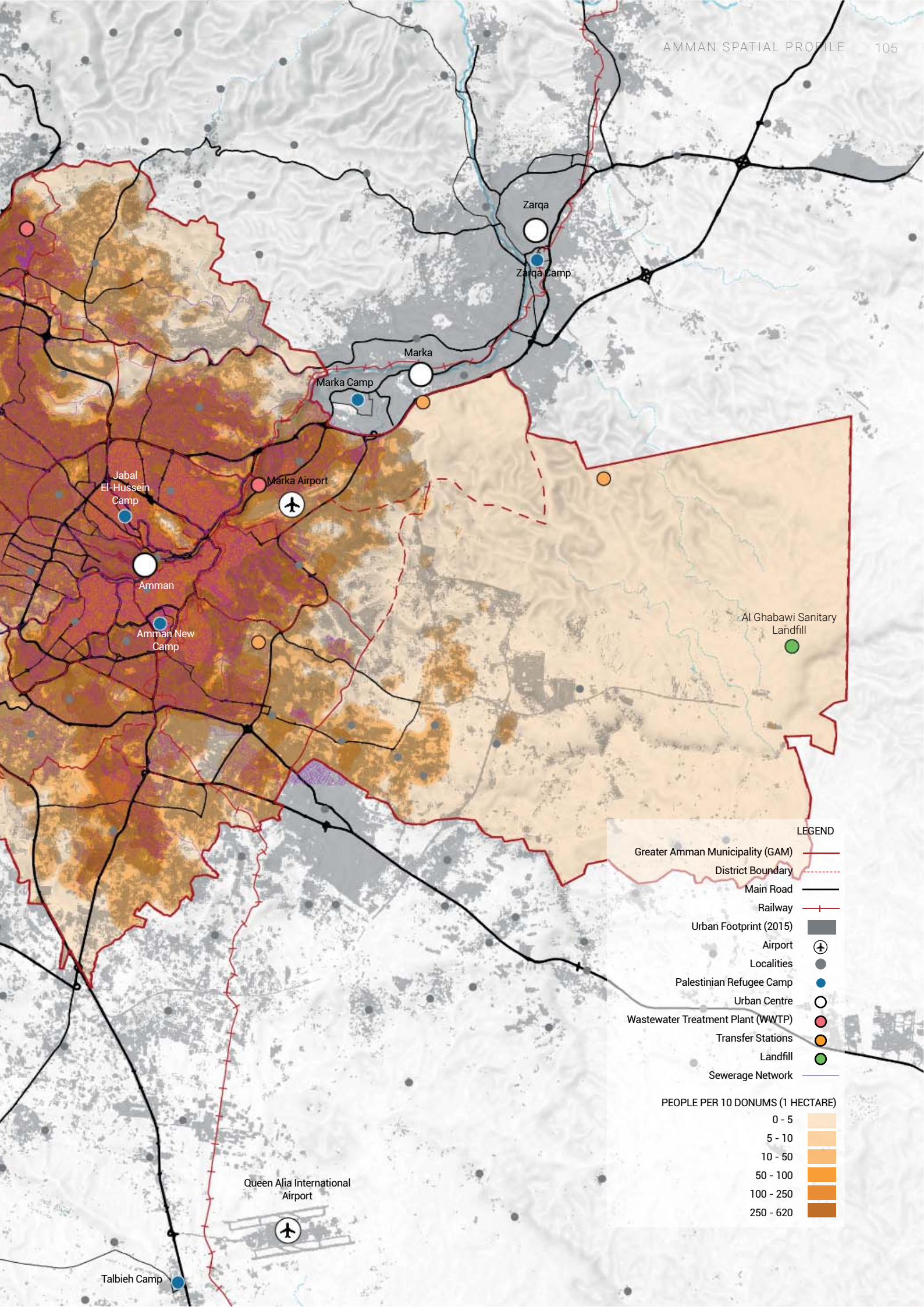


Fig. 27: Basic Services in Amman City



LEGEND

- Greater Amman Municipality (GAM) ————
- District Boundary - - - - -
- Main Road ————
- Railway ————
- Urban Footprint (2015) ■■■■
- Airport (✈)
- Localities (●)
- Palestinian Refugee Camp (●)
- Urban Centre (○)
- Wastewater Treatment Plant (WWTP) (●)
- Transfer Stations (●)
- Landfill (●)
- Sewerage Network ————

PEOPLE PER 10 DONUMS (1 HECTARE)

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 250
- 250 - 620

Access to Public Facilities

Through its services and facilities at the local level, the Greater Amman Municipality seeks to ensure social cohesion among residents while shaping an inclusive identity for the city. Through having open-door activities in its 200 premises, which include community centres, libraries, cultural centres, and recreational parks/green spaces, GAM provides its services to everyone living within its districts. Additionally, the Municipality provides physical services such as street cleaning and environmental-related aspects, building permits, popular markets, health inspection, and maintenance of the urban infrastructure.⁴¹¹ All services provided by the Municipality and activities targeting the community are available to locals and refugees alike.

GAM has also taken specific steps to tackle issues related to migrants' access to basic services and refugee livelihoods. Therefore, it participates in Programmes funded and run under the auspices of governmental and international aid organisations, such as the European Union, the Swiss Agency for Development and Cooperation, the International Rescue Committee (IRC), GIZ, and others.

The map shows the spatial distribution of the public facilities within GAM's administrative boundary including educational, healthcare, religious, commercial, and recreational facilities.

It is clear that the availability of public facilities follow the built-up area. Public facilities are highly concentrated at the city centre, this corresponds to the high population density there, and decreases as you move out towards the peripheries of GAM.

It should be highlighted here that in the upcoming pages, the topography was neglected throughout the street network analysis conducted to the various public facilities, due to the fact that 92.3% of the roads in Amman city have a slope less than a 15 degree which would have no significant impact on the spatial accessibility analysis.

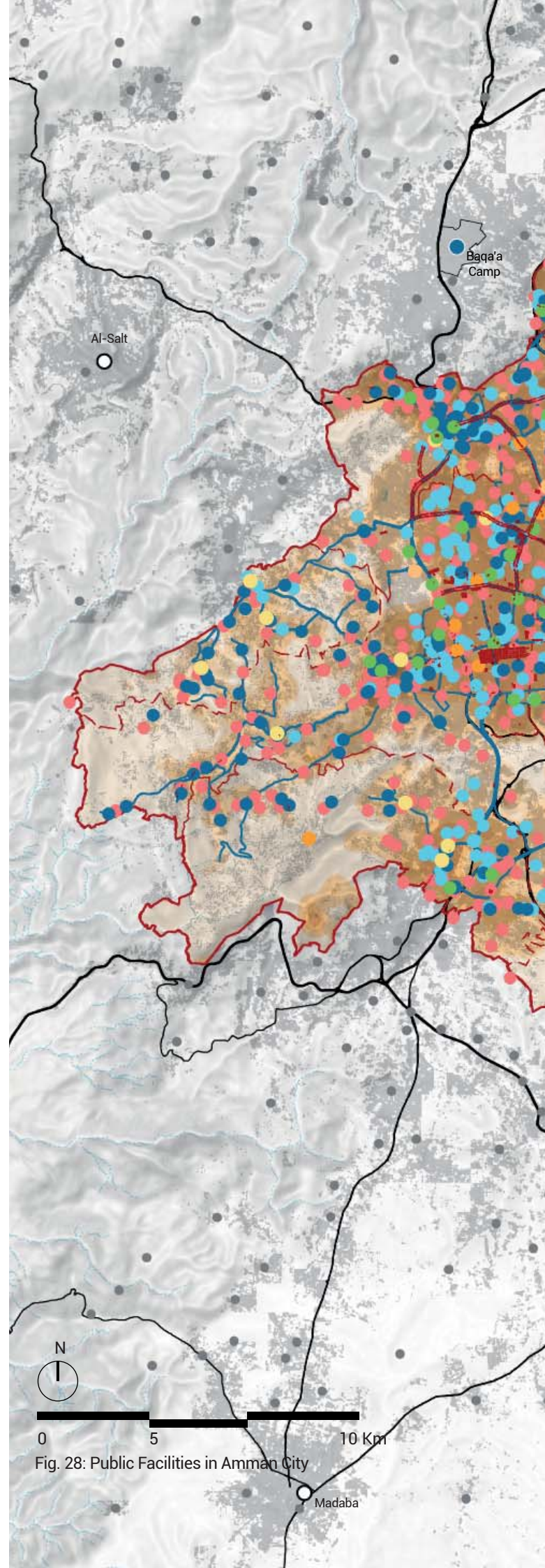
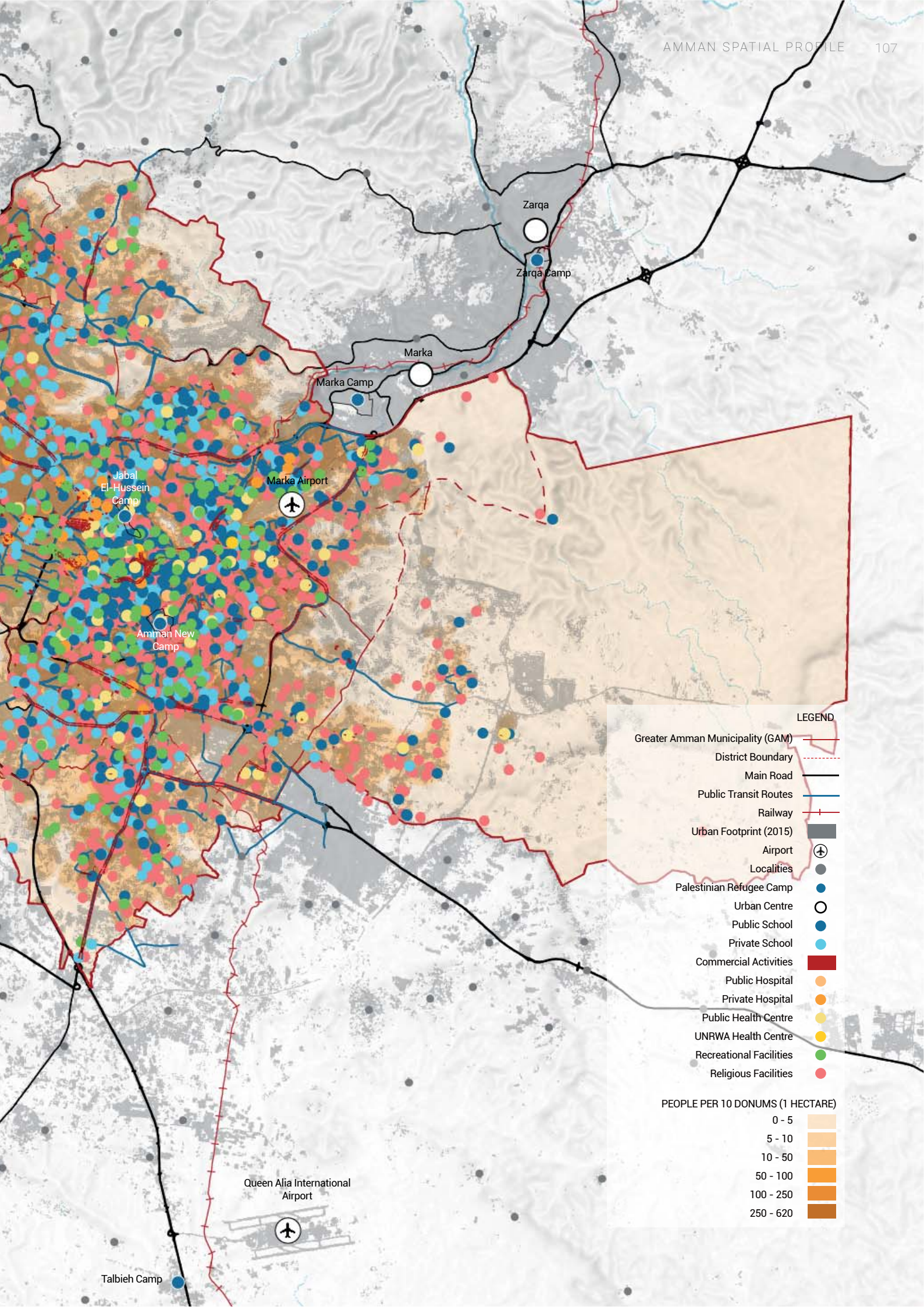


Fig. 28: Public Facilities in Amman City



Access to Public Facilities / Healthcare Facilities

As a country, Jordan has quite an advanced healthcare system, whereby it was ranked by the World Bank to be the number one healthcare service provider in the region and among the top five in the world.⁴¹² Over the years Jordan has emerged as one of the most desirable locations in the region for medical tourism, and the country is rapidly developing an international reputation for high quality and affordable healthcare.⁴¹³ Due to recent shifts in the political climate of the Middle East, Jordan has accepted an influx of refugees. This, coupled with an increase in the domestic population, has led to a significant increase in the demand for hospitals as well as demands for suitable, sustained healthcare infrastructure and services overall.⁴¹⁴

The country's healthcare system is mainly divided between public and private institutions. The public sector provides 37% of all hospital beds in the country while the military's Royal Medical Services provides 24% of beds, and the private sector provides 36% of beds.⁴¹⁵ Currently, there are 117 hospitals in Jordan offering services to Jordanian and non-Jordanian patients. There are 69 private hospitals, 31 governmental hospitals, 15 hospitals for the royal medical services, and 2 university hospitals.⁴¹⁶

In addition to the public and private sectors, a significant portion of healthcare in Jordan, specifically for refugees, is provided through programmes led by the United Nations and non-governmental humanitarian agencies. UNRWA is the dominant provider of primary healthcare for Palestinian refugees. It provides free or heavily subsidized preventive healthcare and limited curative medical treatment to its beneficiaries at its health centres located inside and outside refugee camps.⁴¹⁷ Furthermore, under an agreement with the Ministry of Health, UNRWA can refer patients to public hospitals for medical treatment and will cover part of the cost of some hospital referrals for inpatient care.⁴¹⁸ Furthermore, UNHCR, together with health partners, continues to support access to primary, secondary, and tertiary healthcare services for all other refugees in the camps and urban areas, through the referral system and the cash-for-health programme.⁴¹⁹ UNHCR-supported health services are available for free for all vulnerable refugees excluding Palestinians.⁴²⁰ Additionally, until late 2014, the Jordanian Ministry of Health provided healthcare free of charge to all Syrian refugees registered with the UNHCR. This caused a large burden on the healthcare system.⁴²¹ In response, the GoJ announced a new health access policy in early 2018, reducing the level of access to all refugees outside camps, where refugees were required to pay 80% of the full foreigner's rate at MoH facilities (this represented a two- to five-fold increase in service rates).^{422,423} The new

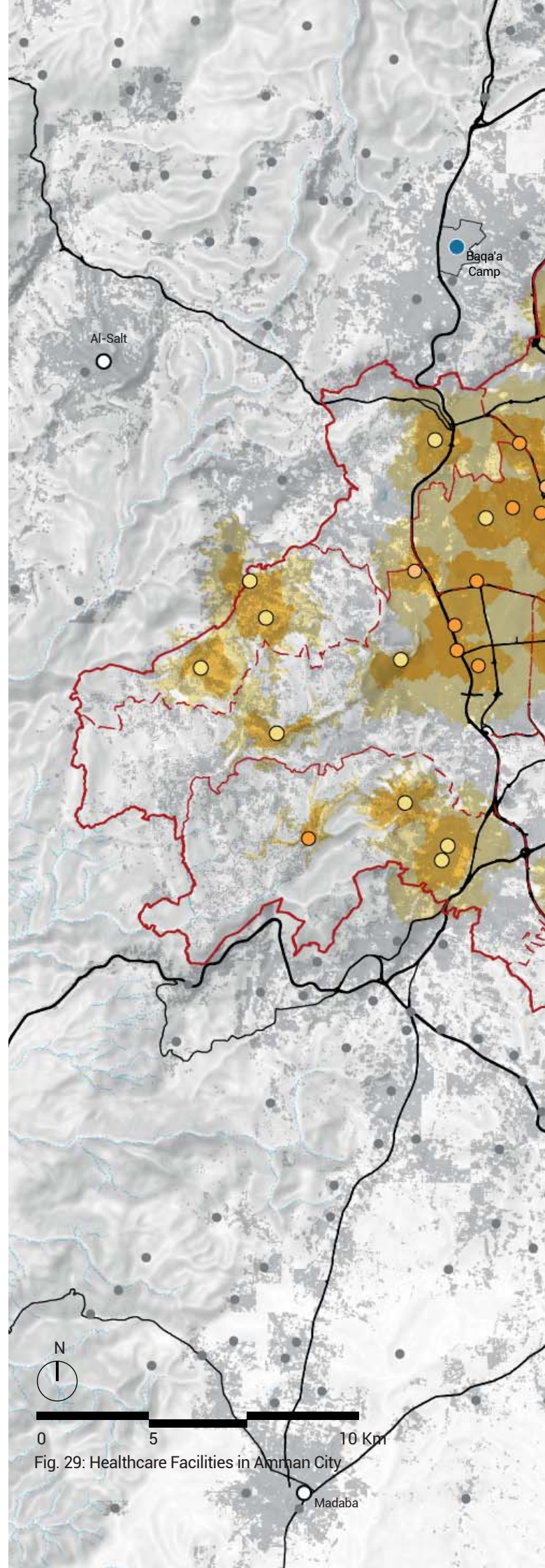
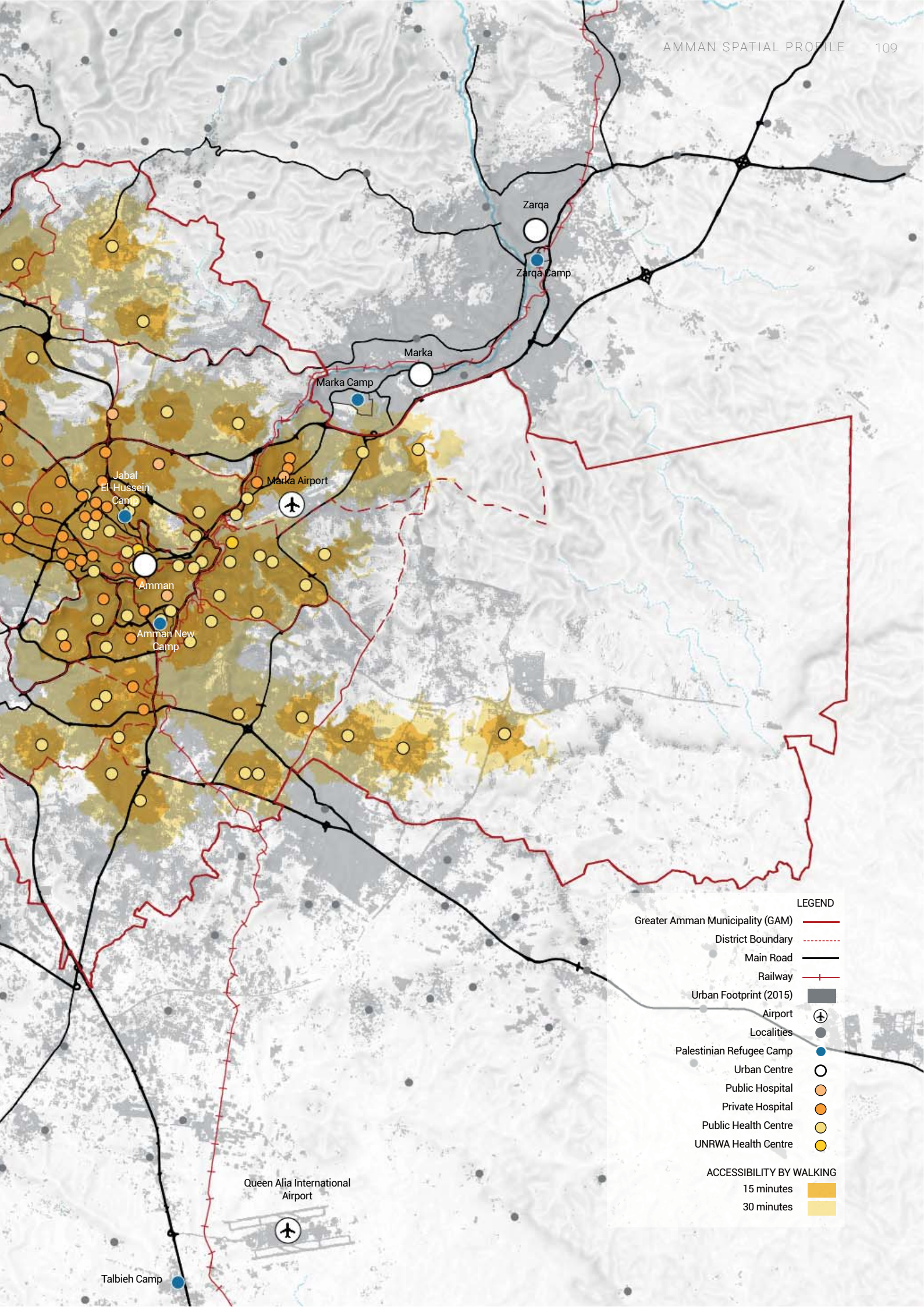


Fig. 29: Healthcare Facilities in Amman City



LEGEND

- Greater Amman Municipality (GAM) ————
- District Boundary - - - - -
- Main Road ————
- Railway ————
- Urban Footprint (2015) ■■■■
- Airport ⊕
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre ○
- Public Hospital ●
- Private Hospital ●
- Public Health Centre ●
- UNRWA Health Centre ●

ACCESSIBILITY BY WALKING

- 15 minutes ■■■■
- 30 minutes ■■■■

Talbieh Camp

Queen Alia International Airport

Jabal El-Husseini Camp

Amman

Amman New Camp

Marka Airport

Marka Camp

Marka

Zarqa

Zarqa Camp

policy and huge inflation in the cost of health services caused considerable hardship for all refugees living outside camps. This affected the access to healthcare facilities and utilization behaviours among urban refugees. The impact on vulnerable Syrian Refugees was the most significant, whereby 69% of households experienced reduced their access to healthcare, 9% reported that medicine was unaffordable, 17% of households have reportedly increased their level of debt, and more than 53% of Syrian spent more than 10% of their expenditure on health items.⁴²⁴ In 2019, the Government of Jordan reinstated subsidized access to public healthcare for Syrian refugees.⁴²⁵ This was extended in 2020, to all non-Syrian asylum seekers and refugees across Jordan.⁴²⁶ Accordingly, primary, secondary, and some tertiary healthcare services are available to all registered refugees from all nationalities at the non-insured Jordanian rate at public health centres and Governmental hospitals.⁴²⁷ The non-insured Jordanian rate is normally considered affordable for non-vulnerable individuals especially at secondary and tertiary levels of care.⁴²⁸ Based on the latest population census, about 56% of the Kingdom's overall population are insured.⁴²⁹ The majority of Jordanians have insurance with the public sector, while the remainder have coverage through private, university, or military sources. However, there is considerable geographic disparity in the population with healthcare insurance, whereby in 2015, Amman Governorate had the lowest percentage of population covered by health insurance, at 41.2% much lower than the national average.⁴³⁰ Furthermore, regarding the COVID-19 vaccination rates, the latest statistics from the MOH reports, Jordan has administered approximately 8 million doses of COVID-19 vaccines so far, whereby approximately 37.3% of the country's population has been fully vaccinated with two doses and 41.2% with one dose.⁴³¹ Additionally, based on data from the MOH and National Centre for Security and Crisis Management (NCSCM), UNHCR has estimated that, as of the end of October 2021, 33% of Syrian refugees living outside of camps have been vaccinated against COVID-19.⁴³²

At city level, GAM has 5 public hospitals of which 2 are specialized (1 psychiatric hospital and 1 addiction treatment centre), 3 military hospitals, 67 public health centres and 2 UNRWA health centres distributed across its neighbourhoods. The average number of hospital beds per 100,000 GAM residents is 180 beds. The map displays the spatial distribution of existing public and private hospitals, and health centres in GAM. 47.3% of GAM's population have access to public hospitals and public health centres within a 15-minute walking distance, while 86.9% have access within a 30-minute walking distance.

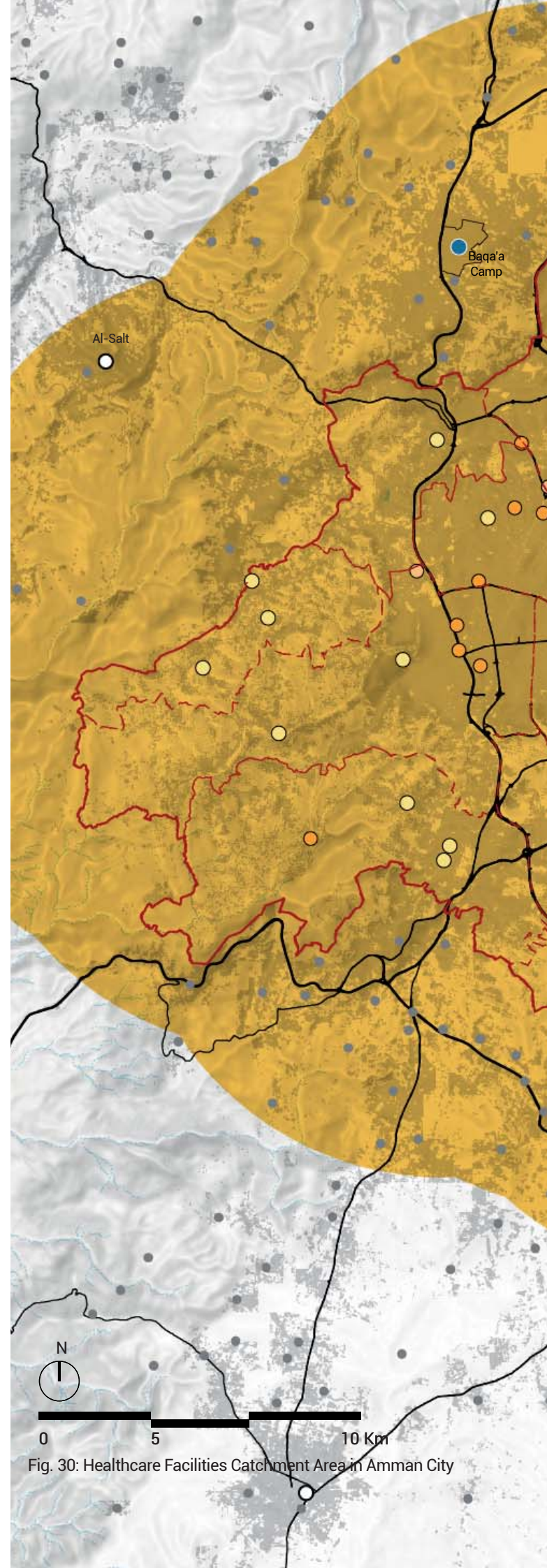
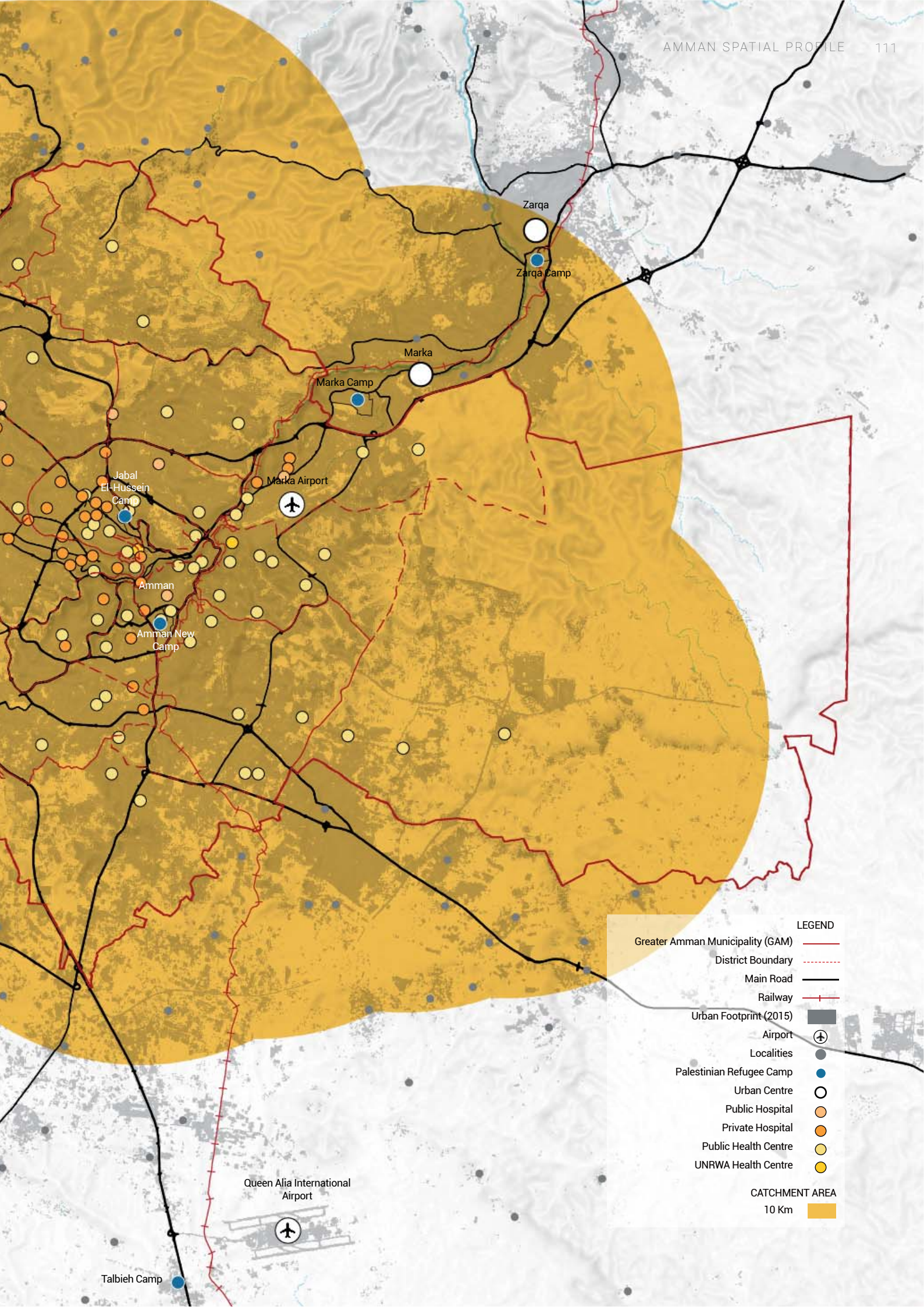


Fig. 30: Healthcare Facilities Catchment Area in Amman City



LEGEND

- Greater Amman Municipality (GAM)
- District Boundary
- Main Road
- Railway +
- Urban Footprint (2015)
- Airport ✈
- Localities
- Palestinian Refugee Camp
- Urban Centre
- Public Hospital
- Private Hospital
- Public Health Centre
- UNRWA Health Centre

CATCHMENT AREA

- 10 Km

Access to Public Facilities/ Commercial Activities

In Jordan, buildings in mixed-use areas usually include commercial service facilities on the ground floors. Therefore, the mixed-use areas have been taken into consideration when analysing the access to Commercial Activities.

Commercial and mixed land use within the GAM is limited to 2.8%. As depicted in the map, commercial activities are most evident in the districts around the city centre and along main roads. Consequently and in accordance to the commercial accessibility map presented in GAM's Performance and City Resilience report, access to commercial services is highest along main roads and in the downtown area, and decreases moving outwards. The south and north are well served, however, access to Commercial Activities is extremely limited in the east of GAM, this is due to the extremely low population density. Some low density areas in the far west of GAM also have limited access, while according to the map, the built up areas in the west seem to have good access.

Based on the SDG indicator analysis of access to public services within 15 and 30 minutes walking distance, 78.9% and 97% of GAM's population have access to commercial activities within 15-minute walking distance and within 30-minutes walking distance, respectively.

Furthermore, local standards indicate that the service catchment radius of commercial activities is 500 meter. Accordingly, 93.5% (338.3 km²) of GAM's urban area is fully served with commercial activities, while 6.5% (23.5 km²) have no commercial facility coverage.

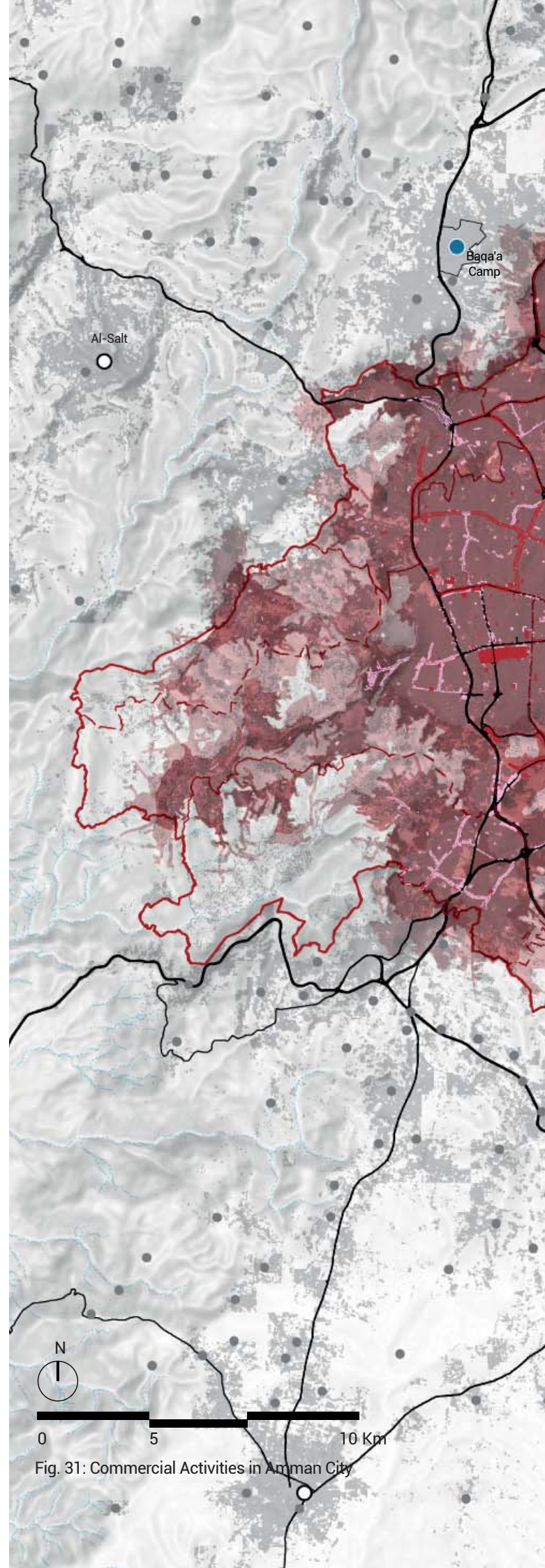
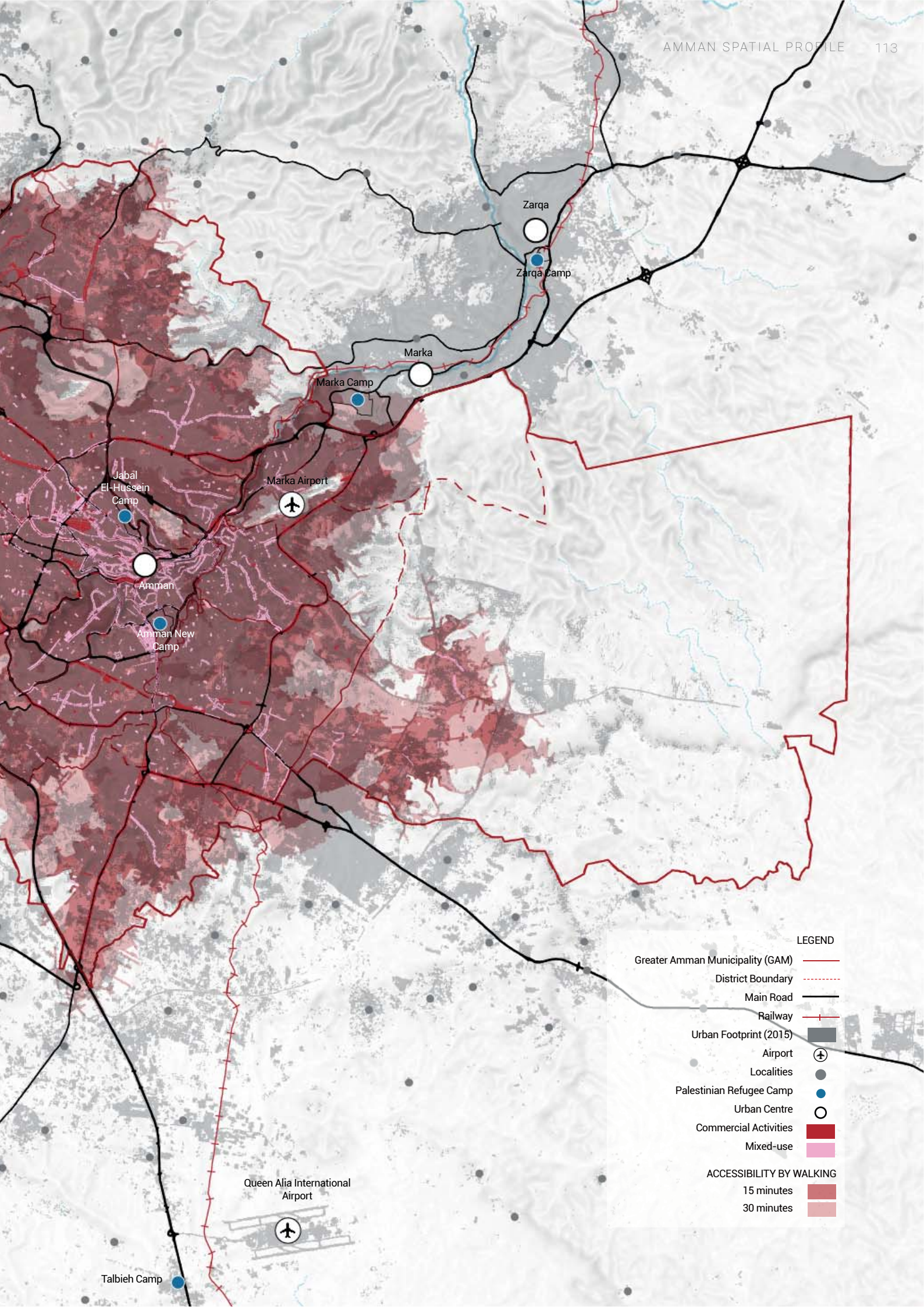


Fig. 31: Commercial Activities in Amman City



LEGEND

- Greater Amman Municipality (GAM) ————
- District Boundary - - - - -
- Main Road ————
- Railway - - - - -
- Urban Footprint (2015) ■■■■
- Airport ⊕
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre ○
- Commercial Activities ■
- Mixed-use ■

ACCESSIBILITY BY WALKING

- 15 minutes ■
- 30 minutes ■

Access to Public Facilities / Education Facilities

According to data from the Department of Statistics (DOS), Jordan has a substantial school-age population, whereby 1.8 million children are between the ages of 6 and 15 as of the end of 2017.⁴³³ Children of Jordanian nationality are the majority at 84%, whereas Syrian children account for 10% and other nationalities for 6%.⁴³⁴ Additionally, 36% of the Kingdom's school-age population live in Amman Governorate.⁴³⁵

As the Syrian conflict continues into its tenth year, Syrian refugee children in Jordan are confronting obstacles to education that grow more acute as they progress into secondary education. The main factors contributing to the decreasing education enrolment of Syrian refugees in Jordan include poverty, the lack of affordable and safe transportation, the poor quality of education in schools for Syrian children, the low value of continuing education for Syrian refugees given their limited professional opportunities in Jordan, administrative barriers to enrolment, as well as the lack of accommodations for children with disabilities.⁴³⁶ To alleviate the burden on over-crowded schools in areas where Syrian families are concentrated, the Ministry of Education has facilitated double shift schooling in Jordanian schools to accommodate the massive numbers of refugee children who wish to continue their education.⁴³⁷

Overall, the Jordanian educational system consists of 2 years of preschool education, 10 years of compulsory basic education for students from the ages of 6 until 16 years old, and 2 years of secondary academic or vocational education.⁴³⁸ The 10 years of mandatory education is free for students in public schools and advised by the Ministry of Education. Furthermore, schools in Jordan are mainly categorised into private and public schools.

GAM has a high educational level, the first Jordanian university, the "University of Jordan" was established in Amman in 1962. Moreover, it includes the majority of specialized academic institutes such as; The Royal Academy of Culinary Arts, Jordan Academy of Music, Queen Noor Civil Aviation Technical College and many more.

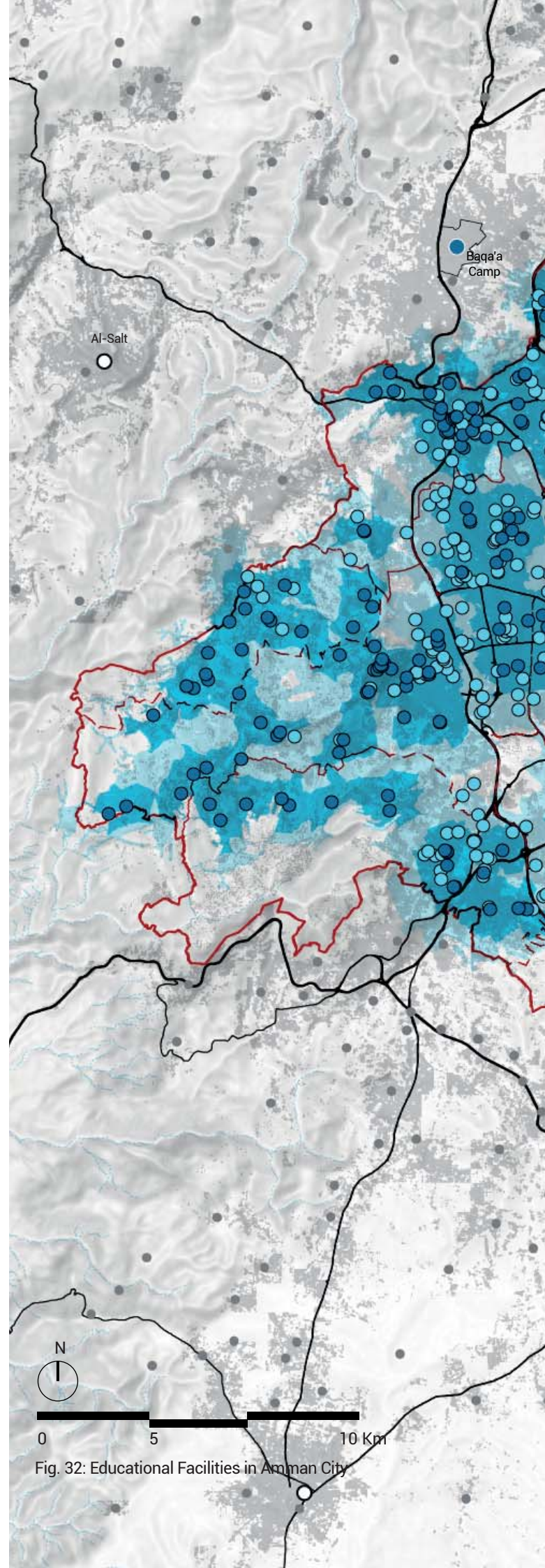
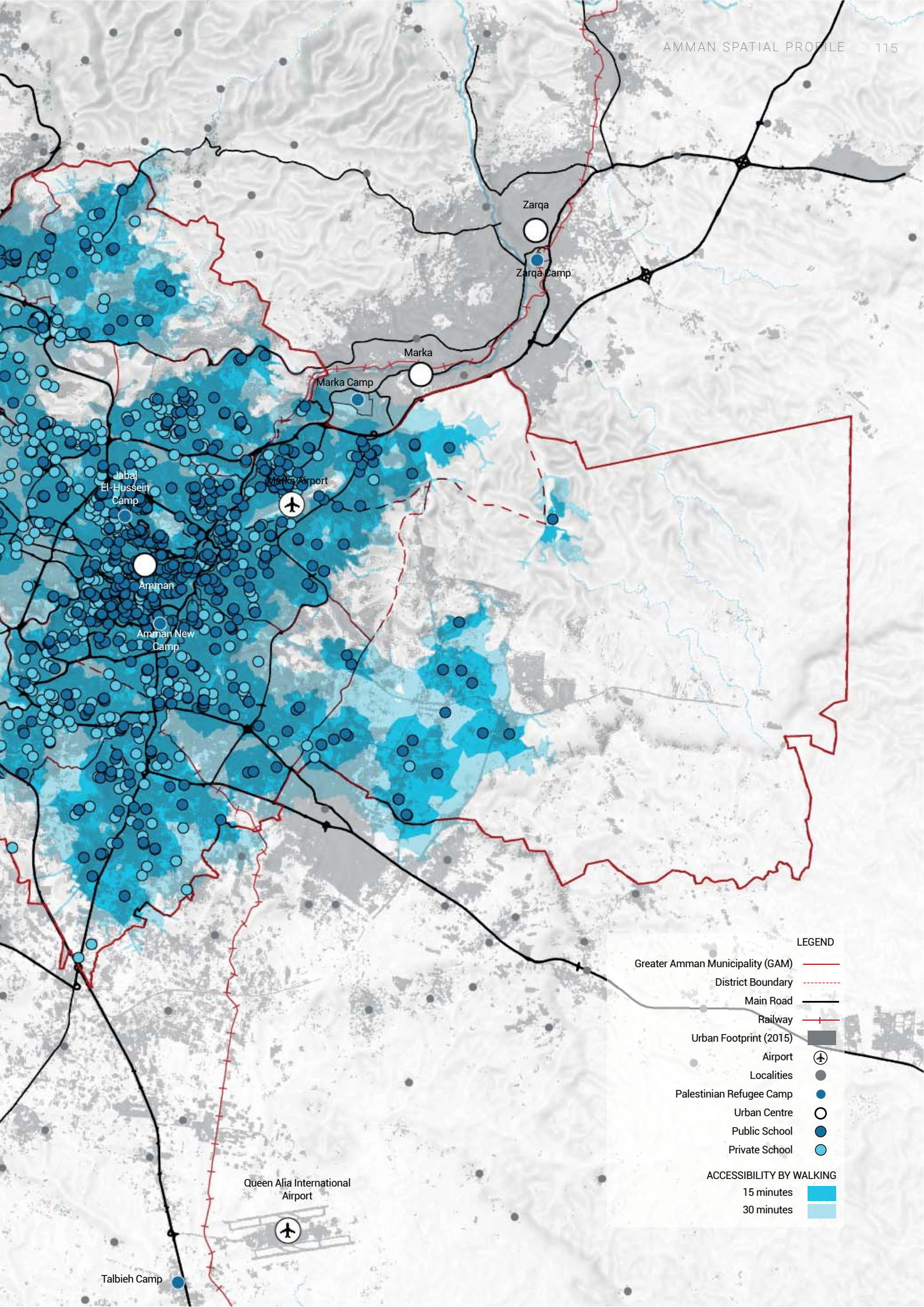


Fig. 32: Educational Facilities in Amman City



LEGEND

- Greater Amman Municipality (GAM) ————
- District Boundary - - - - -
- Main Road ————
- Railway ————
- Urban Footprint (2015) ■■■■
- Airport (⊕)
- Localities (●)
- Palestinian Refugee Camp (●)
- Urban Centre (○)
- Public School (●)
- Private School (○)

ACCESSIBILITY BY WALKING

- 15 minutes (Dark Blue)
- 30 minutes (Light Blue)

Talbieh Camp

Queen Alia International Airport

Jabal El-Husseini Camp
 Amman
 Amman New Camp

Marka
 Marka Camp
 Marka Airport

Zarqa
 Zarqa Camp

As depicted in the map, educational facilities are highly concentrated in the districts around the city centre, and decrease as you move out. However, it is evident that all districts are served with educational facilities. The eastern area of GAM has a disproportionately lower number of educational facilities, and consequently lower access, but this is attributed to the low population density and built-up area. Furthermore, it is apparent that a higher number of private schools are located west of Amman where the larger percentage of people with higher income generally reside, while public schools are more available in the east.

There are 660 public schools in GAM and 561 private schools. The street network analysis conducted on public schools in GAM indicates that 85.8% of the population have access to public schools within a 15-minute walking distance, while 98.3% have access within a 30-minute walking distance. Based on the local standards,⁴³⁹ the service catchment radius for primary and secondary public schools is 3 and 5 km respectively. Private schools were not considered in this analysis, since the majority of the population cannot afford them. As the analysis finds, GAM is well served with public schools spatially.

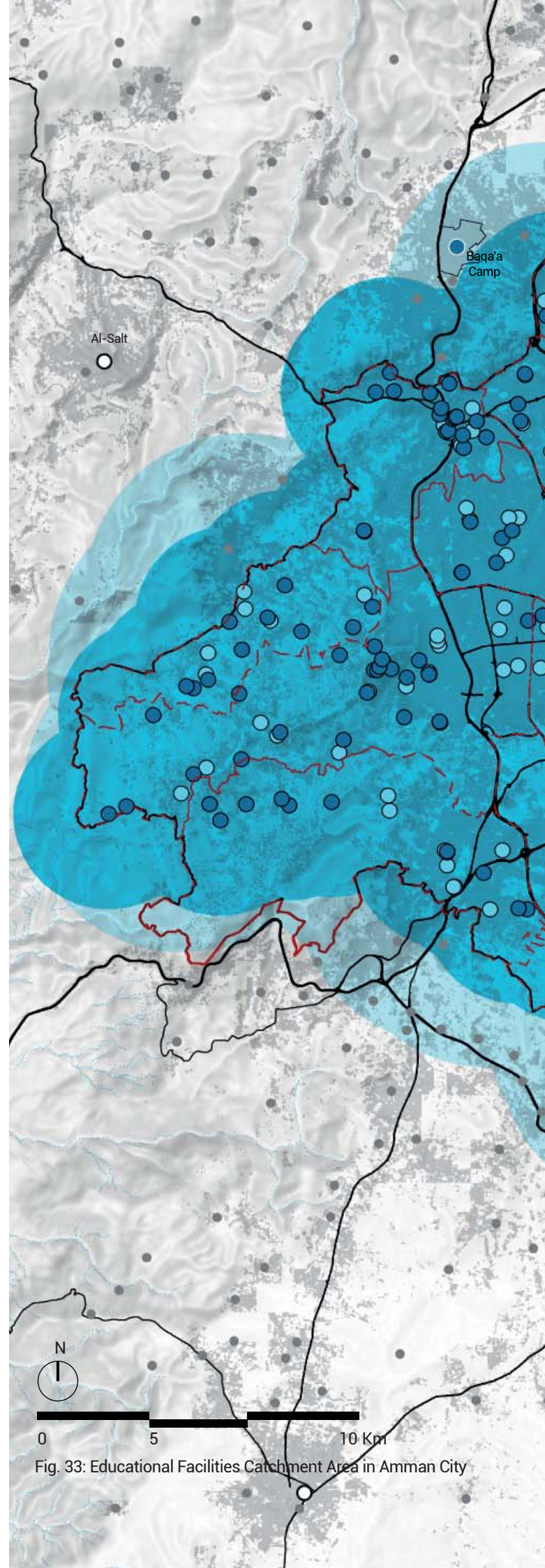
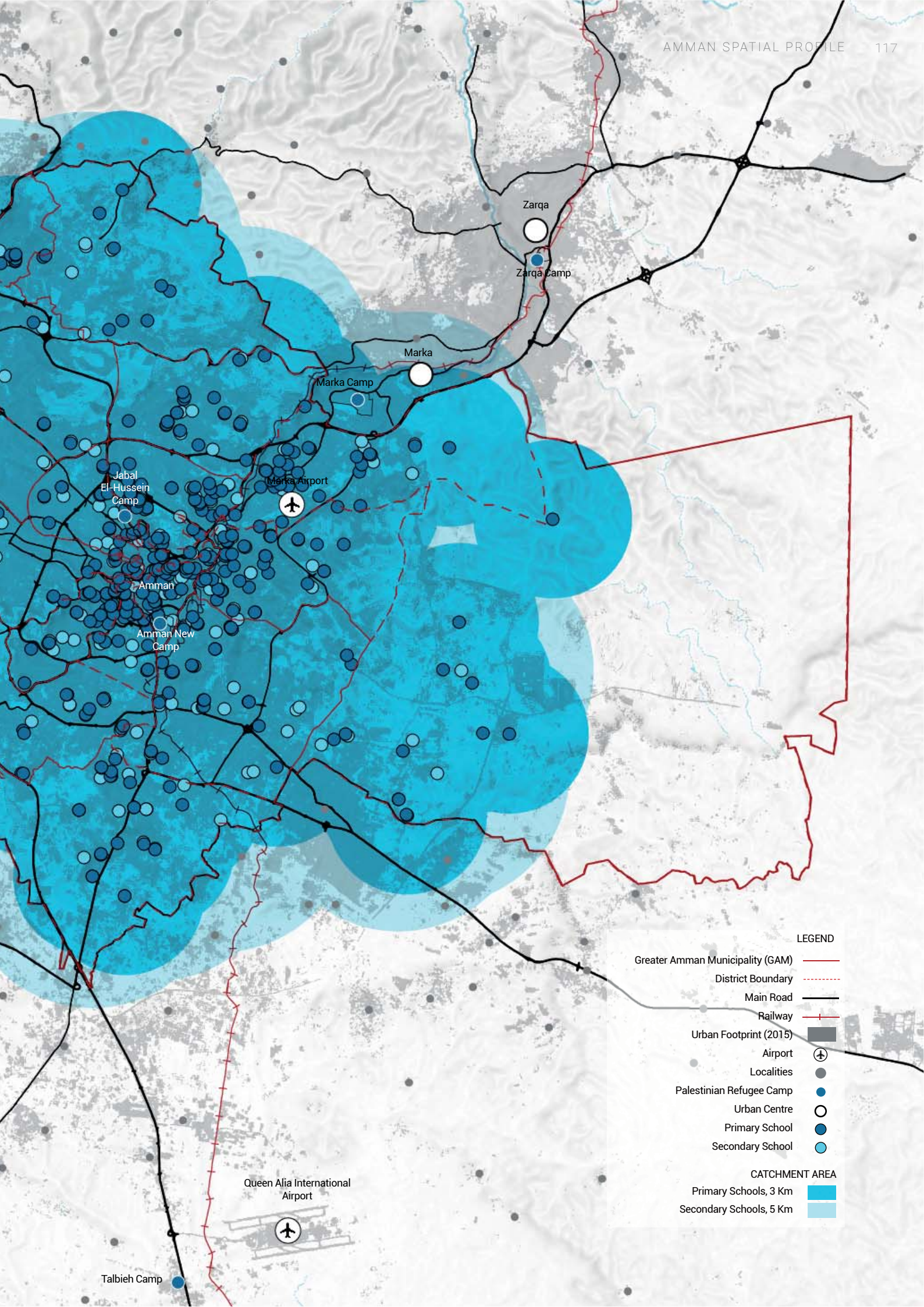


Fig. 33: Educational Facilities Catchment Area in Amman City



LEGEND

- Greater Amman Municipality (GAM) ————
- District Boundary - - - - -
- Main Road ————
- Railway —+—+—+—
- Urban Footprint (2015) ■■■■
- Airport ⊕
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre ○
- Primary School ●
- Secondary School ●

CATCHMENT AREA

- Primary Schools, 3 Km ■■■■
- Secondary Schools, 5 Km ■■■■

Talbieh Camp

Queen Alia International Airport

Jabal El-Hussein Camp

Amman
Amman New Camp

Marka Airport

Marka Camp

Marka

Zarqa
Zarqa Camp

Access to Public Facilities / Recreational Facilities

The minimal availability of public parks is considered a challenge across many Jordanian municipalities and cities, with GAM being no exception.

The city of Amman lacks parks and green open spaces, which is limited to 2.5m² of park area per capita.⁴⁴⁰ There are 189 public parks, with a total area of approximately 8.694 km² within the Municipality boundaries.⁴⁴¹ However, these parks are limited to only 92 out of GAM's 220 neighbourhoods. Ashrafiyyeh, Al-Shaheed Al-Janobi, Al-Ameer Al-Hussein Ibn Abdullah and Ain Ghazal are a few of the neighbourhoods that do not have parks.

GAM identify land use as the major cause for the lack of green spaces and detrimental impacts on biodiversity. Currently, land use to accommodate for rapid urbanisation and population growth has taken precedence over the protection and promotion of existing green space, and there are no legally-binding requirements in development policy relating to the inclusion of green space in new or existing developments. Improving spatial planning has been identified as a high priority of GAM. However, there is a high number of vacant plots in Amman which contribute to informal open spaces.⁴⁴²

As shown in the map and based on the SDG indicator analysis of public services within a 15 and 30 minute walking distance, 72.5% of GAM's population has access to public parks within a 15-minute walking distance while 92.8% has access within a 30-minute walking distance.

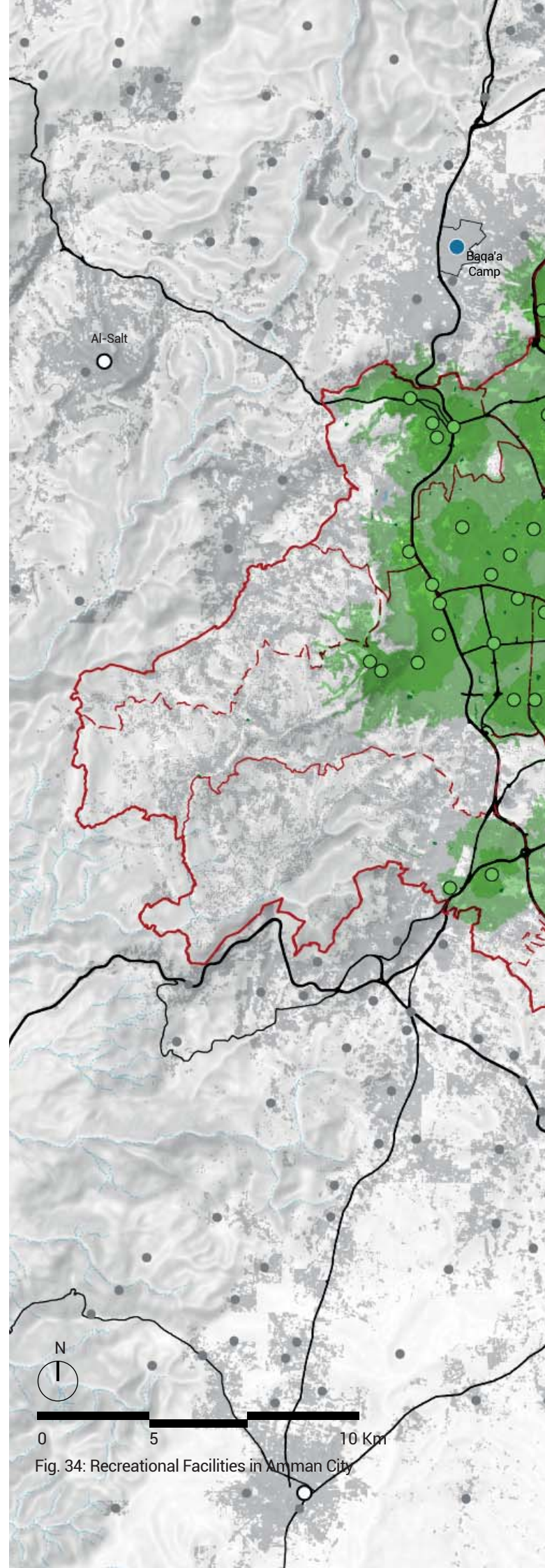
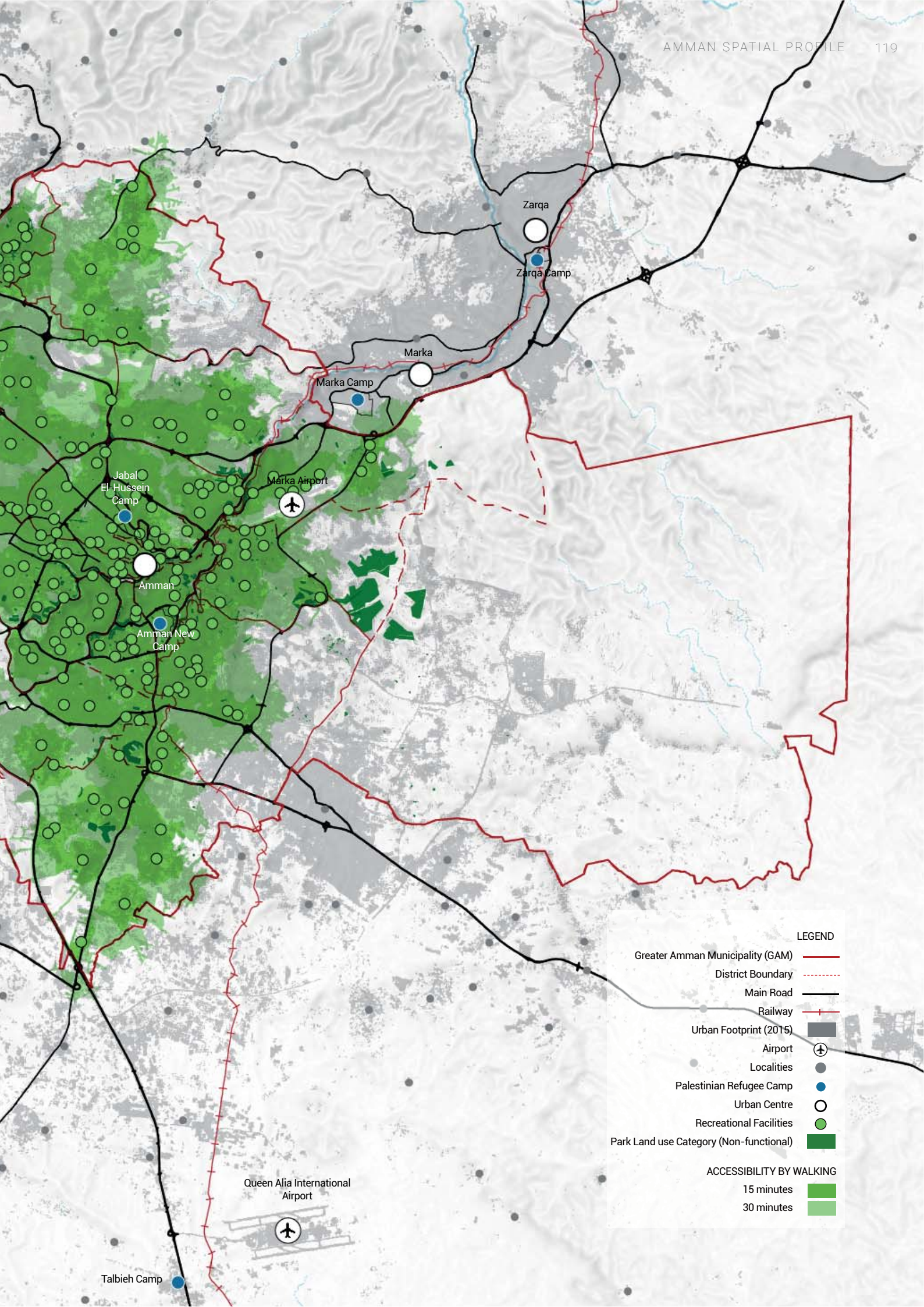


Fig. 34: Recreational Facilities in Amman City



LEGEND

- Greater Amman Municipality (GAM) —
- District Boundary - - -
- Main Road —
- Railway + + +
- Urban Footprint (2015)
- Airport ✈
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre ○
- Recreational Facilities ○
- Park Land use Category (Non-functional)

ACCESSIBILITY BY WALKING

- 15 minutes
- 30 minutes

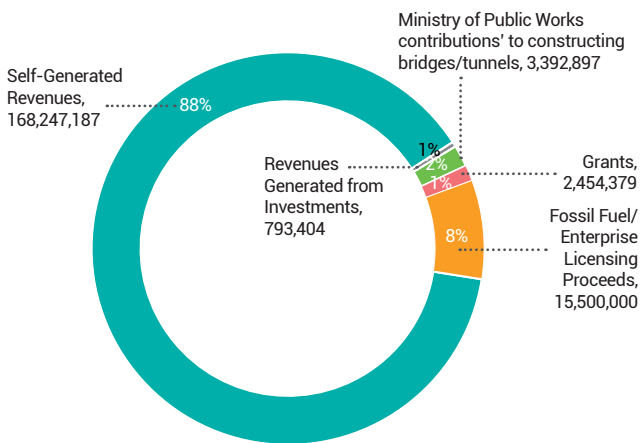
Municipal Financial Context

GAM is an autonomous entity that does not fall under the jurisdiction of MoLA, and reports directly to the Prime Minister. As such, GAM city manager has the responsibility of preparing the annual budget, which the council has the responsibility of approving and have it endorsed by the Prime Ministry. In 2016, GAM's budget was equivalent to all the other municipalities combined, JD 320 million compared to JD 380 million.⁴⁴³ The fiscal impact of the influx in Amman's migrant population between 2011-2015 is estimated at \$2.5 billion annually. There are no direct financial relationships between the GAM and the districts within it.⁴⁴⁴ GAM's budget preparation process proceeds in the absence of any schedule from the GoJ. In each of the last three fiscal years, disbursements have not been received evenly or systematically.⁴⁴⁵ The Audit Bureau (AB) has a resident team at the GAM that performs continuous audits. It performs ex-ante audits over 100% of GAM's

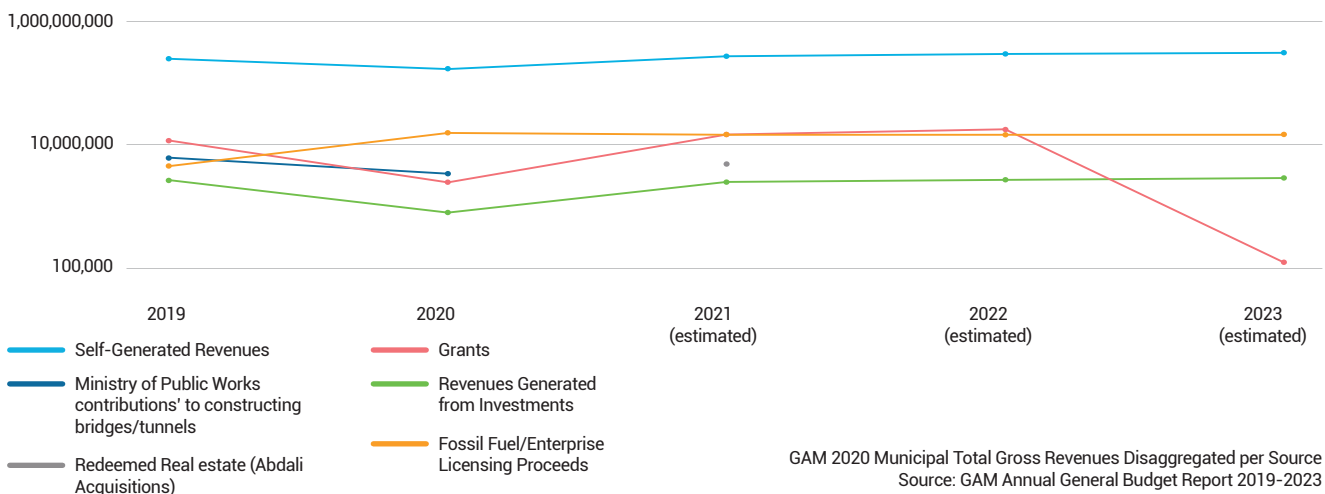
expenditures, 70% of revenues (mainly building license fees), and 15% of other revenues. However, a withdrawal from the ex-ante audit process started a few years ago, along with the government strengthening of internal audit in public entities. As such, it is expected that the AB will progressively withdraw completely from ex-ante audits in more entities, including GAM. GAM does not submit annual financial statements to the AB for audit, and although the GAM acts as its own legislative authority, the Council does not perform any scrutiny of AB reports. The Parliament reviews the annual audit report of the Audit Bureau, which has a section on the GAM, and holds public hearings.

Greater Amman Municipality mobilises funds for infrastructure projects through various channels. In terms of municipal revenue, 88% was self-generated in 2020.⁴⁴⁶ GAM has seven main self-generated revenue sources and they include; property taxes, levies and fines, returns of investments, central government grants, grants from foreign partners, interest on cash investments and income from the sale of land and property leases.⁴⁴⁷ Revenues from taxation is administered by the Income and Sales Tax Department (ISTD) and the LSD which is responsible for property taxes, all reporting to the Minister of Finance.

The tax collection function is managed by the Revenue Collection Department within GAM, which reports to the Deputy City Manager (Financial Affairs Directorate).⁴⁴⁸ Higher government allocates an annual budget to be directly transferred to municipalities, which typically comes from the proceeds of the 8% fossil fuel tax.⁴⁴⁹ The process of how the central government allocates funding for capital projects within municipalities is a complex task



GAM 2020 Municipal Total Gross Revenues Disaggregated per Source
Source: GAM Annual General Budget Report 2019-2023



GAM 2020 Municipal Total Gross Revenues Disaggregated per Source
Source: GAM Annual General Budget Report 2019-2023

that is impacted by a variety of factors, such as the overall financial capacity of the municipality. Therefore, the share which each municipality receives may change with every year. The amounts received by GAM generally match with the amounts originally budgeted (approximately JOD15million per year on average). For example, in 2021 a total of 14,500,000 JOD was allocated to GAM from this type of government transfers. This represents 4.7% of GAM's total annual revenues.⁴⁵⁰ In general this type of subsidy is benefiting smaller municipalities rather than greater municipalities that are able to generate their own revenues. According to GAM's general budget, revenues are classified into 8 categories; self-generated revenues, revenues generated from investments, Ministry of Public Works and Housing (MoPWH) contributions, redeemed real estate acquisitions, grants, fossil fuel/enterprise licensing proceeds, government's debt paid to GAM and government's debt settlements paid to GAM.⁴⁵¹ When comparing the first category self generated revenues to the total gross revenues from 2019 till 2023 we notice a low of 88% and a high of 94% in that time frame.⁴⁵² GAM also collects revenues on behalf of other agencies, either as part of GAM's mandated responsibilities or for a pre-determined collection charge (15% of the amount collected). This applies to:

- Sales tax deposits (transferred to Taxes Department)

- Income tax deposits (transferred to Taxes Department)
- Traffic fines for municipalities outside Amman (transferred to other municipalities with 15% charge)
- Property tax (transferred to Ministry of Finance)
- Sewage tax (transferred to Ministry of Finance)
- Stamps fees (transferred to Ministry of Finance)
- Property tax for other municipalities (transferred to other municipalities with 15% charge)

As for external funding, GAM is able to access financing through various channels. In terms of local aid, GAM can access financing from local development foundations, local NGOs, local development funds and public LLCs. GAM is also able to access financing from local municipal grants, such as the Princess Alia Foundation, Phosphate Company, Arab Potash Company, Jordan Environment Fund (JEF), The Royal Hashemite Court. GAM also has access to foreign development aid; As GAM is an autonomous entity, it has eased interactions with foreign donors and can liaise directly with aid coming from Official Development Assistance as well as development funds, banks and agencies. However, MoPIC is often in a better position to do so as it is perceived to be an enabler. This was witnessed in the BRT project funded by the Agence Française de Développement (AFD), which was facilitated by MoPIC.

Revenues	2019	2020	2021 (Estimated)	2022 (Estimated)	2023 (Estimated)
Self-Generated Revenues	247,321,041	168,247,187	270,707,000	295,616,000	309,520,891
Revenues Generated from Investments	2,681,015	793,404	2,500,000	2,700,000	2,900,000
Ministry of Public Works contributions' to constructing bridges/tunnels	6,185,274	3,392,897	0	0	0
Redeemed Real-estate (Abdali Acquisitions)	0	0	5,000,000	0	0
Grants	11,730,585	2,454,379	14,620,577	17,823,834	124,350
Fossil Fuel/Enterprise Licensing Proceeds	4,500,000	15,500,000	14,500,000	14,500,000	14,500,000
Government's Debt paid to GAM	0	0	0	0	0
Government's Debt Settlements paid to GAM	0	0	0	0	0
Total Gross Revenues	272,417,915	190,387,867	307,327,577	330,639,834	327,045,241
Current Expenditures	2019	2020	2021 (Estimated)	2022 (Estimated)	2023 (Estimated)
Wages and Labor Expenditures	148,200,434	125,010,541	164,270,000	163,820,000	168,014,000
Operating Expenditures	24,679,611	12,305,727	13,562,000	10,970,000	12,025,000
Other Expenditures	38,512,205	26,526,810	44,607,200	42,928,672	40,649,070
Total Current Expenditures	211,392,250	163,843,078	222,439,200	217,718,672	220,688,070

Capital Expenditures for development projects	2019	2020	2021 (Estimated)	2022 (Estimated)	2023 (Estimated)
Feasibility Studies and Consultancies	672,746	267,447	1,580,470	700,000	700,000
Infrastructure Projects (Construction of retaining walls, pavement, sidewalks, culverts, streets, etc)	46,793,031	28,244,959	43,089,878	42,560,000	30,000,000
Purchasing vehicles, machinery and their associated fuel and maintenance	62,917,826	17,692,879	15,752,000	16,000,000	16,000,000
Improving Traffic and lighting	5,359,215	3,079,146	7,527,000	10,000,000	10,000,000
Various construction/public works, purchasing raw material, maintenance for GAM's production and maintenance buildings/amenities	1,503,397	1,213,586	4,000,000	3,000,000	5,600,000
Upgrading parks, green spaces, and sustaining public health	4,471,752	1,390,305	4,258,000	6,000,000	5,000,000
Developing libraries, cultural and social projects	799,158	336,238	760,000	1,200,000	1,301,503
Environmental sustainability projects	263,966	3,000	150,000	650,000	1,000,000
Developing Information Technology and Network Infrastructure	3,115,143	1,713,840	5,000,000	6,800,000	6,000,000
Special Development Projects	21,202,809	16,293,007	13,112,000	23,000,000	23,000,000
Projects funded by the EBRD	4,175,791	3,795,955	22,905,500	0	0
Public Transport Expenditures	5,543,218	4,864,462	7,000,000	16,000,000	8,600,000
Developing Public Transport (BRT)	23,066,010	32,400,766	35,000,000		
Total Expenditures for Capital Development Projects	179,884,062	111,295,590	160,134,848	125,910,000	107,201,503
Land Acquisitions	29,684,904	18,752,587	50,000,000	20,000,000	20,000,000
Total Gross Expenditures (current + capital)	420,961,216	293,891,255	432,574,048	363,628,672	347,889,573
Total Surplus/Deficit	-148,543,301	-103,503,388	-125,246,471	-32,988,838	-20,844,332
Redeemed Credit	1,315,734				
Total Annual Surplus/Deficit	-147,227,567	-103,503,388	-125,246,471	-32,988,838	-20,844,332

Annual Actual Municipal Revenue/Expenditure Figures in JOD
Source: GAM Annual General Budget Report 2019-2023

GAM is eligible to borrow funds from commercial banks; with the impacts of the COVID-19 pandemic in 2020, GAM has suffered from significantly reduced revenue. This decreased their total gross revenue by 30% from JOD 272,417,915 JOD in 2019 to JOD 190,387,867 JOD in 2020. Thus, GAM had to borrow funds from banks to finance its current expenditures such as salaries and utilities.⁴⁵³

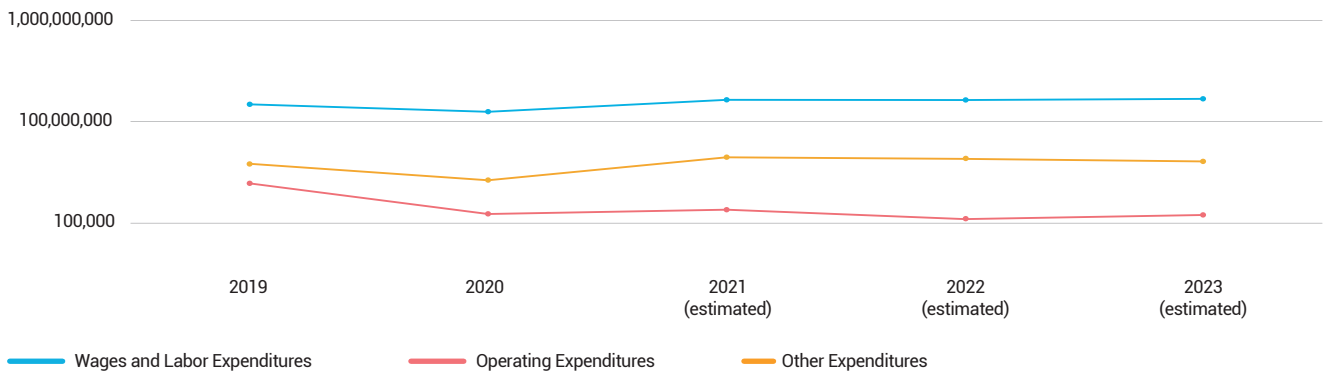
GAM also borrows funds from several sources to cover its deficit. In fact, it has several line items in its cash flow

statement titled "repayment of loans", "repayment of deficit" and "repayment of deficit from previous years".⁴⁵⁴ Based on the data presented in the table, self-generated revenues are increasing annually, with an exception for 2020, which can be attributed to COVID-19 pandemic, however, forecasts show continued exponential growth. In reference to municipal investments; GAM has embarked on a Capital Investment Plan (CIP), to put into place efficient and accountable systems for delivering municipal services. The goal of the plan is to upgrade existing systems for delivering urban

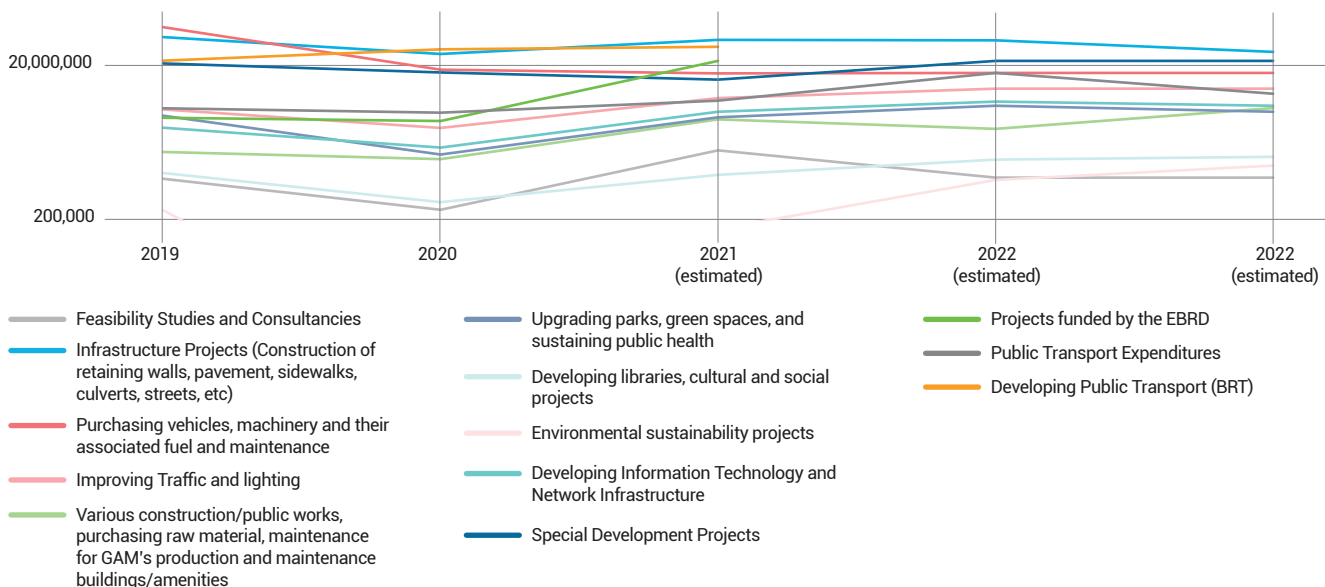
services, and to put in place new infrastructure. Moreover, there is an entity within GAM referred to as "Amman Vision", which is the investment arm for GAM responsible for creating infrastructure and non-infrastructure revenue generating investments that yield revenues to GAM.⁴⁵⁵ One major investment project developed and constructed by "Amman Vision" in 2020 was the "Amman Bus" transport system. The first phase included acquiring and deploying a fleet of 136 buses covering 55 destinations through 23 routes at a cost of 18 million JOD.⁴⁵⁶ The capital expenditure was covered by 10.3 million JOD of unsecured sub-sovereign loan to GAM to finance the acquisition of 136 diesel buses (including ancillary systems) as part of a larger bus fleet expansion involving 151 buses which include 15

electric buses as a pilot rollout of zero-emission public transport vehicles in the city of Amman.⁴⁵⁷ The loan was co-financed by a CAPEX grant of up to 8 million Euros from the Community Resilience ("CR") Sub Account of the EBRD.⁴⁵⁸

As for expenditures, wages and labour expenditures have the highest expenditure percentage, whereby in 2020, JOD 125 million was spent.⁴⁵⁹ This is followed by other expenditures, while operating expenditures have the least amount allocated.⁴⁶⁰ As for municipal capital expenditure, the majority of costs for 2020 included developing public transport, followed by infrastructure projects such as construction of retaining walls, pavement, sidewalks.⁴⁶¹



GAM Change in Municipal Current Expenditures in JOD (2019-2023)
Source: GAM Annual General Budget Report 2019-2023



GAM Change in Municipal Capital Expenditures in JOD per Sector (2019-2023)
Source: GAM Annual General Budget Report 2019-2023

Conclusion

Based on the most updated data from the 2015 census, the refugee density analysis conducted within GAM’s administrative boundaries considered the numbers of Palestinian, Syrian, and Iraqi refugees. Five neighbourhoods with the highest refugee presence were selected and further evaluated in coordination with GAM’s team members in order to identify and select the most vulnerable three neighbourhoods. The selected neighbourhoods for evaluation are Jabal Al Nuzha, Al Hashmi Al Janoubi, Al Qweismeh, Al Yadoudeh, and Al Amira Alia. The evaluation criteria included assessing the refugee presence in the selected neighbourhoods, the access to basic services, the access to public facilities, and access to public transportation. Accordingly, and as displayed in the table below, the evaluation revealed that the highest vulnerable neighbourhoods are Al Hashmi Al Janoubi, Al Qweismeh, and Al Yadoudeh Neighbourhoods.

The selected neighbourhoods are of different characteristics. As such, the profiling exercise will be done for three neighbourhoods with unique typologies, which is an added value for the Municipality, as it will build their capacity to replicate the process within the boundaries of other neighbourhoods and across typologies.

District	Jabal Al Nuzha	Al Hashmi Al Janoubi	Al Qweismeh	Al Yadoudeh	Al-Amira Alia
Refugee Presence	5	5	3	2	3
Needs access to Infrastructure networks	0	2	3	4	3
Needs access to public transportation	2	4	5	4	2
Needs access to basic services (schools, health centres, parks, & mosques)	2	2	2	3	4
Total	9	13	13	13	12

Evaluation Matrix with GAM

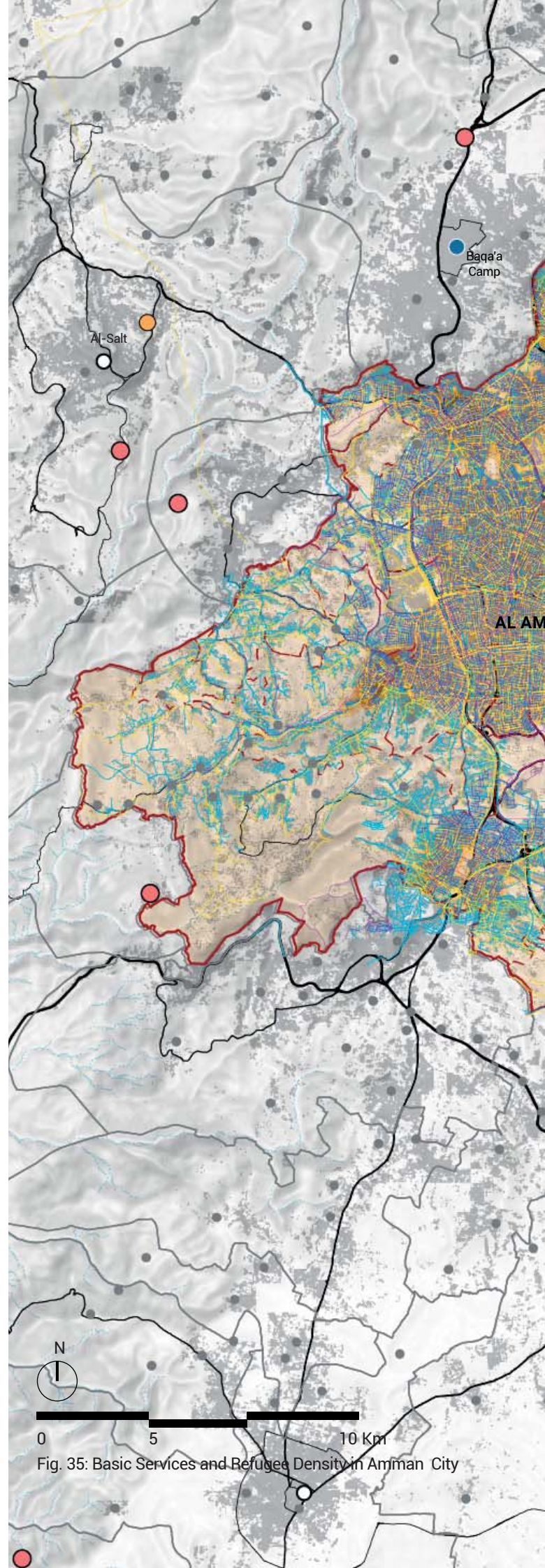
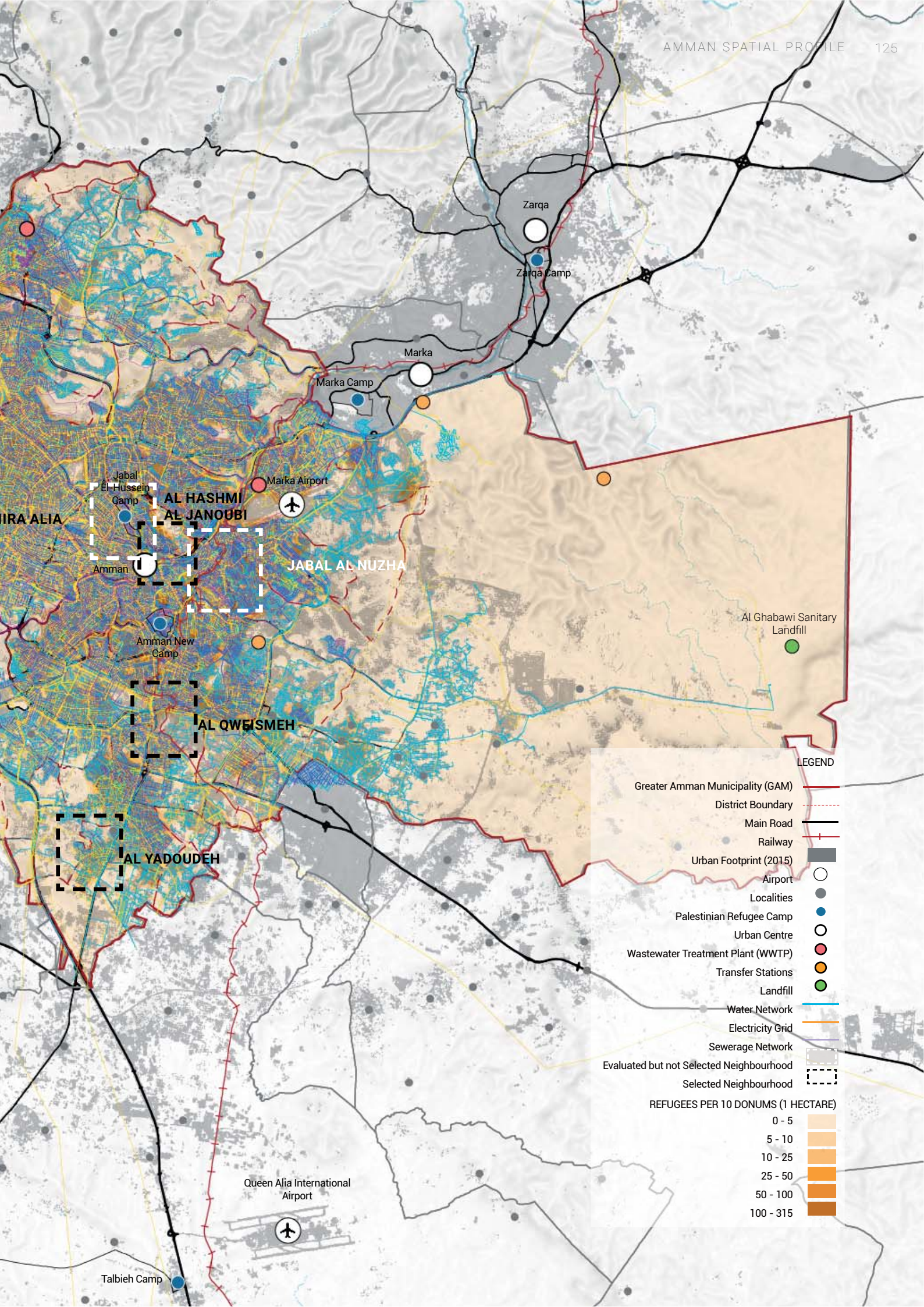


Fig. 35: Basic Services and Refugee Density in Amman City



LEGEND

- Greater Amman Municipality (GAM) ———
- District Boundary - - - - -
- Main Road ———
- Railway ———
- Urban Footprint (2015) ■■■■
- Airport ○
- Localities ●
- Palestinian Refugee Camp ●
- Urban Centre ○
- Wastewater Treatment Plant (WWTP) ●
- Transfer Stations ●
- Landfill ●
- Water Network ———
- Electricity Grid ———
- Sewerage Network ———
- Evaluated but not Selected Neighbourhood [Dotted Pattern]
- Selected Neighbourhood [Dashed Border]

REFUGEES PER 10 DONUMS (1 HECTARE)

- 0 - 5 [Lightest Orange]
- 5 - 10 [Light Orange]
- 10 - 25 [Medium Orange]
- 25 - 50 [Dark Orange]
- 50 - 100 [Dark Orange]
- 100 - 315 [Darkest Orange]

IRRA ALIA

AL HASHMI
AL JANOUBI

JABAL AL NUZHA

AL QWEISMEH

AL YADOUDEH

Zarqa

Zarqa Camp

Marka

Marka Camp

Marka Airport

Jabal El-Husseini Camp

Amman New Camp

Amman

Al Ghabawi Sanitary Landfill

Queen Alia International Airport

Talbieh Camp



“If we wish to rebuild our cities, we must first rebuild our neighbourhoods”

Harvey Milk

04

NEIGHBOURHOOD CONTEXT

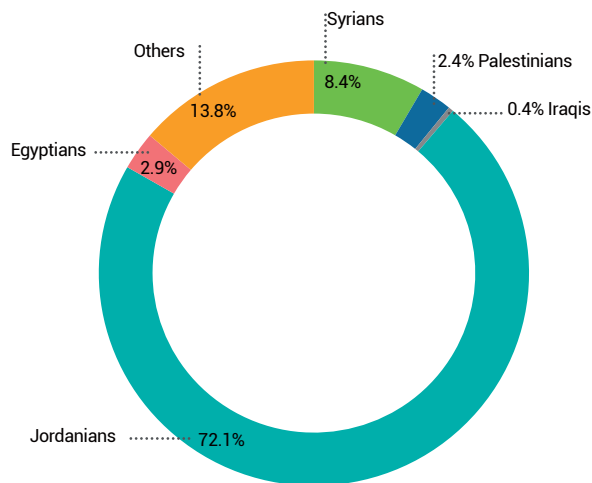
Al Madeena District and Al Hashmi Al Janoubi Neighbourhood Contexts

Consisting of nine neighbourhoods, the Al Madeenah District covers an area of 3.1 km² and accommodates a total population of approximately 58,316 inhabitants. The Al Hashmi Al Janoubi Neighbourhood within the Al Madeenah District was selected based on the findings of the refugee density analysis, which revealed that it has the highest refugee presence in comparison to the other neighbourhoods within the district.

The Al Hashmi Al Janoubi Neighbourhood has an area of 0.43 km², a total population of 14,100 inhabitants, and, accordingly, a population density of 32,118.4 person/km². It is one of the neighbourhoods in Amman City that was most affected by the influx of refugees. Refugee residents consist of 11.2% of the Al Hashmi Al Janoubi's population, whereby 2.4% are Palestinians, 8.4% are Syrians, and 0.4% are Iraqis. It is worth mentioning that the percentage of Palestinians represents Palestinians who do not hold a Jordanian citizenship, and the actual number of Palestinians are higher in this neighbourhood but they have a Jordanian citizenship.

Residential land use within the neighbourhood comprises of types C and D, whereby 9.9% of the neighbourhood's area is classified as type C and 71.7% is classified as type D. Around 6.7% of the land use in the neighbourhood is mixed-use and 3% is services.

The visual inspection of the neighbourhood found housing to generally be in good condition and structure, with most of the buildings having two to three floors.



Population Nationality Breakdown at Al Hashmi Al Janoubi Neighbourhood

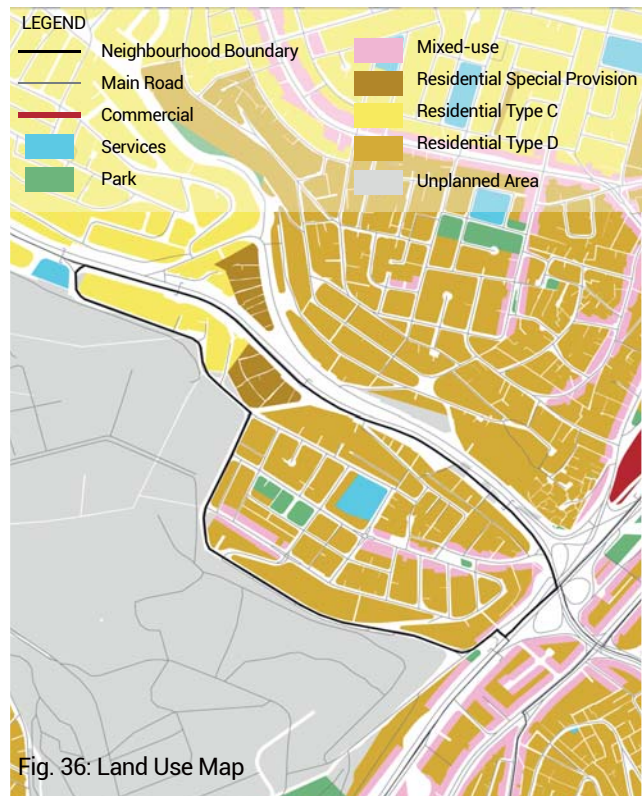
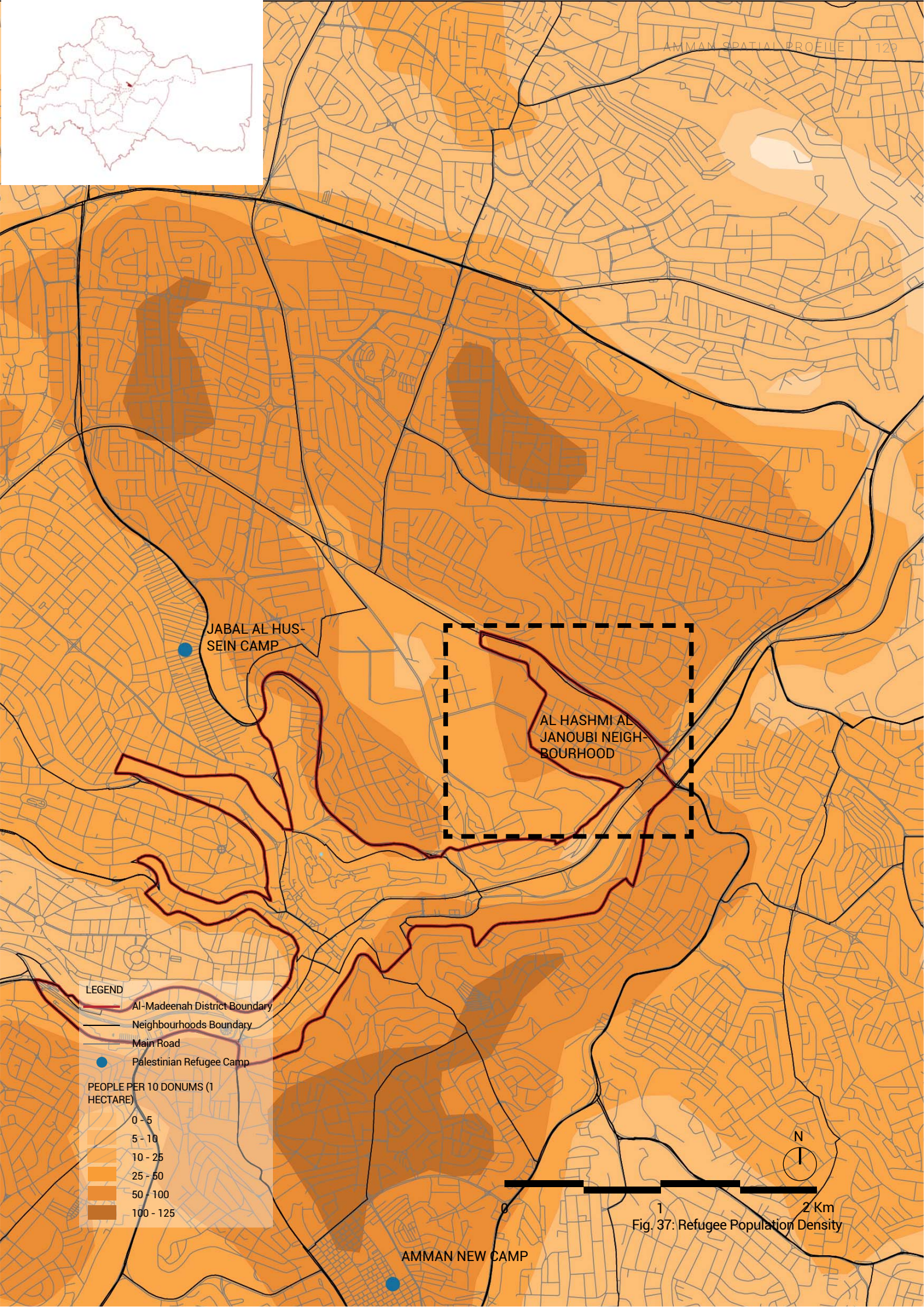


Fig. 36: Land Use Map



Al Hashmi Al Janoubi Housing Situation (UN-Habitat, 2021)



LEGEND

- Al-Madeenah District Boundary
- Neighbourhoods Boundary
- Main Road
- Palestinian Refugee Camp

PEOPLE PER 10 DONUMS (1 HECTARE)

- 0 - 5
- 5 - 10
- 10 - 25
- 25 - 50
- 50 - 100
- 100 - 125



Fig. 37: Refugee Population Density

AMMAN NEW CAMP

JABAL AL HUSSEIN CAMP

AL HASHMI AL JANOUBI NEIGHBOURHOOD

Access to Basic Services

Based on the data available, the map reveals that the Al Hashmi Al Janoubi Neighbourhood is connected to electricity, water, and sewerage networks. Additionally, a site visit was conducted to visually assess the challenges and situation on the ground while interacting with residents.

Electricity Service:

The map reveals that the Al Hashmi Al Janoubi Neighbourhood is well connected to the existing electricity network.

Water Service:

The capacity assessment tool measured the demand on the existing water network, which indicates the sufficiency of the existing network (whereby high demand means low network sufficiency) by factoring in the pipes' diameter and length, as well as the number of people served. The results designate areas of high and low demand on the tested infrastructure network. Overall, the water capacity assessment revealed that there is a relatively high demand on water network at the neighbourhood level. Although there is access to the existing water network across the neighbourhood, which indicates that the water network is serving a larger population than it is designed to. This shows that there is a need to upgrade the water network at the neighbourhood level to ease the pressure on the current network.

Storm-water Drainage System:

The visual inspection of the neighbourhood found that there are some storm-water drainage points. However, the neighbourhood residents explained that there are challenges with the storm-water drainage system, with one resident explaining, "Flash floods affect us during the winter. Due to the topography of the neighbourhood and blockage in the network, all the water comes from the top to the main street. We had to call the water authority to fix the pipeline network." (Interview, Nov., 2021)

Sewerage Network:

The capacity assessment tool measured the demand on the existing sewerage network and revealed that there is a relatively high demand on the sewerage network at the neighbourhood level. Although there is access to the existing sewerage network across the neighbourhood, which indicates that the sewerage network is serving a larger population than it is designed to and needs to be

upgraded. A resident explained, "In winter, we face the issue of flooded sewerage and rainwater runoff, cars start to slide due to the streets incline. Also, the public water delivery cycle is very weak." (Interview, Nov., 2021)

Solid Waste Management:

The visual inspection of the neighbourhood found that the neighbourhood is well equipped with trash bins that are distributed all over it. Additionally, interviews revealed that there are no complaints about the service and that it is working on a daily basis.

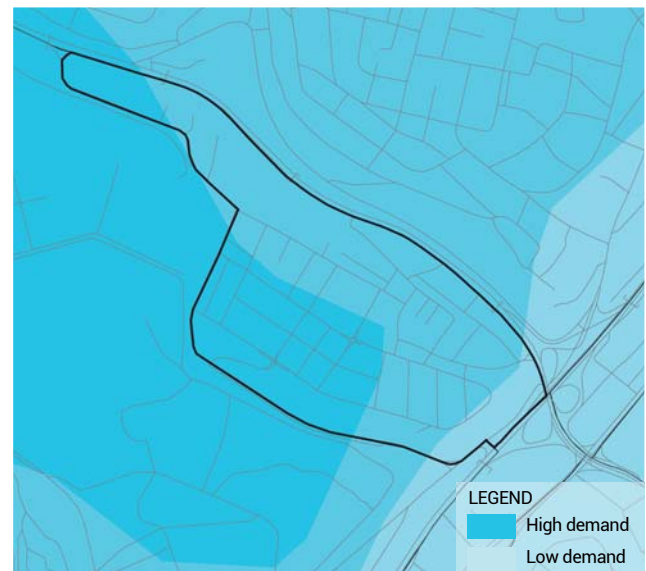


Fig. 38: Water Demand

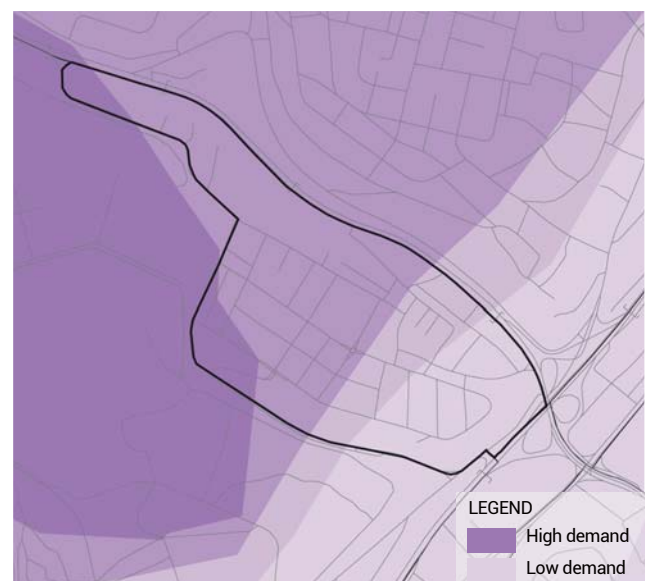
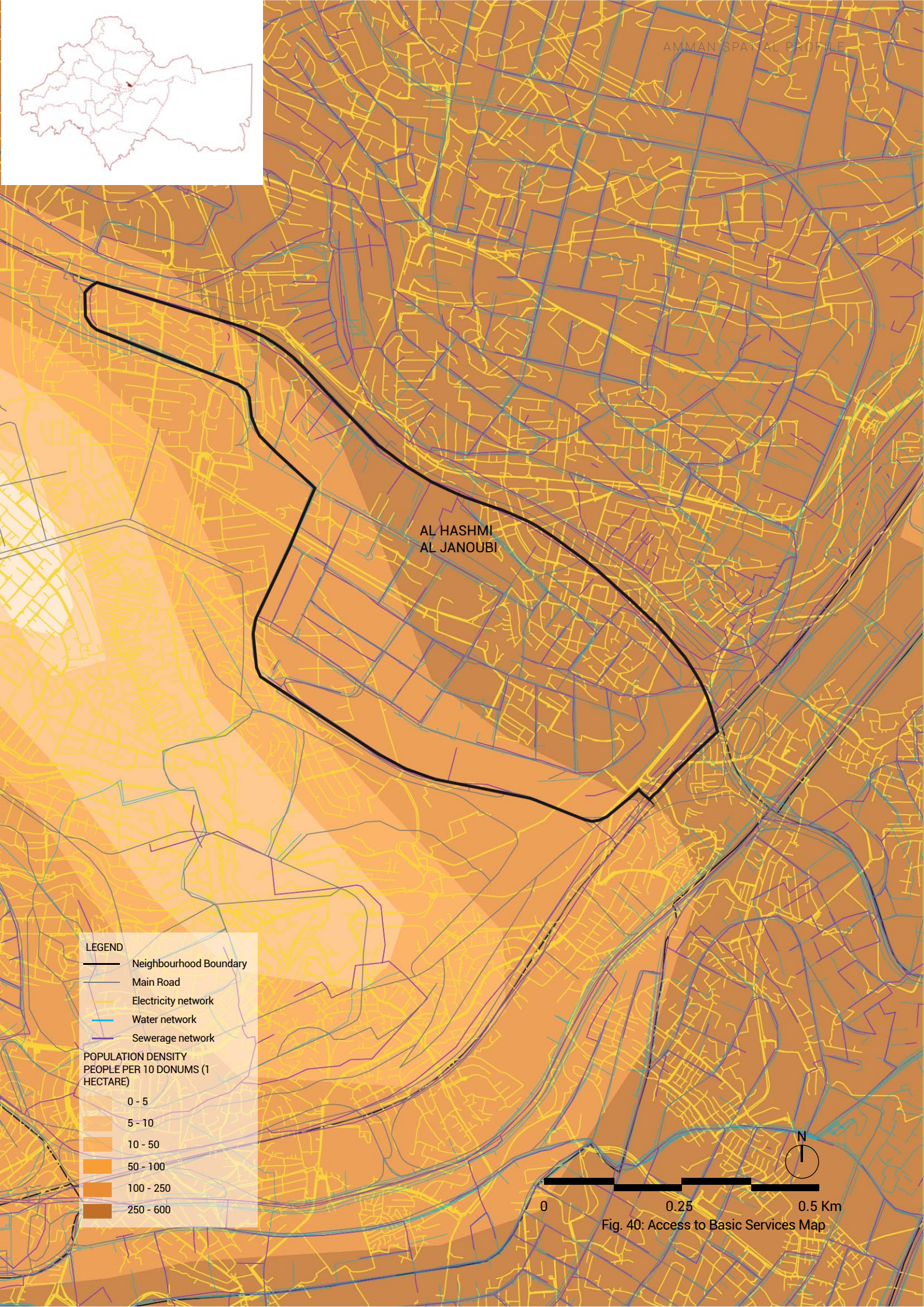


Fig. 39: Sewerage Demand



AL HASHMI
AL JANOUBI

LEGEND

- Neighbourhood Boundary
- Main Road
- Electricity network
- Water network
- Sewerage network

**POPULATION DENSITY
PEOPLE PER 10 DONUMS (1
HECTARE)**

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 250
- 250 - 600

0 0.25 0.5 Km

Fig. 40: Access to Basic Services Map

Access to Public Transport

The street network analysis measured the coverage of the existing public transportation services within the Al Hashmi Al Janoubi Neighbourhood. This applied a defined time interval of 5- and 15-minute walking distance to the existing street network surrounding the bus stops and public transportation routes including the BRT's route. The map shows the areas served within a 5-minute walking distance from public transportation routes and bus stops as well as a 15-minute walking distance from bus stops. The street network analysis, which considered the spatial location of existing bus stops, the public transportation routes, and the BRT route, revealed that residents of the southeast and northwest areas of the neighbourhood have access to bus stops within a 5-minute walking distance. Additionally, the analysis found that the entire neighbourhood has access to bus stops within a 15-minute walking

distance. Regarding the access to public transportation routes, most of the neighbourhood's residents have access to public transport routes within a 5-minute walking distance.

Interviews revealed that residents of Al Hashmi Al Janoubi find public transportation slow and time consuming. A resident of the Al Hashmi Al Janoubi Neighbourhood said, "Public transportation and walking are generally my preference in commuting. However, public transportation is time consuming and slow." (Interview, Nov., 2021)



Al Hashmi Al Janoubi Streets Situation (UN-Habitat, 2021)



Al Hashmi Al Janoubi Streets Situation (UN-Habitat, 2021)



LEGEND

Neighbourhood Boundary	5 minutes from station
BRT Line	15 minutes from station
Main Road	5 minutes from public transit route
Public Transit Stations	Public Transit Network

0 0.25 0.5 Km

N

Fig. 41: Access to Transportation map

Access to Public Facilities & Commercial Activities

Health Care Facilities:

There is one public health centre within the Al Hashmi Al Janoubi Neighbourhood. The public health centre serves 51.6% of the neighbourhood's population within a 5-minute walking distance, and 100% of the neighbourhood's population within a 15-minute walking distance. Additionally, a public health centre within the nearby northern neighbourhood is accessible to the Al Hashmi Al Janoubi's residents within a 15-minute walking distance around the neighbourhood's boundaries. Accordingly, based on the SDG indicators analysis, all residents of the neighbourhood have full access to health care facilities within a 15-minute walking distance. Therefore, it is well served with health care facilities.

Educational Facilities:

There are 4 public schools located within the neighbourhood. Based on the analysis, 85% of the population have access to public schools within a 5-minute walking distance and 100% within a 15-minute walking distance. Based on local standards and SDG indicators, the neighbourhood is well served with educational facilities.

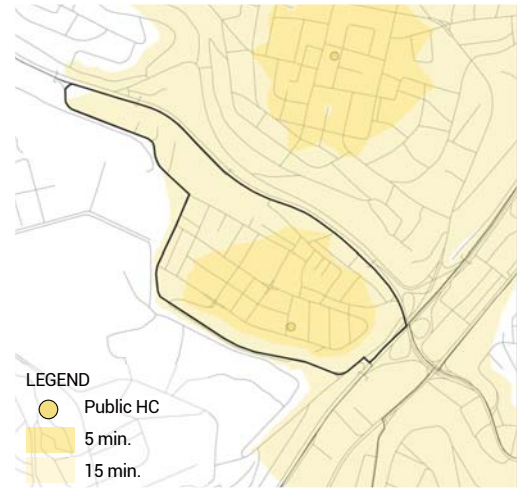
Recreational Facilities:

According to the street network analysis and the existing public spaces, 40.9% of the population have access to parks within a 5-minute walking distance and 100% within a 15-minute walking distance. Based on the SDG indicators analysis, the neighbourhood is well served with recreational facilities. However, a resident said regarding the safety of the park, "I used to come during early hours, but in the evening, some problems might happen especially before the renovation of the park where young men used to gather here." (Interview, Nov., 2021)

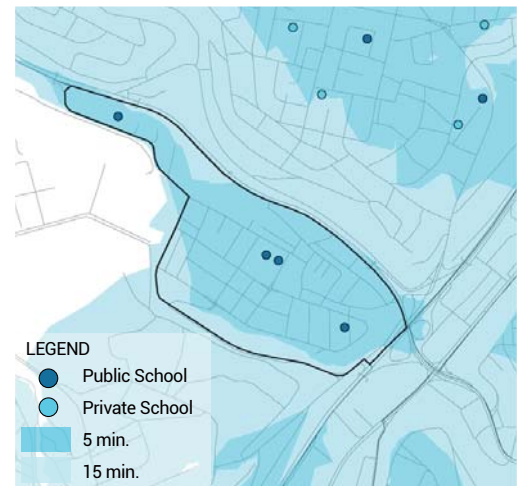
Commercial Activities:

The Al Hashmi Al Janoubi Neighbourhood has no assigned commercial land uses within its boundaries. Rather, the neighbourhood's residents are served with commercial shops that are usually on the ground floors of mixed-use areas. Based on the SDG indicators analysis, the neighbourhood residents are fully served with commercial activities within a 5-minute and/or 15-minute walking distance, as shown in the map.

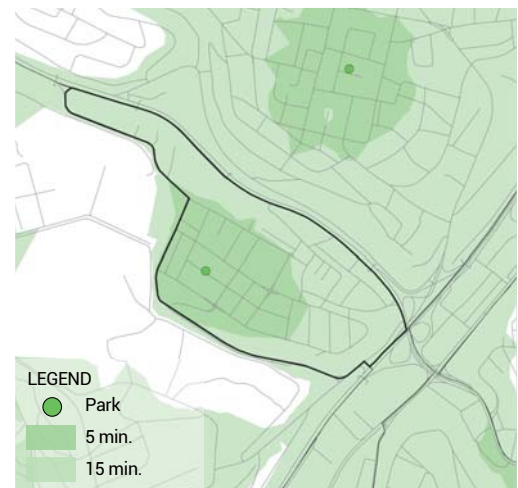
Health Care Facilities



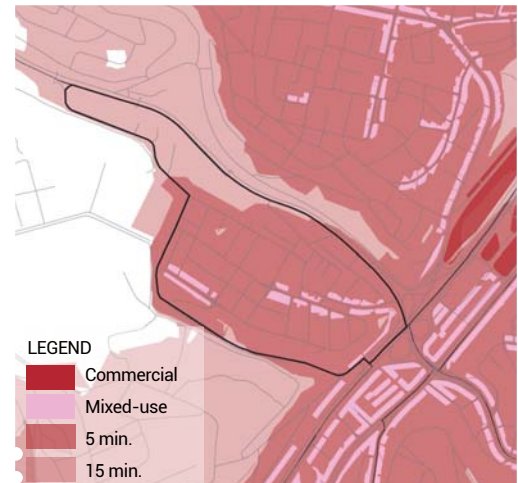
Educational Facilities



Recreational Facilities



Commercial Activities



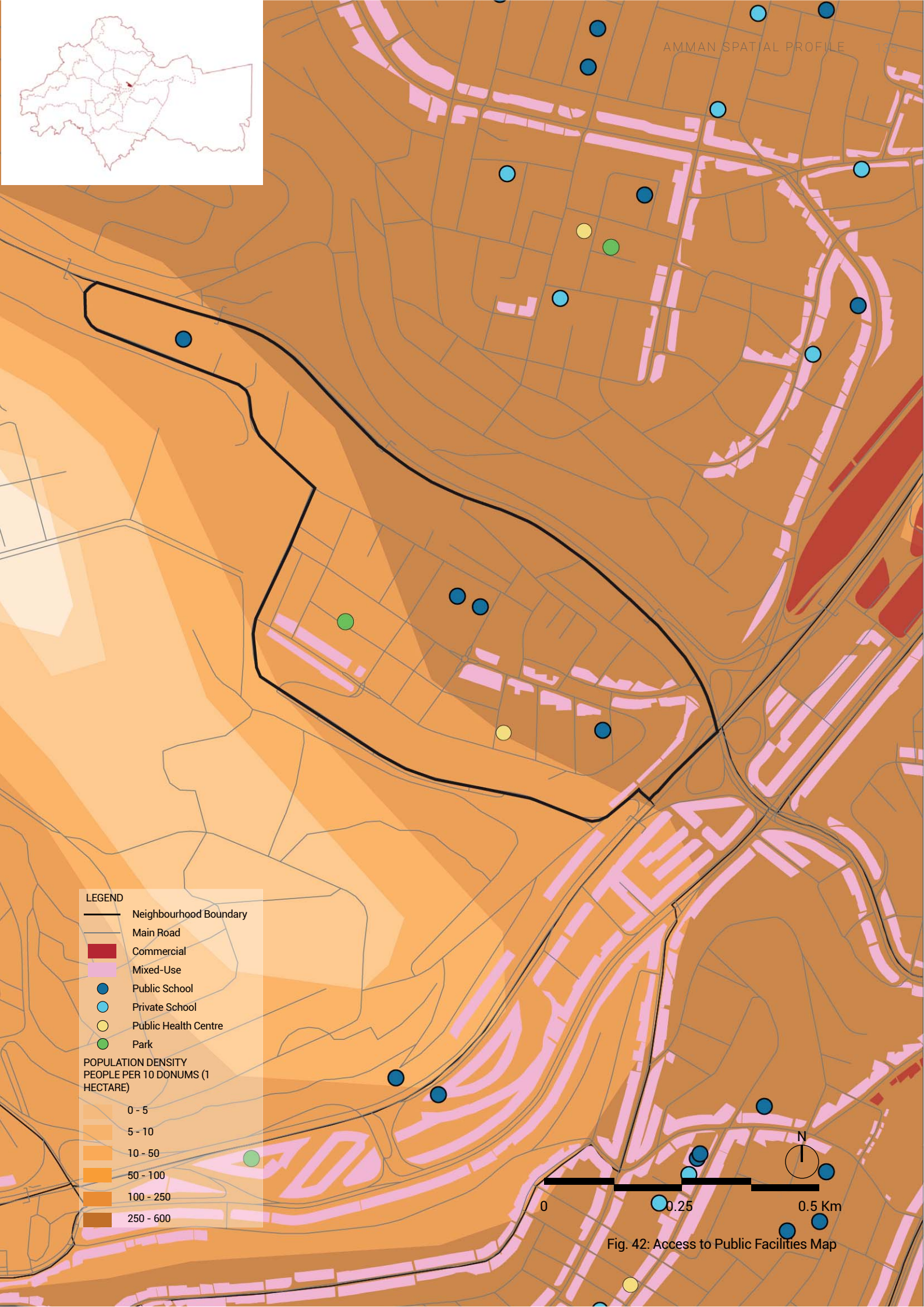


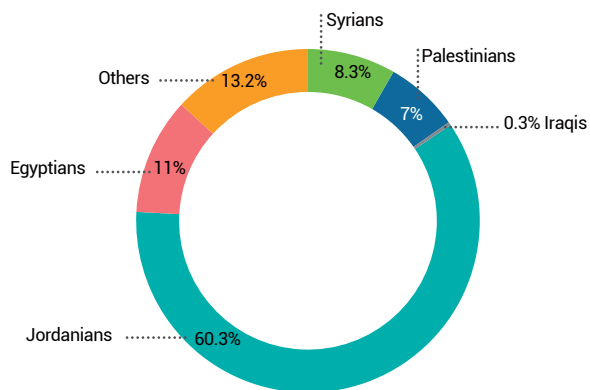
Fig. 42: Access to Public Facilities Map

Al Qweismeh District and Al Qweismeh Neighbourhood Contexts

Consisting of 15 neighbourhoods, the Al Qweismeh District covers an area of 45.5 km² and accommodates a total population of 335,935 inhabitants. The Al Qweismeh Neighbourhood within the Al Qweismeh District was selected based on the findings of the refugee density analysis at city level, as well as the infrastructure and public transportation accessibility and availability analysis. These analyses revealed that the neighbourhood needs better access to infrastructure networks and public transportation, especially in comparison to the other neighbourhoods within the district, and that it has a relatively high refugee presence.

The Al Qweismeh Neighbourhood has an area of 1.9 km², a total population of 31,920 inhabitants, and accordingly, a total population of 16,800 person/km². It is also affected by the influx of refugees. Refugee residents consist of 15.6% of the Al Qweismeh's population, whereby 7% are Palestinians, 8.3% are Syrians, and 0.3% are Iraqis. In reality, the percentage of Palestinian refugees is actually higher than the aforementioned percentage. However, because many Palestinian refugees living in this district have Jordanian citizenship, they were not incorporated into this calculation. Additionally, 11% of the total neighbourhood population are Egyptians that reside in Al Qweismeh because of its proximity to industrial areas and cheaper housing.

Residential land use within the neighbourhood comprises of types B and C, whereby 55.5% of the neighbourhood's area is classified as type B and 19.1% is classified as type C. Around 2.2% of the land use in the neighbourhood is mixed-use, 2.3% is commercial, 18.7% is industrial, 0.8% is parks, and 1.5% is services.



Population Nationality Breakdown at Al Qweismeh Neighbourhood

The visual inspection of the neighbourhood found housing to generally be in a very good condition. However, some of the vacant lands within the neighbourhood are occupied by tent dwellers.

Being close to an industrial area, as shown in the land use map, has its effects on the neighbourhood's residents, where one resident said "Our proximity to an industrial area, and the pollution coming from such area is affecting us badly. Burnt tires and oils resulted in air pollution and most houses here are covered with ash." (Interview, Dec., 2021). Another resident added, "Being close to an industrial area is negatively affecting us as residents. The blacksmiths and mechanical workshops produce a lot of noise which causes sound pollution." (Interview, Dec., 2021).

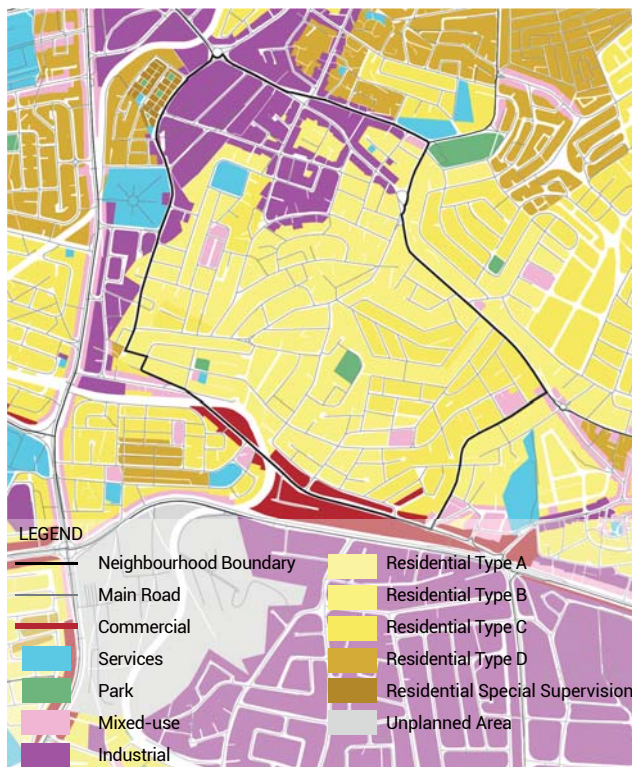
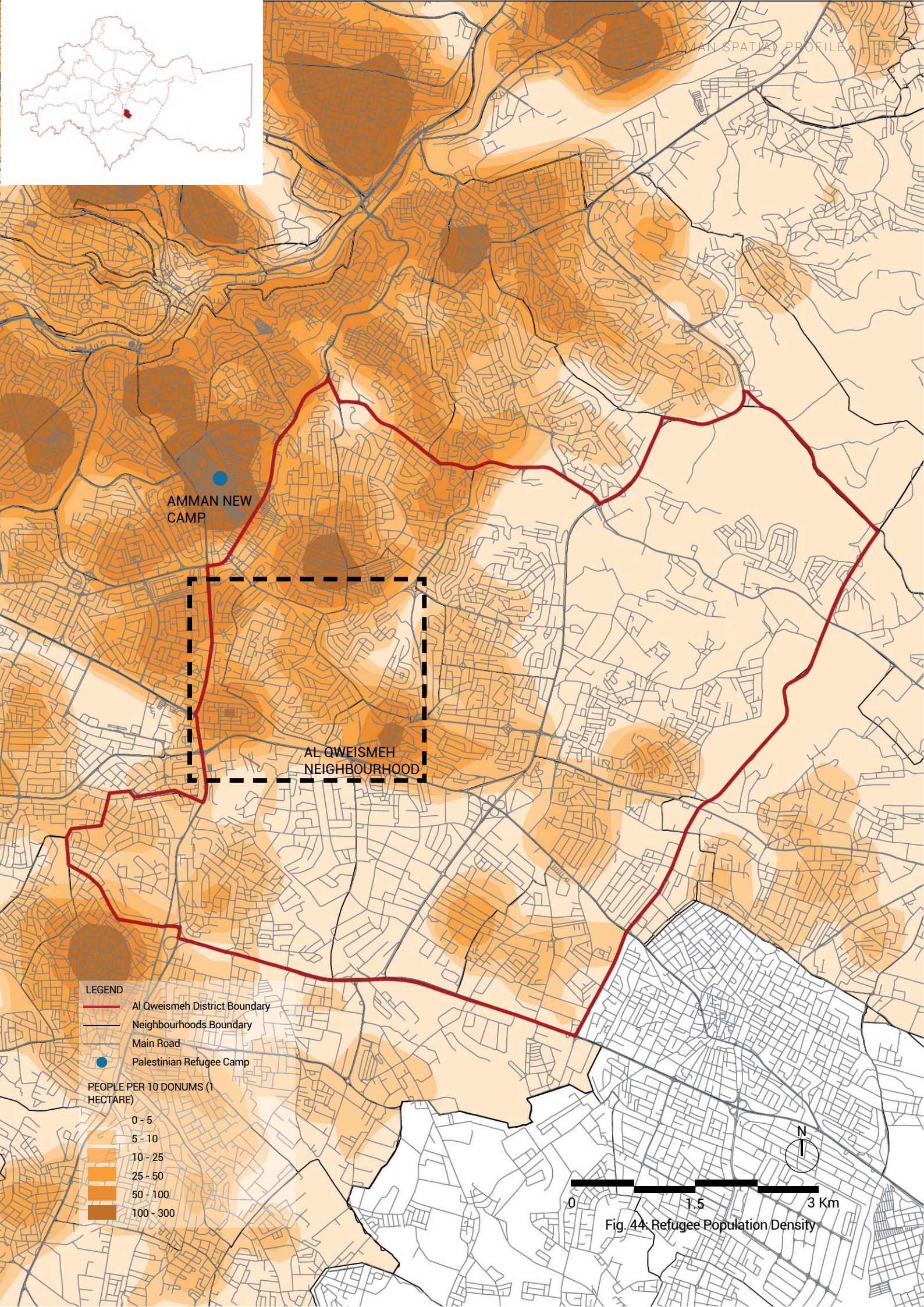
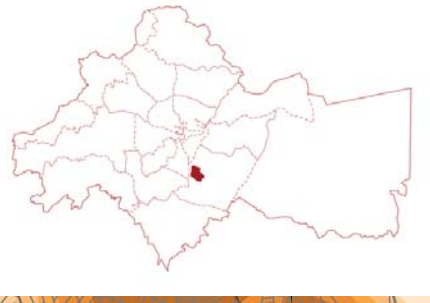


Fig. 43: Land Use Map



AMMAN NEW CAMP

AL QWEISMEH NEIGHBOURHOOD

LEGEND

- Al Qweismeh District Boundary
- Neighbourhoods Boundary
- Main Road
- Palestinian Refugee Camp

PEOPLE PER 10 DONUMS (1 HECTARE)

- 0 - 5
- 5 - 10
- 10 - 25
- 25 - 50
- 50 - 100
- 100 - 300



Fig. 44 Refugee Population Density

Access to Basic Services

Based on the available data, the map reveals that Al Qweismeh Neighbourhood is connected to electricity, water, and sewerage networks. Additionally, a site visit was conducted to visually assess the challenges and situation on the ground while interacting with residents.

Electricity Service:

Al Qweismeh Neighbourhood is well connected to the existing electricity network.

Water Service:

Overall, the water capacity assessment revealed that there is a relatively high demand on water network at the neighbourhood level. Although there is access to the existing water network across the neighbourhood, which indicates that the water network is serving a larger population than it is designed to. This shows that there is a need to upgrade the water network at the neighbourhood level to ease the pressure on the current network.

Storm-water Drainage System:

Interviews with the neighbourhood's residents revealed that there are no challenges in the storm-water drainage system, with one resident explaining, "most of the issue with rainwater runoff is happening in Downtown Amman, but here, since we are located in more uphill location, we do not face this issue." (Interview, Nov., 2021)

Sewerage Network:

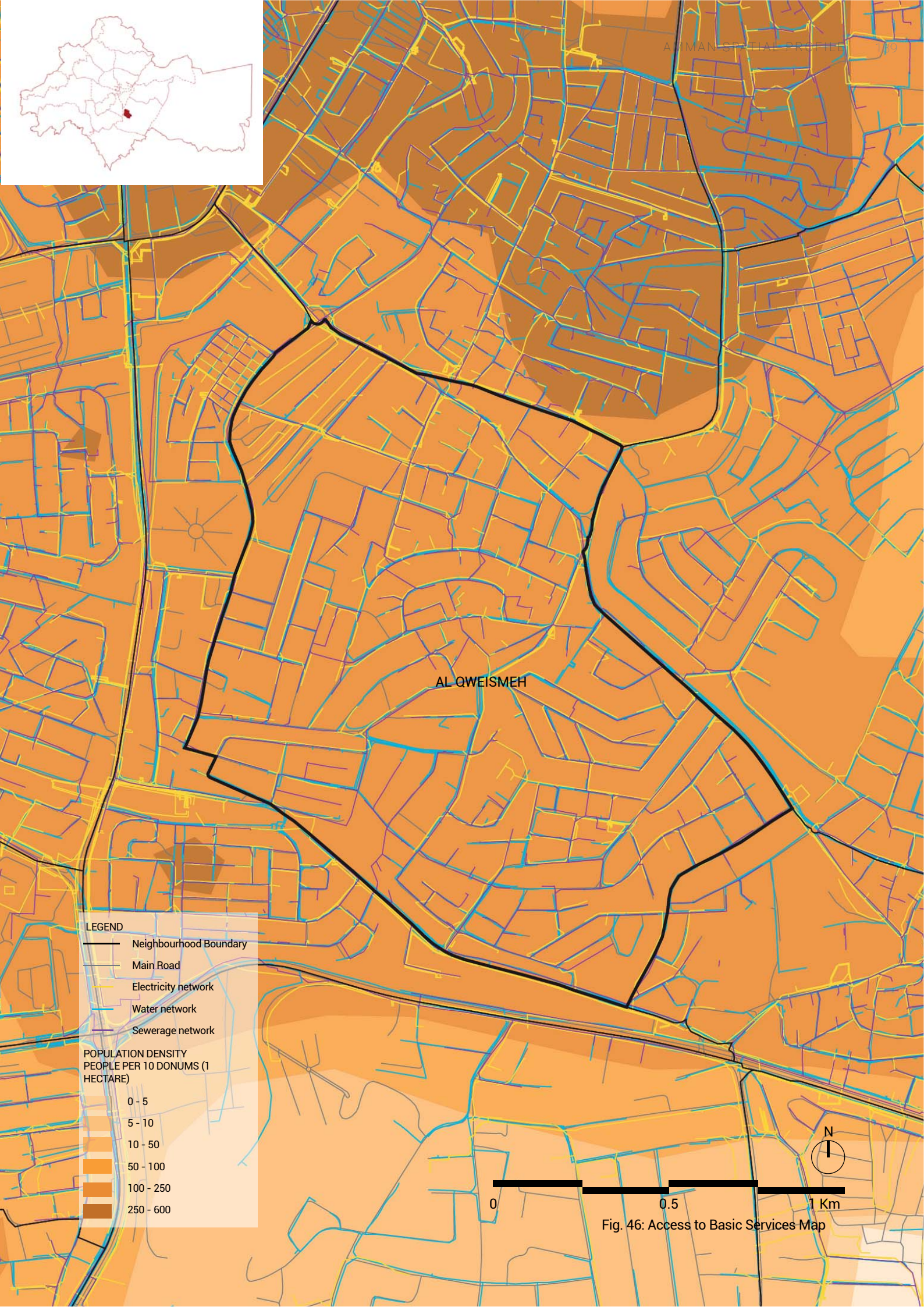
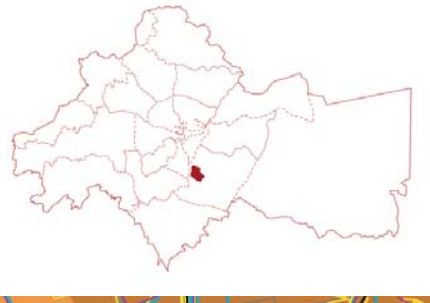
The spatial analysis conducted revealed that the neighbourhood is well covered with the sewerage network. A resident explained, "We are connected to the public sewerage network, but some areas in the neighbourhood still use septic tanks, but we don't have any issues with the sewerage network." (Interview, Nov., 2021). However, another resident said, "Sewerage is the biggest challenge we have here. The network has been constructed in the 80s for few houses, but the plan did not take into consideration future urban growth. JWA visits the area almost daily to open the blockage in the sewerage network" (Interview, Dec., 2021).

Solid Waste Management:

The visual inspection of the neighbourhood found that it is well equipped with trash bins that are distributed across the neighbourhood. Additionally, interviews revealed that there are no complaints about the service and that it is provided twice a day on a daily basis.



Fig. 45: Water Demand



LEGEND

- Neighbourhood Boundary
- Main Road
- Electricity network
- Water network
- Sewerage network

**POPULATION DENSITY
PEOPLE PER 10 DONUMS (1
HECTARE)**

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 250
- 250 - 600



Fig. 46: Access to Basic Services Map

Access to Public Transport

The street network analysis, which considered the spatial location of existing bus stops and the public transportation routes, revealed that only 0.1% of the neighbourhood's residents have access to bus stops within a 5-minute walking distance and only 43.1% of the neighbourhood's residents have access to bus stops within a 15-minute walking distance. As shown in the map, the eastern part of the Al Qweismeh Neighbourhood does not have access to bus stops. Regarding the access to public transportation routes, 78.8% of the neighbourhood's residents have access to public transport routes within a 5-minute walking distance.

A resident of the Al Qweismeh Neighbourhood said, "we are not served with buses. My kids are enrolled in a public school, and I had to contract with a private taxi to commute them as the neighbourhood is not served with public transportation." (Interview, Nov., 2021)

The visual inspection of the neighbourhood found that the roads are in a bad condition. Additionally, interviews with the neighbourhood's residents identified road conditions as a challenge in Al Qweismeh, where a resident said, "roads are in a bad condition due to the neighbourhood's proximity to mechanical workshops and need maintenance." (Interview, Nov., 2021)

Traffic was also identified as a challenge in Al Qweismeh, where a resident explained, "Being close to the industrial

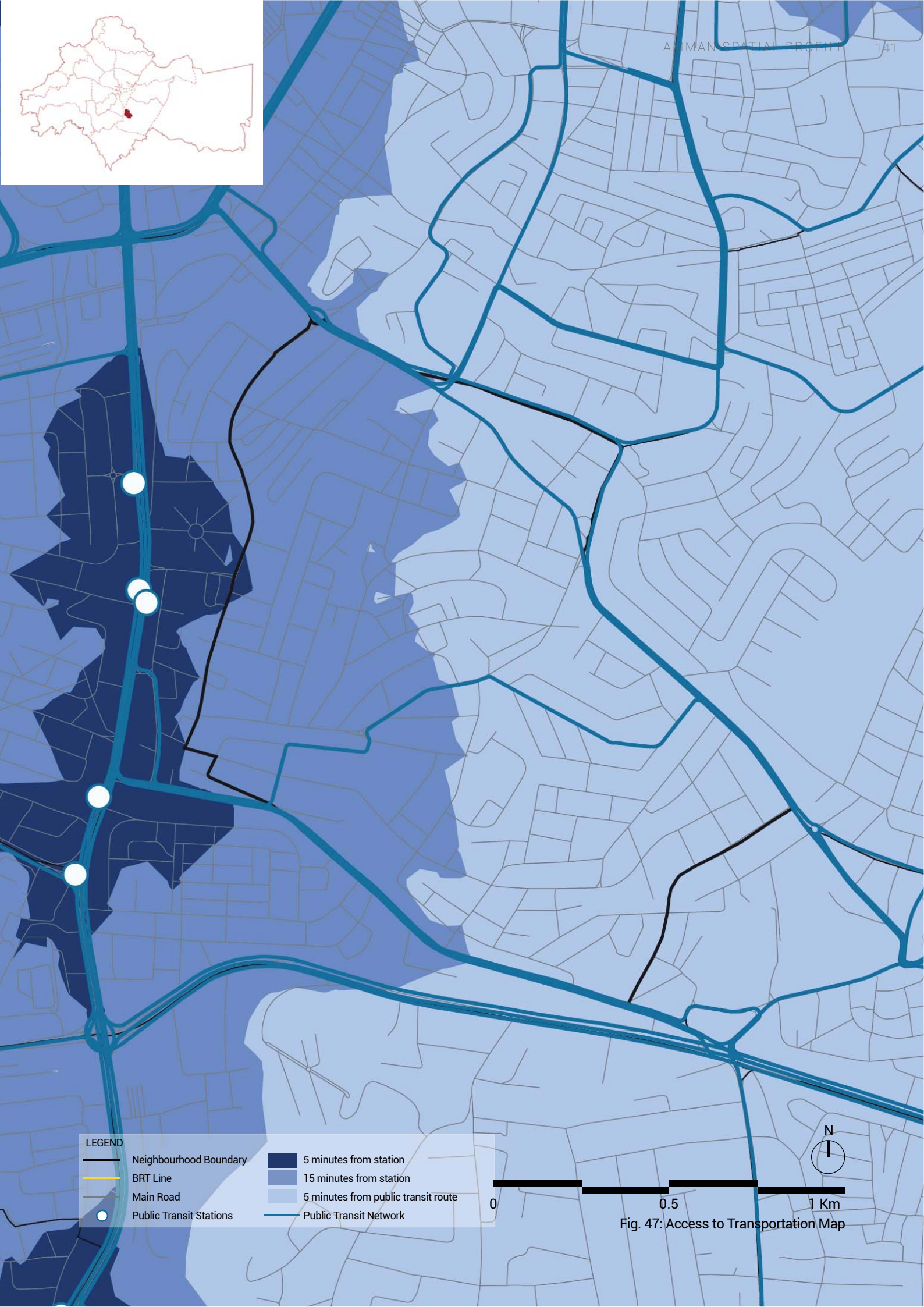
area has its pros and cons. The pros are that this might attract resident to work, but on the other hand, the cons are the sound pollution and traffic congestion, mainly on Saturdays." (Interview, Dec., 2021)



Al Qweismeh Streets Situation (UN-Habitat, 2021)



Al Qweismeh Streets Situation (UN-Habitat, 2021)



LEGEND

- Neighbourhood Boundary
- BRT Line
- Main Road
- Public Transit Stations

- 5 minutes from station
- 15 minutes from station
- 5 minutes from public transit route
- Public Transit Network

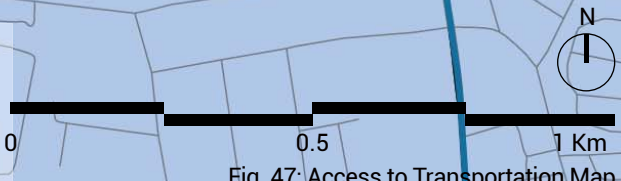


Fig. 47: Access to Transportation Map

Access to Public Facilities & Commercial Activities

Health Care Facilities:

There are no public health centres within the Al Qweismeh Neighbourhood. Based on local standards and SDG indicators, the neighbourhood is poorly served with healthcare facilities, with only 9% of the neighbourhood's residents having access to healthcare facilities within a 15-minute walking distance. Therefore, there is a need to establish a health care centre/ facility to serve the area. "The neighbourhood is well served with most services such as mosques, schools, and commercial centres, but the public health facility is far, I need to go by car", a resident of Al Qweismeh Neighbourhood said.

Educational Facilities:

There are 6 public schools located within the neighbourhood. Based on the analysis, 83.1% of the population have access to public schools within a 5-minute walking distance and 100% within a 15-minute walking distance. Based on local standards and SDG indicators, the neighbourhood is fully served with educational facilities.

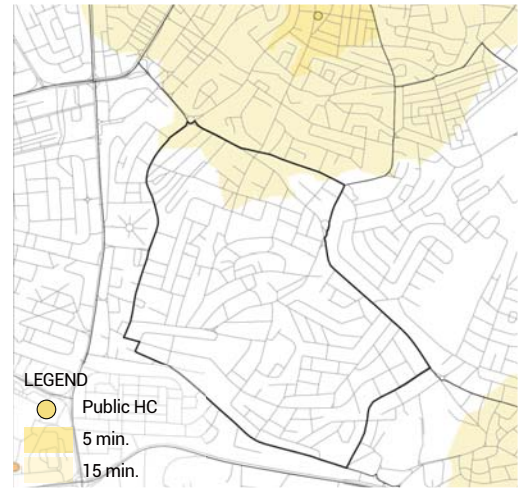
Recreational Facilities:

According to the street network analysis and the existing public spaces, 39.4% of the population have access to parks within a 5-minute walking distance and 99.7% within a 15-minute walking distance. Based on the SDG indicators analysis, the neighbourhood residents are fully served with public parks within a 5-minute and/or 15-minute walking distance, as shown in the map.

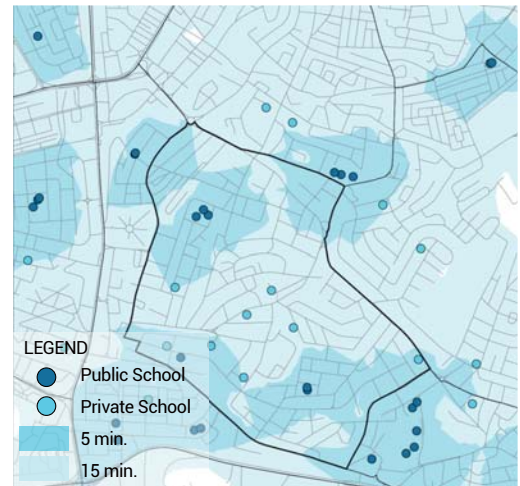
Commercial Activities:

The commercial activities in the Al Qweismeh Neighbourhood are mainly concentrated at the southern edge of the neighbourhood. There are also some mixed-use areas within the neighbourhood that serve the needs of residents through their commercial ground floors. Based on the SDG indicator analysis, the neighbourhood residents are fully served with commercial activities within a 5-minute and/or 15-minute walking distance, as shown in the map.

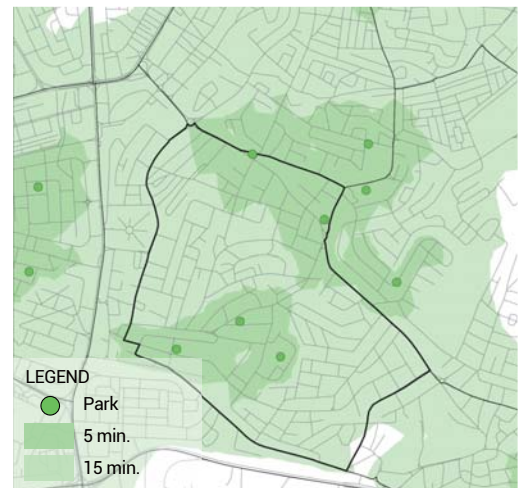
Health Care Facilities



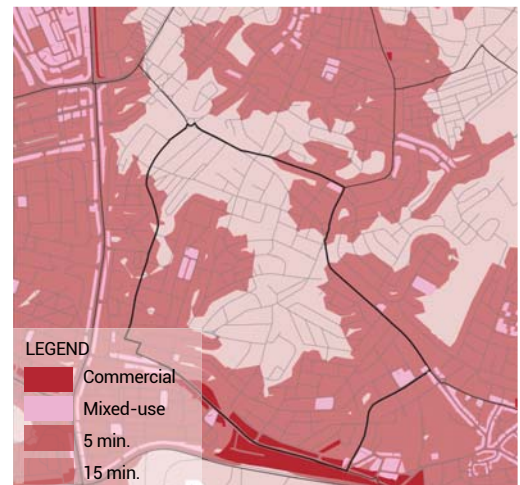
Educational Facilities



Recreational Facilities



Commercial Activities



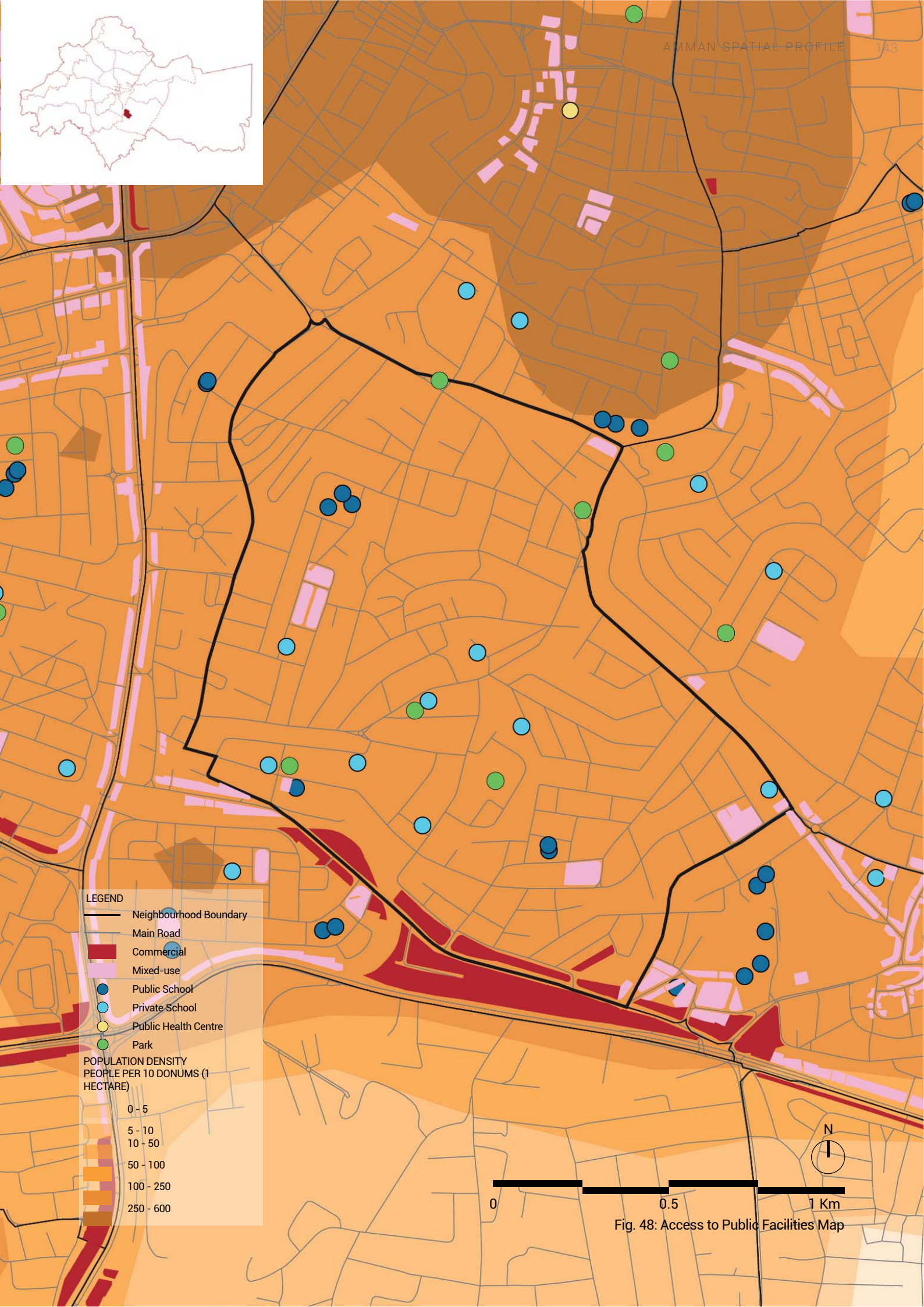
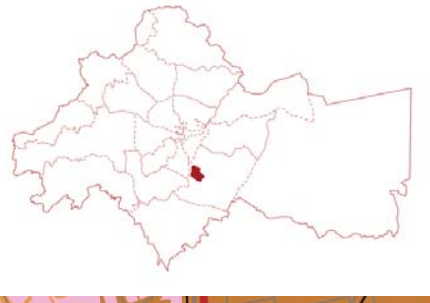


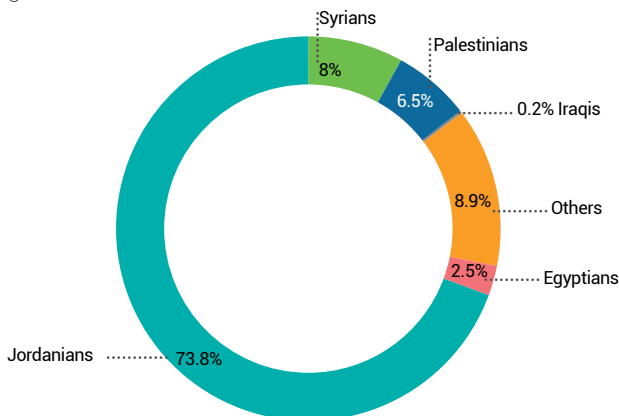
Fig. 48: Access to Public Facilities Map

Khraibet Al-Souq District and Al Yadoudah Neighbourhood Contexts

Consisting of 19 neighbourhoods, the Khraibet Al-Souq District covers an area of 49.1 km² and accommodates a total population of approximately 212,806 inhabitants. The Al Yadoudeh Neighbourhood within the Khraibet Al-Souq District was selected based on the findings of the refugee density analysis, as well as the infrastructure and public transportation accessibility and availability analysis. These analyses revealed that the neighbourhood needs better access to infrastructure networks, especially in comparison to the other neighbourhoods within the district, and that it has a relatively high refugee presence.

The Al Yadoudeh Neighbourhood has an area of 2.89 km², a total population of 22,771 inhabitants, and accordingly, a population density of 7,879.2 person/km². It is also affected by the influx of refugees. Refugee residents consist of 14.7% of the Al Yadoudeh's population, whereby 6.5% are Palestinians, 8% are Syrians, and 0.2% are Iraqis. In reality, the percentage of Palestinian refugees is actually higher than the aforementioned percentage. However, because many Palestinian refugees living in this neighbourhood have Jordanian citizenship, they were not incorporated into this calculation. Additionally, 2.5% of the total neighbourhood population are Egyptians that reside in Al Yadoudeh because of its proximity to industrial areas and cheaper housing.

Residential land use within the neighbourhood comprises of types A, B, C, and D, whereby 20.6% of the neighbourhood's area is classified as type A, 23.5% is classified as type B, 26% is classified as type C, and 0.8% is classified as type D. Around 2.3% of the land use in the neighbourhood is mixed-use, 5.5% is commercial, and 1.1% is services. 0.4% of the neighbourhood's area is unplanned, 14.2% is parks, 1% is industrial, and 4.6% is agricultural. The visual inspection of the neighbourhood found housing to generally be in a very good condition.



Population Nationality Breakdown at Al Yadoudeh Neighbourhood

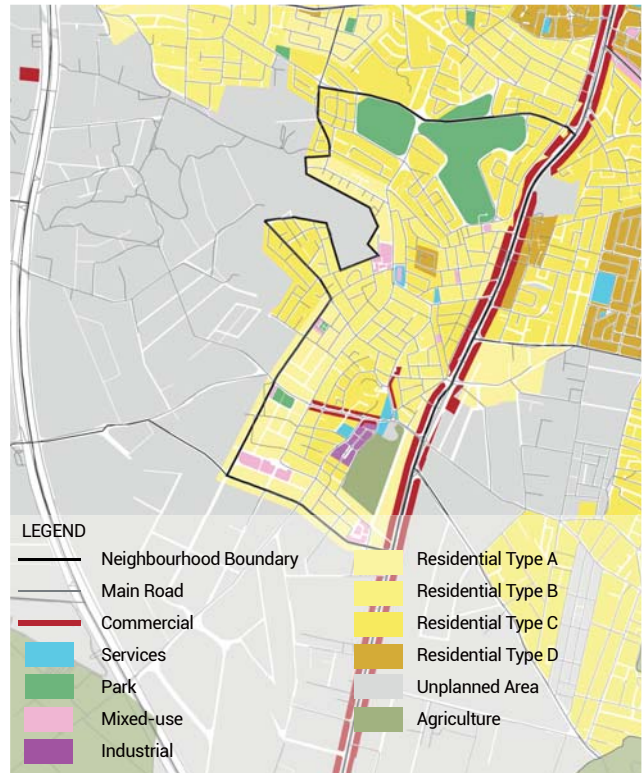
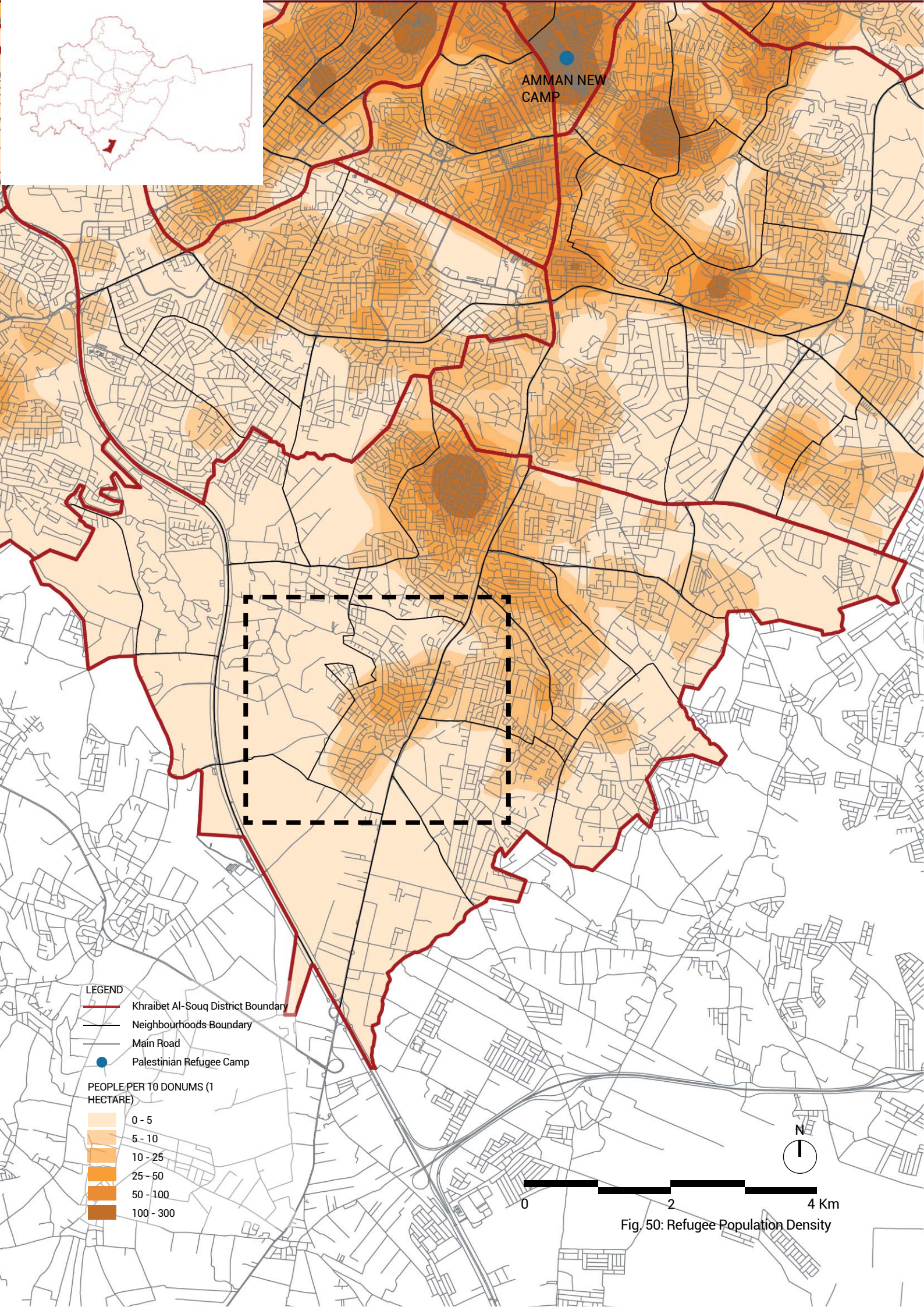


Fig. 49: Land Use Map



Al Yadoudeh Housing Situation (UN-Habitat, 2021)



AMMAN NEW
CAMP


LEGEND

- Khraibet Al-Souq District Boundary
- Neighbourhoods Boundary
- Main Road
- Palestinian Refugee Camp

PEOPLE PER 10 DONUMS (1 HECTARE)

- 0 - 5
- 5 - 10
- 10 - 25
- 25 - 50
- 50 - 100
- 100 - 300

N



0 2 4 Km

Fig. 50: Refugee Population Density

Access to Basic Services

Based on the data available, the map reveals that the Al Yadoudeh Neighbourhood is connected to electricity and water networks. However, the neighbourhood is not connected to the sewerage network. A site visit was conducted to visually assess the challenges and situation on the ground while interacting with residents.

Electricity Service:

Al Yadoudeh Neighbourhood is well connected to the existing electricity network.

Water Service:

Overall, the water capacity assessment revealed that there is a relatively high demand on the water network at the neighbourhood level. Although there is access to the existing water network across the neighbourhood, which indicates that the water network is serving a larger population than it is designed to. Additionally, Interviews with Al Yadoudeh residents revealed that the water network is weak. This indicates that there is a need to upgrade the water network at the neighbourhood level to ease the pressure on the current network.

Storm-water Drainage System:

Interviews with Al Yadoudeh residents revealed that there are no issues regarding the storm-water drainage system, and that they do not face any flood challenges from rainwater.

Sewerage Network:

Prior to the visit, the available data had revealed that the Al Yadoudeh Neighbourhood is not connected to the sewerage network. However, this was found to be inaccurate during the field visit, which determined that the neighbourhood is connected partially to the sewerage network. A resident of Al Yadoudeh Neighbourhood said, "the water network is weak, but the sewerage is good here, some parts of the neighbourhood are connected to the public sewerage network while others on septic tanks" (Interview, Dec., 2021). This highlights an important challenge regarding the outdated data in the municipality's database. Furthermore, this indicates that the sewerage network needs developing and upgrading to connect all parts of the neighbourhood.

Solid Waste Management:

The visual inspection of the neighbourhood found that it is well equipped with trash bins that are distributed across it. However, an owner of a supermarket in Al Yadoudeh Neighbourhood explained, "there are no trash bins in this street because residents refuse to put it in front of their

houses, that is why we have to walk 5 minutes to throw the garbage." (Interview, Dec., 2021)

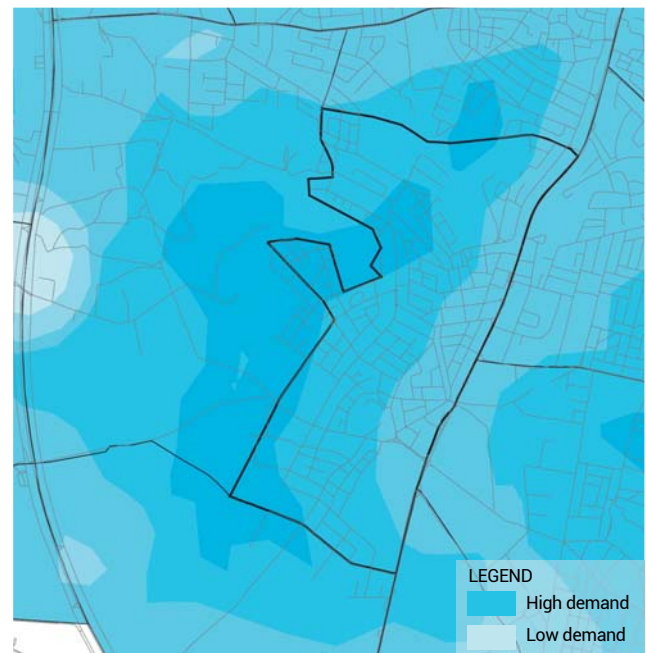
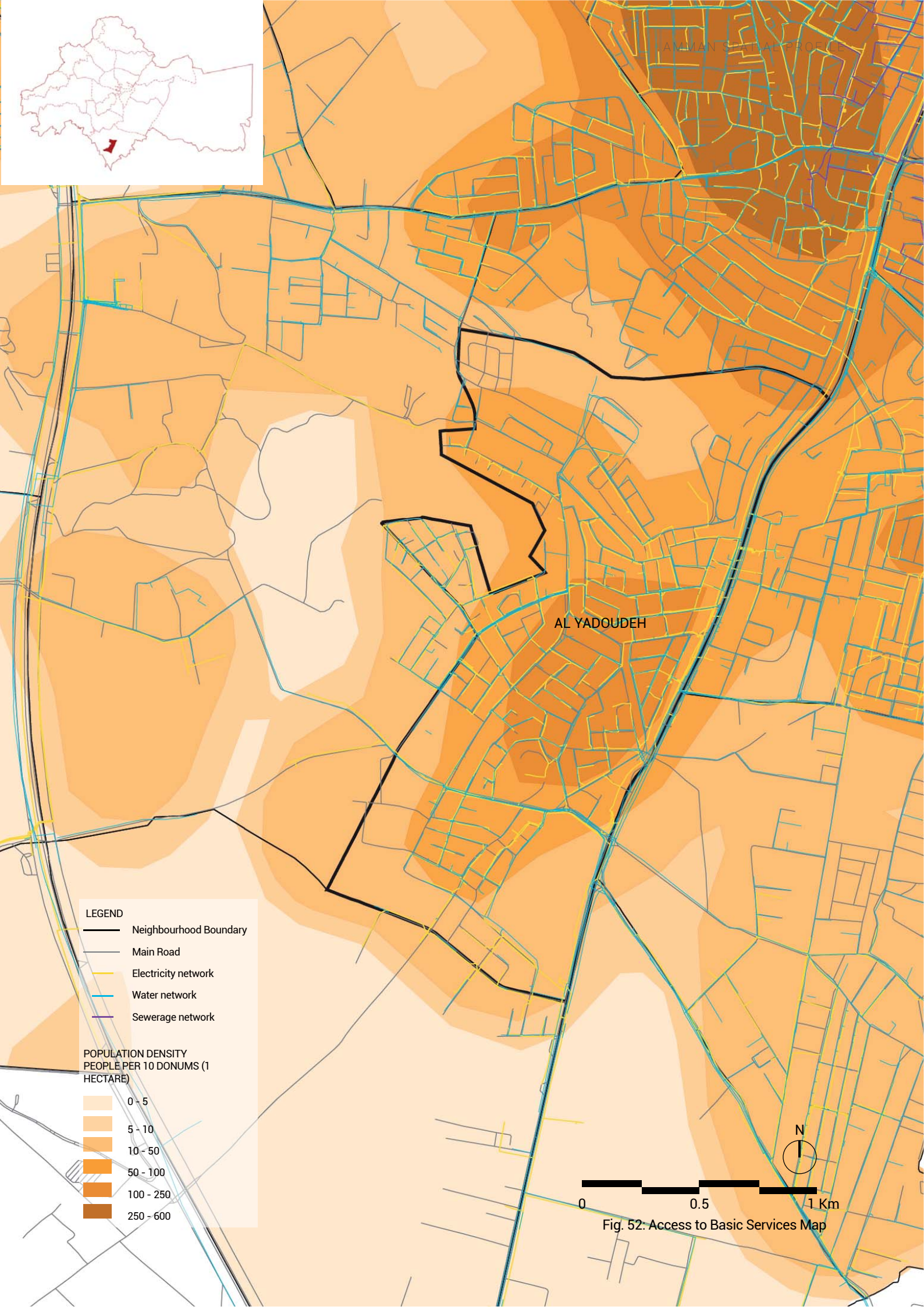


Fig. 51: Water Demand



An Image Showing that there is a Sewerage Network in the Neighbourhood (UN-Habitat, 2021)



AL YADOUDEH

LEGEND

- Neighbourhood Boundary
- Main Road
- Electricity network
- Water network
- Sewerage network

**POPULATION DENSITY
PEOPLE PER 10 DONUMS (1
HECTARE)**

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 250
- 250 - 600

0 0.5 1 Km

A north arrow is located to the right of the scale bar. The scale bar is a horizontal line with markings at 0, 0.5, and 1 Km.

Fig. 52: Access to Basic Services Map

Access to Public Transport

The street network analysis, which considered the spatial location of existing bus stops and the public transportation routes, revealed that 9.3% of the neighbourhood's residents, mainly living in the centre of the eastern edge of the neighbourhood, have access to bus stops within a 5-minute walking distance. Additionally, the analysis found that some areas in the neighbourhood (26.1% of the neighbourhood's population) does not have access to bus stops within a 15-minute walking distance, such as the northern and southwest areas. Regarding the access to public transportation routes, 66.9% of the neighbourhood's residents have access to public transport routes within a 5-minute walking distance. Based on the SDG indicators, the neighbourhood is not well served with public transportation means.

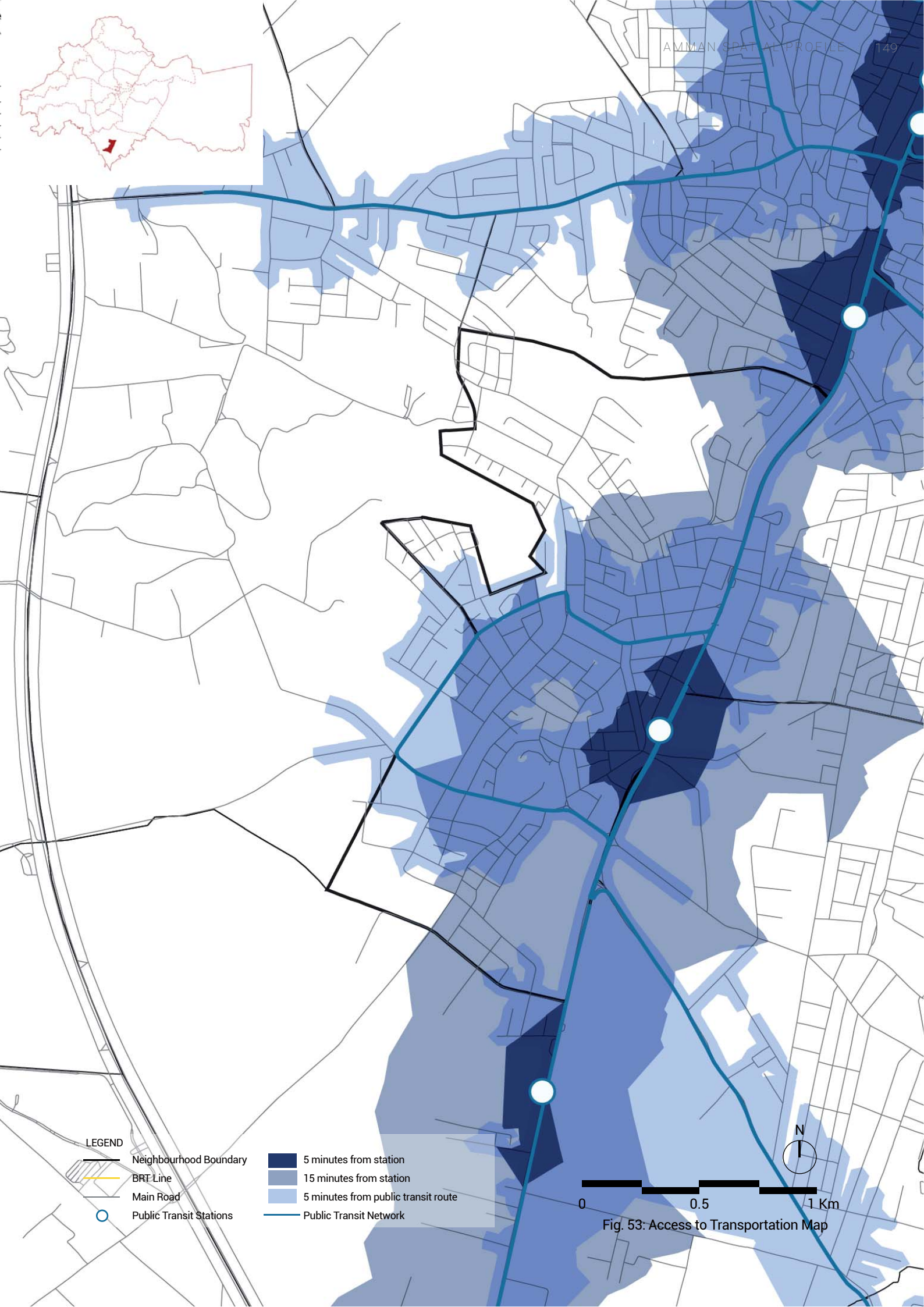
A resident of the Al Yadoudeh Neighbourhood validated this through the following quote, "the transportation on the main road is very weak, we have to wait for almost one hour to take the bus, that is why residents often depend on private cars and taxis." (Interview, Dec., 2021) (Interview, Dec., 2021). Another resident explained, "I do not use public transportation because I am a person with disabilities, so I often use my wheelchair or take a private taxi." This highlights the challenge regarding the accessibility of public transportation and the lack of inclusivity towards people with disabilities.



Al Yadoudeh Streets Situation (UN-Habitat, 2021)



Al Yadoudeh Streets Situation (UN-Habitat, 2021)



LEGEND

- Neighbourhood Boundary
- BRT Line
- Main Road
- Public Transit Stations

- 5 minutes from station
- 15 minutes from station
- 5 minutes from public transit route
- Public Transit Network

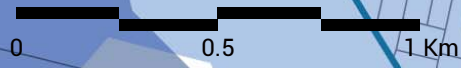


Fig. 53: Access to Transportation Map

Access to Public Facilities & Commercial Activities

Health Care Facilities:

There are no public health centres within the Al Yadoudeh Neighbourhood. Based on local standards and SDG indicators, the neighbourhood is poorly served with health care facilities. Therefore, there is a need to establish a health care centre/ facility to serve the area. A resident of Al Yadoudeh explained, “the neighbourhood is well served but faces issues with transportation and public health centres accessibility and availability.” (Interview, Dec., 2021)

Educational Facilities:

There are 5 public schools located within the neighbourhood. Based on the analysis, 41.4% of the population have access to public schools within a 5-minute walking distance and 97.9% within a 15-minute walking distance. Based on local standards and SDG indicators, the neighbourhood is well served with educational facilities.

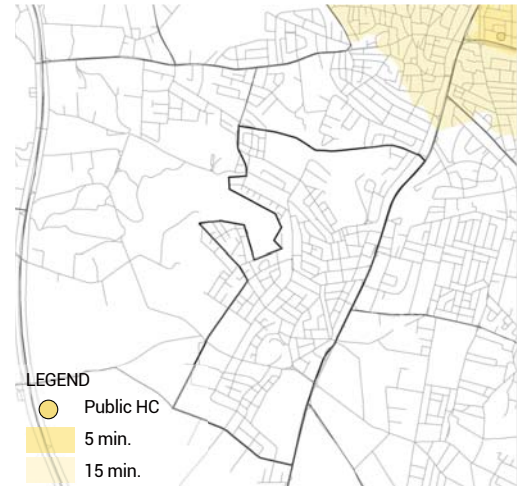
Recreational Facilities:

According to the street network analysis and the existing public spaces, 6% of the population have access to parks within a 5-minute walking distance and 65.7% within a 15-minute walking distance. Based on the SDG indicators, the neighbourhood is poorly served with recreational facilities. A resident explained, “the neighbourhood is served with Ghamadan Park within 10-15 minute walking distance.” (Interview, Dec., 2021)

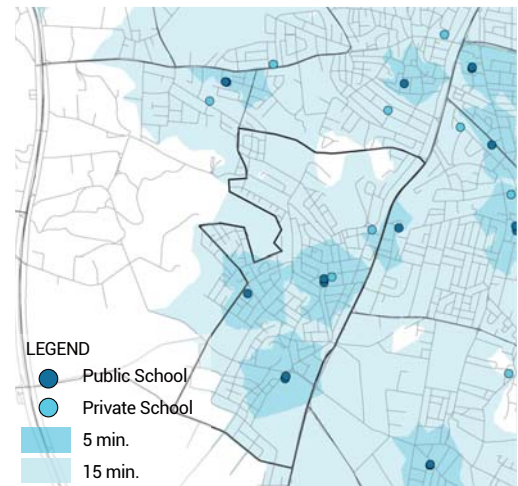
Commercial Activities:

The commercial activity in Al Yadoudeh Neighbourhood is mainly concentrated on the main road to the East of the neighbourhood. Other Commercial Activities are scattered in the neighbourhood either in commercial land use or in mixed-used areas. Based on the SDG indicators analysis, 75.7% of the neighbourhood residents are served with commercial activities within a 5-minute walking distance, as shown in the map. Additionally, 96.4% of its residents are served with commercial activities within a 15-minute walking distance. Based on the SDG indicators, the neighbourhood is well served with Commercial Activities, except for the Northern west part of the neighbourhood.

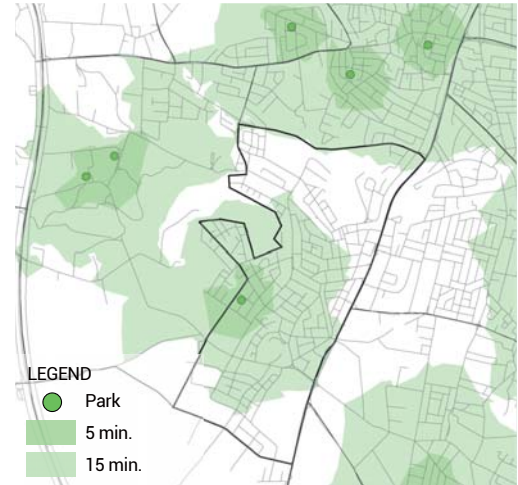
Health Care Facilities



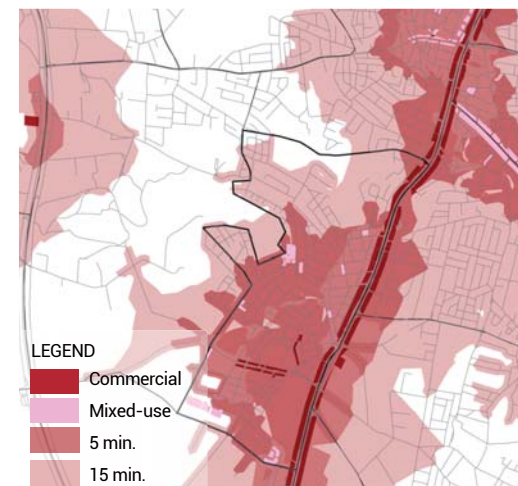
Educational Facilities

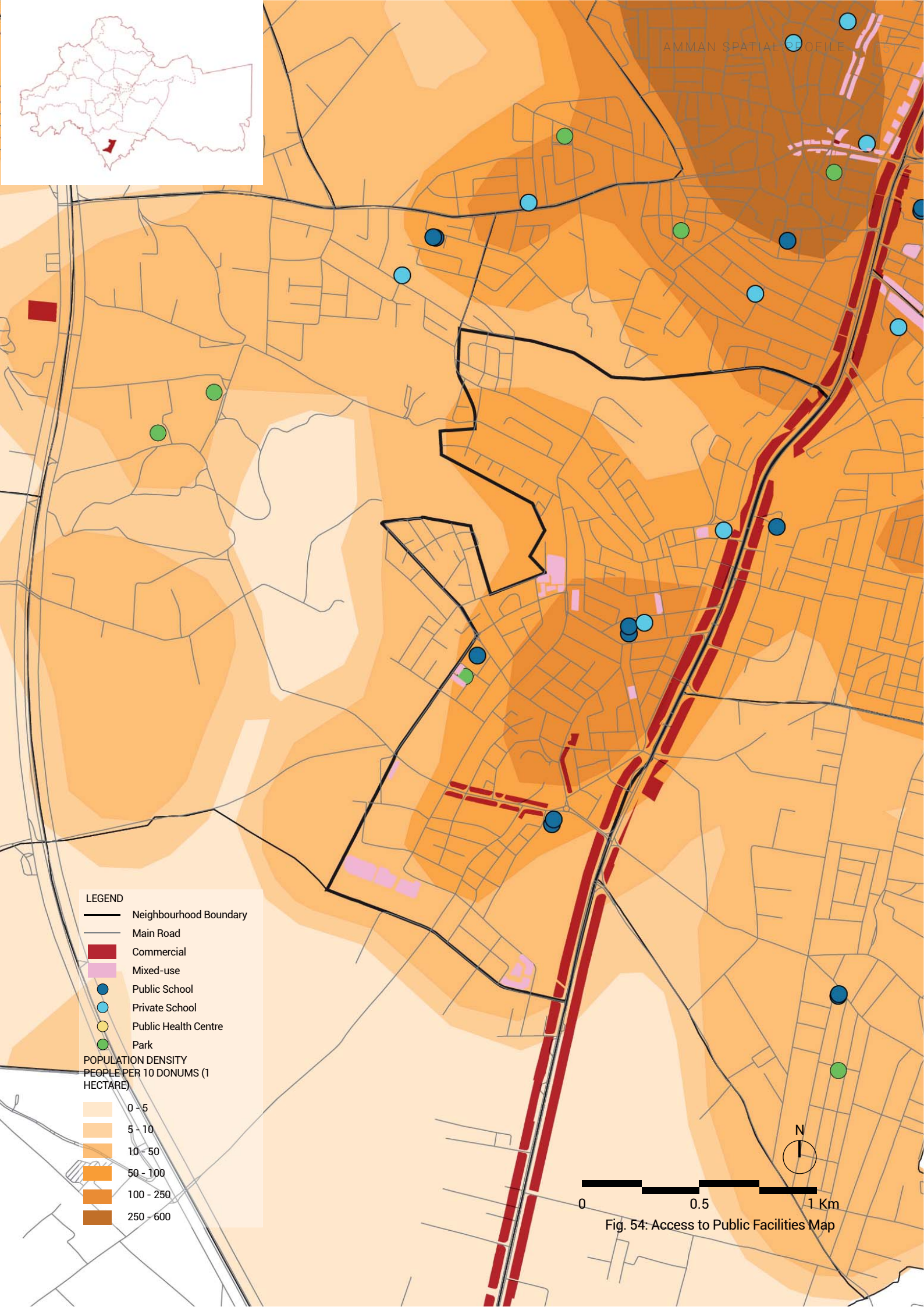
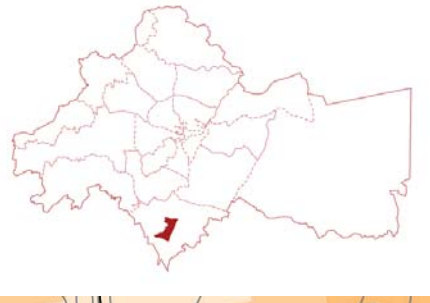


Recreational Facilities



Commercial Activities





LEGEND

- Neighbourhood Boundary
- Main Road
- Commercial
- Mixed-use
- Public School
- Private School
- Public Health Centre
- Park

**POPULATION DENSITY
PEOPLE PER 10 DONUMS (1
HECTARE)**

- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 250
- 250 - 600

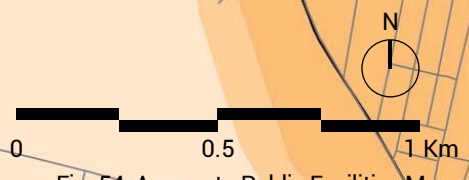


Fig. 54: Access to Public Facilities Map

Challenges and Interventions Needed

Neighbourhood/ Typology	Challenges
<p>Al Hashmi Al Janoubi Neighbourhood: represents the typology of a dense neighbourhood with overloaded infrastructure networks.</p>	<div data-bbox="842 573 1334 689">  </div> <ul data-bbox="807 698 1350 792" style="list-style-type: none"> • The overloaded water and sewerage network • Lack of assigned commercial areas • Flash floods.
<p>Al Qweismeh Neighbourhood: represents the typology of a neighbourhood that lacks access to some public facilities.</p>	<div data-bbox="842 990 1334 1106">  </div> <ul data-bbox="807 1115 1452 1370" style="list-style-type: none"> • The overloaded water network. • Deteriorated sewerage network. • Lack of roads' maintenance. • Lack of access to hospitals or health care facilities within a 5 and 15 minute walking distance. • The lack of public transportation means, in addition to traffic. • Pollution.
<p>Al Yadoudeh Neighbourhood: represents the typology of a neighbourhood that lacks access to some infrastructure networks and public facilities.</p>	<div data-bbox="842 1438 1334 1554">  </div> <ul data-bbox="807 1581 1452 1818" style="list-style-type: none"> • The overloaded water network. • The neighbourhood is not connected with the sewerage network. • Lack of access to hospitals or health care facilities within a 5 and 15 minute walking distance. • The insufficient recreational facilities. • The lack of public transportation means.

Interventions Needed



- Upgrading the water network
- Upgrading the sewerage network
- Flash flood mitigation/ SUDS Interventions
- Adding commercial uses



- Upgrading the water network.
- Upgrading the sewerage network.
- Adding health care facilities to the area.
- Improving public transportation means.
- Providing maintenance to the existing roads.
- Addressing the pollution issue in the area through sustainable and innovative infrastructure, as well as adding more trees and forestation.
- Addressing the pedestrian network.



- Upgrading the water network.
- Upgrading and connecting the sewerage network.
- Adding health care facilities to the area.
- Adding recreational facilities to the area.
- Improving public transportation means.

05

CHALLENGES AND OPPORTUNITIES

Challenges

STRATEGIC CHALLENGES



Unequal Urbanisation

- The weak urban planning practices along with Jordan's rapid urbanisation has led to the inadequate distribution and access to basic services and public facilities.
- Additionally, approximately half of Jordan's population (around 11 million) is concentrated in the capital city of Amman. The various migration and settlement patterns of the city clearly display the social and spatial disparity between west Amman and central/east Amman, whereby wealthier population have settled in the West.

Demographic Profile

- Jordan has welcomed and been a safe haven for several influxes of refugees throughout its history. It holds the second highest percentage of refugees per capita in the world, with 89 refugees per 1,000 inhabitants.⁴⁶²
- Jordan has a young population profile, with 63% of its population falling under the age of 30.⁴⁶³ This poses a challenge in providing educational facilities that can appropriately accommodate the young population as well as sufficient employment opportunities for the emerging, young workforce.
- Refugees and host communities in Jordan are currently facing significant challenges stemming from the COVID-19 pandemic, which has resulted in increasing unemployment rates and food insecurity as well as highlighted the inadequate access to basic services and needs at the neighbourhood level.

Climate Change

- Jordan ranked 81 out of 181 in the NDGAIN index for climate vulnerability.⁴⁶⁴ It is suffering from increasing temperatures, erratic rainfall, declines in available water, and an increase in heatwaves, flash floods, droughts, and landslides.⁴⁶⁵
- At the national level, transport and industrial energy activities are responsible for 74% of GHG emissions, while the waste management sector emitted approximately 13% and industry 8%, posing

an environmental challenge.⁴⁶⁶

- The impact of climate change and extreme weather conditions, such as flash floods, droughts, and high temperatures, have further driven people into urban areas.

SPATIAL CHALLENGES



Urban Sprawl and Population Density

- Jordan is experiencing rapid urban growth, with an annual population growth of 2.3% (2019) and population density of 118.9 persons/km².⁴⁶⁷ The total built-up area has doubled between 2004-2015, reaching 1,500 km².⁴⁶⁸ The spatial expansion of urban areas is equivalent to 1% annually, approximately 15 km².⁴⁶⁹ This poses a risk to agricultural land as well as infrastructure and its financing.
- As Jordan's urban footprint continues to increase, the land available for agriculture is declining, resulting in major socio-economic challenges.
- In Amman, the urban area has increased rapidly, with an average annual rate of 2.03%.⁴⁷⁰
- At the city level, municipal service provision and development plans follow the scattered urbanised areas. This demonstrates that urban planning in Amman is mainly reactive rather than proactive, responding to the actualities of the urban growth as they happen.
- Coupled with the influxes of refugees, urban sprawl has increased the demand on services, thus exacerbating the pressure on municipalities to provide such public services. Municipalities have limited capacity to fulfil this increasing demand, which has affected the quality-of-service provision, consequently making residents reluctant to pay their taxes.
- Additionally, the areas with higher population density in Amman City corresponds with the areas with higher refugee presence. These areas are accordingly experiencing increasing pressures on their infrastructure networks, which has affected the quality of the provided service.
- Urban growth in Amman generally occurred along transport routes away from the core of Amman,

and as a result, this growth led to the expansion of urban areas into other types of land use/cover classes, particularly vegetation areas.⁴⁷¹

- 64% of Amman's annual carbon emissions are attributed to buildings.

Housing

- At the national level, there is a significant mismatch between housing supply and demand, whereby the current housing needs are not being met. Accordingly, the lack of affordable adequate housing has become a critical issue due to the inflated prices of land, construction, and energy.
- While the HUDC is the sole government agency responsible for housing, its current mandate focuses on overseeing and monitoring the building's construction.
- The influx of Syrian refugees created a high demand for rental housing, further raising land prices.⁴⁷² Refugees are the most tenure insecure in Jordan.⁴⁷³
- Real estate prices increased 100% in 2005, which is attributed to the dramatic increase in the number of land and housing transactions by Iraqis, from 125 transactions in 2002 to 1,811 in 2005, or from JOD4.9million to JOD100million.⁴⁷⁴

Accessibility and Connectivity

- At the Governorate level, around 56% of households own at least 1 private car⁴⁷⁵, indicating a heavy reliance on private modes of transport and resulting in heavy traffic congestion and pollution.
- A total of 7 million trips are made daily within GAM, with around 1 million entering GAM from neighbouring municipalities.⁴⁷⁶ This has increased traffic congestion within the city, leading to increased air pollution, reduced pedestrian mobility, and the dominance of vehicular roads.
- Inadequate mobility options within Amman City have resulted in major environmental, economic, and social challenges.
- Public transportation in Amman is slow, costly, and time consuming, exacerbating the vulnerabilities of refugees and people with low incomes.

Facilities and Infrastructure

- The sharp rise in the city's population has contributed to a 40% increase in demand for water,⁴⁷⁷ with

water consumption in GAM being estimated at 72.75 litres daily per capita.⁴⁷⁸ However, the supply intermittency greatly reduces the value of this service to consumers. Non-revenue water accounts for around 50% of total water consumption.⁴⁷⁹ Additionally, in 2014, half of the municipal water losses occurred within the Amman Governorate.

- Several areas in Amman City face significant problems during intense rainfall due to the poor conditions of the current storm-water drainage network.
- There is a minimal availability of public parks in many Jordanian municipalities and cities, including GAM.
- The flow of refugees from camps to urban areas has impacted the capacities of infrastructure and public facilities, such as education, health, and public spaces. It has also increased strain on natural resources, particularly water, which is already scarce.
- The Influx of Syrian refugees resulted in an increase of 1000 tonnes of waste per day.⁴⁸⁰ It has been estimated that the remaining lifespan of the current landfills is 16 years before they have reached their capacities.⁴⁸¹
- An estimated 20.6% of the GAM population are not connected to the sewerage network.⁴⁸²

GOVERNANCE, LAND MANAGEMENT & PLANNING



CHALLENGES

Governance & Administration

- The boundaries of administrative institutions, like MoI, and planning institutions, like MoLA, GAM, and GIM, are unaligned. This governance framework leads to overlapping mandates and roles and a lack of horizontal and vertical coordination among entities. Consequently, this impacts decision-making processes and planning activities, resulting in a lack of uniformity.
- Jordan's planning system lacks a National Urban Policy.
- The multiplicity of urban planning institutions and actors has resulted in weak coordination and overlapping responsibilities.

- The lack of integrated planning policy at regional and city levels hinders the project prioritization process.
- The lack of a unified system and poor monitoring mechanisms leads to vast disparities between planning documents and on-ground implementation.
- The lack of up-to-date data that is available and uniform across different systems and entities has impacted the capabilities to implement evidence-based decision making.

Land Management & Planning Boundaries

- The only law in Jordan related to planning is the “Law of Planning of Cities, Villages, and Buildings, No.79”, which was established in 1966. It is based on the town planning of the British Palestine Mandate, which itself originated from the 1932 British Town Planning Act.⁴⁸³ This law remains temporary, with minimal attempts to update it.
- Jordan’s legal land tenure system reflects a movement towards land privatization.⁴⁸⁴ This has led to unsustainable land use practices and severe land degradation, particularly regarding agricultural lands. Moreover, as private land is located in prime areas, they have become more expensive and unaffordable as a consequence of increased demand.
- Social restrictions on land inheritance and ownership persist, especially impacting poor women.⁴⁸⁵
- Palestinian refugee camps remain excluded from municipal land use and development plans, despite being permanent and well-established within the social and urban fabric of Amman, with their shelters being connected to municipal services and inhabitants paying service tax.

ENVIRONMENTAL AND NATURAL HAZARD



CHALLENGES

- Jordan’s population vulnerable to natural hazards due to the limited proactive approach to disaster prevention and mitigation, insufficient institutional capacities at the national and local levels, limited trained human resources, lack of awareness

among officials and communities about disaster preparedness, and unsatisfactory implementation of existing policies, such as Amman Resilience Plan, Green Cities Action Plan.⁴⁸⁶

- Jordan is the second most water scarce country.⁴⁸⁷ It is heavily reliant on external water resources, exacerbating tensions with neighbouring countries. The influx of refugees increased Jordan’s struggle to meet domestic water needs.
- According to a flood hazard mapping of Amman City, the downstream areas, such as Downtown Amman, are among the most vulnerable to flash floods due to their geographical features, pressured infrastructures, increasing populations, and high concentrations of Syrian refugees.
- Additionally, according to the seismic zoning map, Amman is in Zone 2A.⁴⁸⁸ This risk of earthquakes disproportionately affects the vulnerable populations living in refugee camps and the old city, which have higher population densities and weaker structures.



SOCIO-ECONOMIC CHALLENGES

Economy and Jobs

- Municipalities have limited capacity to support local economic development.
- Municipalities are facing constraints to finance service delivery, due to their low economic dynamics. In addition to low-income revenues, municipal staff salaries account for half of their budgets. Municipalities are not notified in advance about the amount, which hinders budget preparations.
- Furthermore, an estimated 14.4% of Jordan’s population lives in poverty.⁴⁸⁹ The poverty profile of Syrian refugees has imposed stresses on the pre-existing Jordanian poor.
- The highest numbers of poor people are concentrated in Amman, driven by low wages and high costs of living. Many are falling into the ‘working poor’ category.⁴⁹⁰

- Despite high education rates, youth in Jordan have low job prospects and an unemployment rate of 19.3% due to the poor conditions of the labour market and high-skilled job saturation.⁴⁹¹ There is a mismatch of skills in the labour market.
- At Governorate level, the average household in Amman is earning a monthly income of 576 JOD, with many households spending beyond their means on purchasing a new house or renting.⁴⁹²
- The sharp rise in the city's population has contributed to an 83% increase in public debt, 30% increase in youth unemployment, a 40% increase in demand for water, as well as a 17% increase in rental costs.⁴⁹³
- In Amman, many residents are under insecure working conditions in the informal sector. Additionally, most refugees work in the informal job market.
- Due to Government restrictions, Syrian refugees have limited domains of work available to them, regardless of their prior experience.

Conflict between Host and Refugee Communities

- As demand for dignified housing increases, tensions between refugees and host communities are likely to increase as well, with refugees and Jordanians competing for affordable housing. Additionally, in mid-sized cities, Jordanians are competing with Syrian refugees for rental apartments.
- The unequal access to public facilities, infrastructure, and job opportunities has exacerbated conflict and tensions between refugees and host communities.
- Many refugees rely on humanitarian assistance, which is considered a short-term strategy to reduce vulnerabilities. However, the lack of legal access to the job market intensifies their vulnerabilities and results in wider informal markets, thus increasing tensions between host and refugee communities in their efforts to receive the limited work opportunities.

Opportunities

STRATEGIC OPPORTUNITIES



- Due to Jordan's high proportion of young population – especially in Amman Governorate where more than half of the population are aged under 25⁴⁹⁴ – there is an opportunity for a growing labour force and human resources, less demand on health facilities, and reduced dependency rates, if a long-term plan that utilizes resources efficiently was adopted to encourage multidimensional developments in addition to capacity and skill-building programmes to meet future needs of this growing population.
- The availability of various documents at the national level that focus on addressing the needs of the refugees and host communities, such as the National Resilience Plan, Regional Refugee and Resilience Plan, Jordan Response Plan, Jordan Compact, and Global Compact for Migration. These plans provide strategies to respond to the immediate needs of provide the opportunity of meeting the immediate needs of Syrian refugees living both in camps and urban areas, as well as host community impacted by the crisis. Additionally, there is a major opportunity to build on these plans and efforts to achieve sustainable solutions for the integration of Jordan's host communities and refugees.
- It is considered a significant opportunity to improve the governance of migration, address the challenges associated with today's migration, and strengthen the contribution of migrants and migration to sustainable development.
- Turning the Syrian refugee crisis into a development opportunity that attracts new investments and boosts the local economy.
- Currently, donations to Jordan aim at building the capacities of the governmental institutions to provide long term solutions for the refugee crisis, which is an opportunity to build existing capacities.
- UN-Habitat, in collaboration with MoLA, is currently in the final stages of formalizing a national urban policy for Jordan that will set a guiding framework for urban development in the country, once approved.
- Jordan is transitioning from a highly centralized to a progressively decentralized system with more powers at the Governorate and Municipal level. This will enhance more local community participation in decision making.
- In GAM, there is the opportunity of enhancing data

collection and sharing through a proper database,



which is the Urban Observatory Department.

SPATIAL OPPORTUNITIES

Land Availability

- The COVID-19 pandemic and restrictions raised awareness on the importance of spatial planning and availability of green/open space and highlighted the importance of taking advantage of the existing vacant lands and turning them into green/open spaces.
- Up to 40% of land within Amman's built-up area is vacant, giving the opportunity of a large degree of intensification.
- Proper documentation of land ownership encourages land investment. Additionally, Jordan facilitates investment through renting governmental lands for investors.
- There are steps towards implementing white land taxes in Jordan, which will stimulate utilizing vacant lands, and thus, encouraging intensification.

Accessibility and Connectivity

- Developing adequate mobility options within Amman City will give the opportunity of reducing the environmental impact and improve the residents' socio-economic conditions and access to job opportunities.
- The current construction work for expanding the BRT further to connect Amman to Zarqa is an opportunity as this connection will significantly enhance affordable accessibility and connectivity between these areas, reduce traffic congestion, and reduce air pollution.
- GAM is currently finalizing their Gender Action Plan for Equitable Mobility, which will allow for equitable access to public transportation for women and vulnerable populations.



ENVIRONMENTAL OPPORTUNITIES

- As for climate mitigation, the potential for mitigation is large as Jordan is mainly a desert and solar energy can be utilized to produce electricity and reduce fuel consumption, and accordingly, mitigate climate change impacts and GHG.

- On the city level, there are 37 potential projects/ initiatives that were prioritized in the Amman Green City Action Plan that are to be implemented by 2025.⁴⁹⁵ These projects, when implemented, will assist in addressing the city's most acute climate change and environmental challenges, including solid waste management, water and wastewater, urban transport and building energy efficiency.
- Additionally, through the UN-Habitat's Flash Floods Resilience project, 120 suitable sites in Amman City for pilot projects were identified in the Flood Risk Assessment and Hazard Mapping Study. This endeavours to help reduce the effects of floods and droughts while additionally helping secure a more reliable water supply.
- At the city level, GAM recognizes the importance of environment sustainability projects and had allocated from its capital expenditures 650,000 JOD and 1,000,000 JOD, for the years 2022 and 2023 respectively, on such projects.⁴⁹⁶
- The Flood Risk Assessment and Hazard Mapping Study -done by DAR Al Handasah under a UN-Habitat's project- and COVID-19 pandemic raised awareness about the importance of retrofitting buildings' roofs and vacant lands within GAM into green spaces, which will help in reducing flash floods.



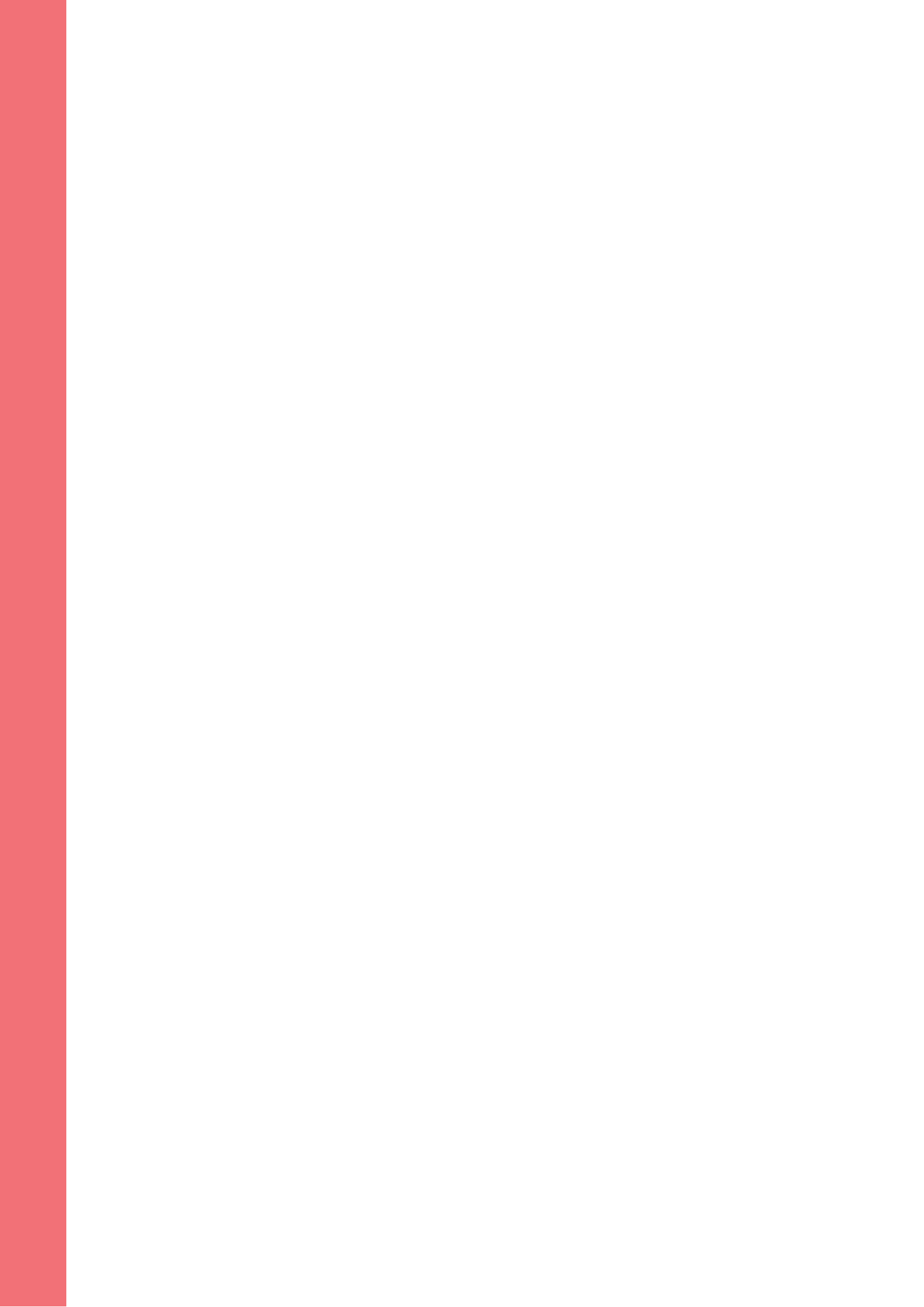
SOCIO-ECONOMIC OPPORTUNITIES
Economy and Jobs

- Jordan is open to potential investors and facilitates doing business. Whereby the end of 2013, Arab investors have invested 40% in the industry sector, 38% in the commercial sector, 20% in the agricultural sector and 2.5% in the real estate sector.⁴⁹⁷
- Jordan has high education attainment rates which offers the potential for a growing skilled workforce that will support the local economic development of the country when accompanied by other enabling factors.
- The government of Jordan's gave its residents the opportunity to establish home-based business, including Syrian refugees inside and outside camps, which assists in improving the resident's socio-economic conditions.

- Due to the COVID-19 impacts, there is an increase in unemployment rates, food insecurity, and inadequate access to basic services and needs. However, there is an opportunity of using the government's vacant lands for urban agriculture/permaculture in order to reduce unemployment, mitigate climate change impact, enhance the residents' socio-economic conditions, and achieve food security.
- 88% of GAM's revenues are self-generated.⁴⁹⁸ Additionally, approximately 82% of formal companies with a declared capital of more than JD500,000 are registered in GAM.⁴⁹⁹ This means that the market is stable and has potential for more growth and investments.

Facilities and Infrastructure

- As a country, Jordan has quite an advanced healthcare system, whereby it was ranked by the World Bank to be the number one healthcare service provider in the region and among the top five in the world. It is one of the most desirable locations in the region for medical tourism, and the country is rapidly developing an international reputation for high quality and affordable healthcare, which gives the opportunity for further flourishing of medical tourism. The increased expenditure in healthcare increases the productivity of human capital, thus making a positive contribution to economic growth and reducing the burden on families and contribute to national growth.
- There is an opportunity for enhancing Jordan's residents' livelihoods, local economy as well as attracting investors and businesses by increasing provision and investment in a sustainable water and sewerage systems, public transport, green/open and public spaces, and pedestrian infrastructure.
- There are several planned infrastructure investments at Amman City level that will – once completed- promote and enhance sustainability in the city, as well as improving the delivery of services.



06

STAKEHOLDER WORKSHOPS

Stakeholder Engagement Workshop

On the 24th of January 2022, the UN-Habitat Jordan team held the Spatial Profile Validation Workshop using a hybrid modality (via Zoom and in-person). This approach was utilized to ensure conformity with the COVID-19 restrictions and measures of physical distancing.

Participants included representatives from relevant ministries and governmental entities, partners from Greater Amman Municipality, private sector, development banks and agencies, and urban professionals.

The workshop intended to inform stakeholders about the work progress throughout the UPIMC Programme, provide an overview of the developed spatial profile and present the urban development situation and challenges related to the influx of refugees within the city of Amman, obtain stakeholder perspectives on the developed spatial profile, challenges, and opportunities identified in relation to infrastructure investment and implementation within the selected city, and select one pilot neighbourhood from the three neighbourhoods that were analysed in Amman for the second stage of the project.

Being comprehensive, during the first session, the UN-Habitat team presented an overview to inform key stakeholders about the UPIMC Programme process, objectives, and intended deliverables of the upcoming stage, which is: Develop Strategic Vision and Scenario Building. This was followed by a brief introduction from a representative of Greater Amman Municipality, where main actions and potential synergies between UPIMC Programme and their development plans were discussed. Next, a presentation of the national level of the spatial profile was showcased, highlighting its key findings and followed by an open discussion to validate the findings.

The second session entailed an in-depth presentation of Amman spatial profile at regional and city levels, followed by an interactive exercise to validate the findings and open the floor for feedback and discussion. The session ended with presenting the three analyzed neighbourhoods. Followed by a voting exercise, to select one pilot neighbourhood in Amman for the next phase.





An image showing the in-person participants

Qualitative Feedback

Below is a summary on the stakeholders' feedback regarding the quality of public infrastructure services and public facilities, including:

Public Transportation Sector:

The transportation problem within GAM lies in the ability of the transportation sector to absorb the load, as there are relatively few large means of transportation, while there are many small mass transportation means such as coaster buses. Moreover, the lack of a specific authority that organizes the public transportation system and the absence of an accurate public transportation information system (e.g about the schedules and the routes), that public transport users can rely on, is another major challenge.

Public Water Service:

Although the connection to the water network is available and accessible in most areas, piped water is undrinkable. Thus, people tend to buy filtered water.

Sanitation (Sewerage) Service:

The stakeholders mentioned that there are some areas that are not connected to the sewerage network and still rely on septic tanks. On the other hand, the MoWI mentioned that there is a currently planned project with allocated budget to connect residential areas within Al Yadoudeh and Al Qweismeh neighbourhoods, which aligns with the identified interventions needed for these two analysed neighbourhoods.

Electricity Service:

The electricity company works very well, but most people complain about the tariff and the cost of electricity. Also, sometimes electricity cut-offs happen during the winter. Additionally, the stakeholders highlighted the importance of promoting the use of alternative energy resources.

Storm-water Drainage:

Due to the increase in the built-up area, the city suffers from poor storm-water drainage, where many areas, especially the low ones, face flooding. In addition, the storm-water drainage system needs rehabilitation, development, and maintenance.

Solid Waste Management System:

Amman is considered a clean city and has dumpsites. However, these dumpsites are exposed to open air which produce and carry undesirable/bad smells.

Quality of Health care and Educational Services:

In general, these facilities' spatial distribution was described as very good. Health care and educational services are provided in most of the neighbourhoods. However, the quality of these services was described as poor.

Quality of Recreational (park) facilities:

These facilities are poorly distributed among Amman's neighbourhoods. Stakeholders explained that there are very few parks, and their quality is considered poor and not exclusive to families, making them unsafe.

Most of the available parks lack maintenance on a regular basis and need improvements. GAM needs to work on creating more green and open areas, especially in the densely populated neighbourhoods and camps. This must be done as to provide at least one open green area within each neighbourhood in Amman in cooperation with the residents of the neighbourhood, as part of the partnership between the public sector and people.



An image showing the validation workshop

Neighbourhood Selection

The following section summarises the results of the voting exercise that was held after the analysis of the three neighbourhoods in Amman city was presented. The participants voted on which pilot neighbourhood in Amman should be selected for the upcoming phase of the project.

The results of the voting exercise were as follows:

- Al Yadoudeh neighbourhood: 10 votes
- Al Hashmi Al Janoubi neighbourhood: 7 votes
- Al Qweismeh neighbourhood: 5 votes

On February 14th 2022, the UN-Habitat Jordan team held a virtual meeting with GAM to further discuss GAM's technical comments on the spatial profile and the selection of the pilot neighbourhood. While the Al-Yadoudeh neighbourhood received a few more votes, the GAM team explained that the Al Hashmi Al Janoubi neighbourhood is a better choice for the second stage of the project, because the Al Hashmi Al Janoubi neighbourhood lacks any planned infrastructure and investment projects, needs more attention due to the lack of previous studies, and accommodates a higher number of beneficiaries in comparison with the Al-Yadoudeh neighbourhood.

Therefore, the selected neighbourhood for the upcoming stage (Visioning and Scenario Building) is "Al Hashmi Al Janoubi neighbourhood" within Al Madinah district in Amman city, which represents the Typology number 1: the typology of a dense neighbourhood with overloaded infrastructure networks.

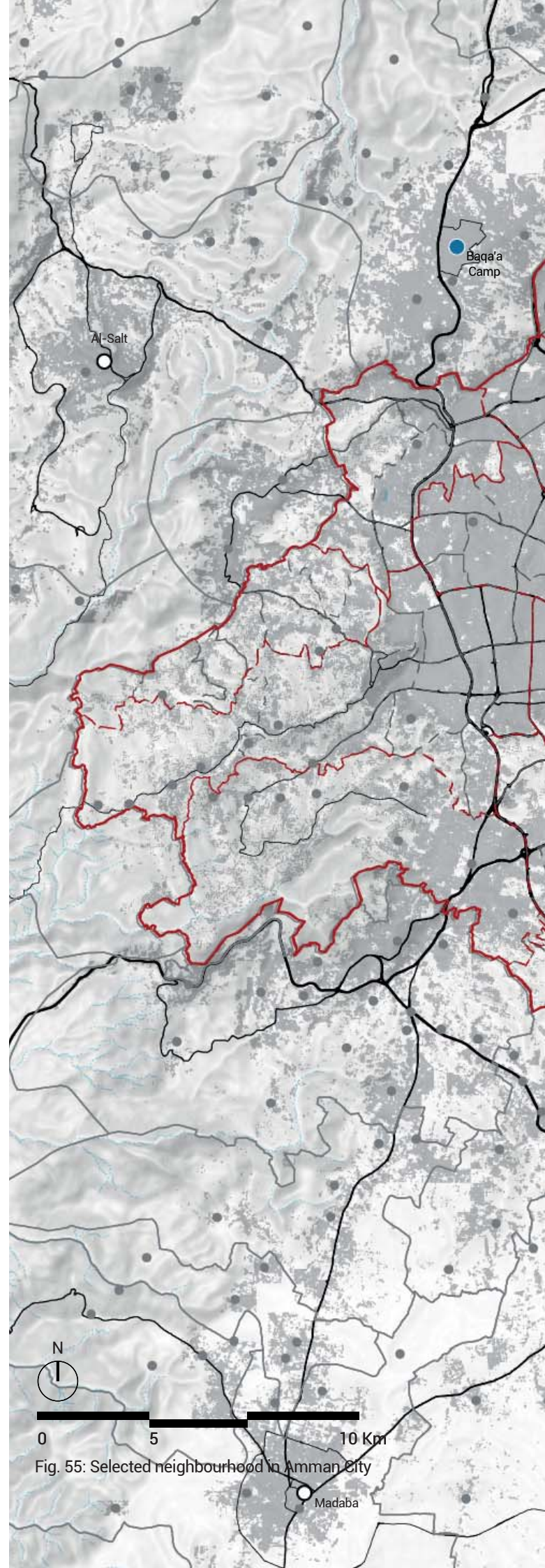
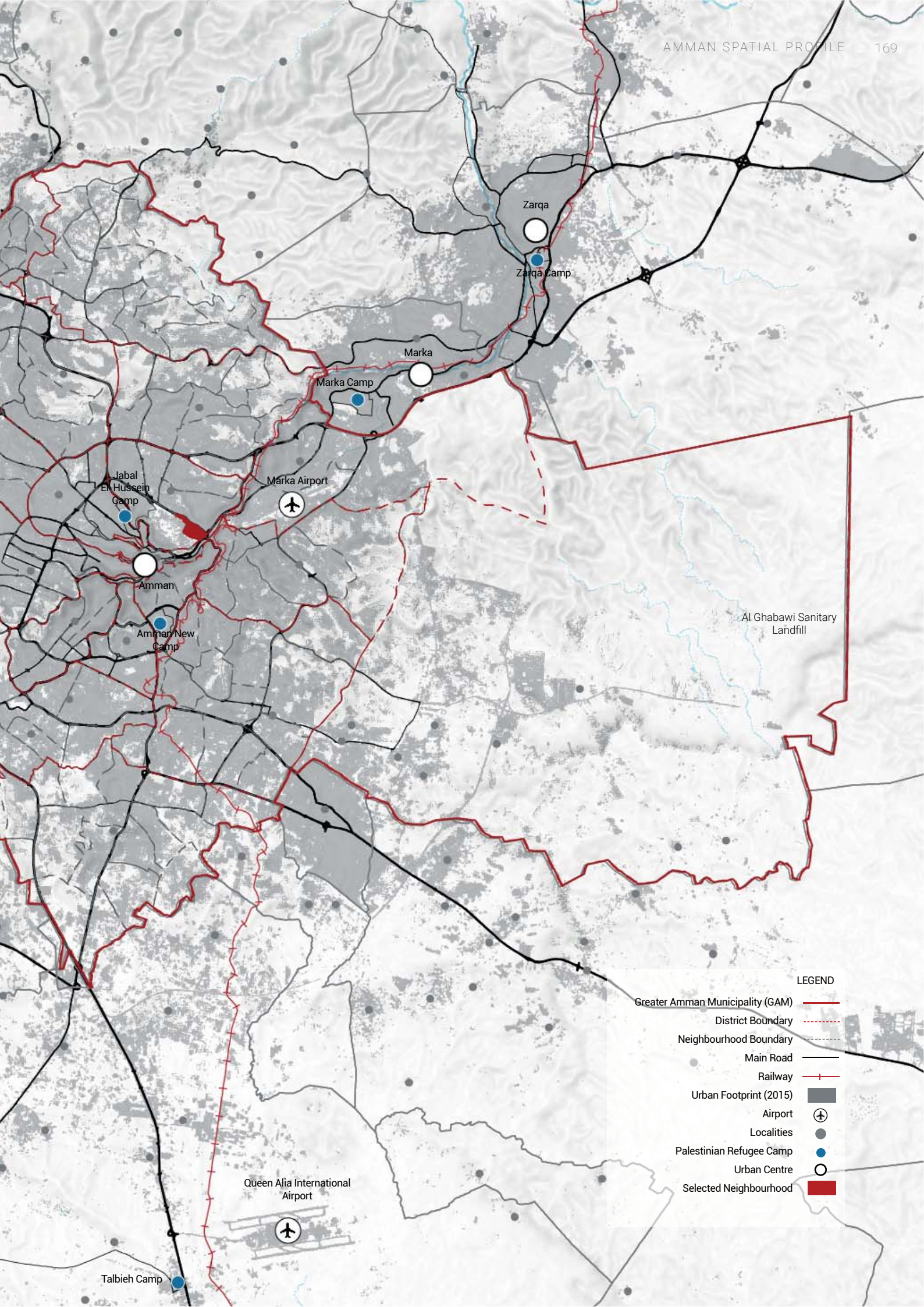


Fig. 55: Selected neighbourhood in Amman City



LEGEND

- Greater Amman Municipality (GAM) ————
- District Boundary - - - - -
- Neighbourhood Boundary ······
- Main Road ————
- Railway ————
- Urban Footprint (2015) ■■■■
- Airport (⊕)
- Localities (●)
- Palestinian Refugee Camp (●)
- Urban Centre (○)
- Selected Neighbourhood (■)

Selected Neighbourhood Validation Workshop

On the 9th of March 2022, the UN-Habitat Jordan team held the Neighbourhood Validation Workshop at the GAM's Library located at the city centre of Amman, which is very close to the Al Hashmi Al Janoubi Neighbourhood. 28 participants attended the workshop, most of whom were residents of the Al Hashmi Al Janoubi Neighbourhood, including the head of the neighbourhood (Mukhtar Al Hara) as well as women, youth, elderly, refugees, and people with disabilities, to ensure the inclusion of diverse age groups, genders, nationalities, and abilities within the neighbourhood. Additionally, representatives from GAM attended the workshop, including GAM's area manager and district planning engineers.

The workshop aimed at informing the residents of the Al Hashmi Al Janoubi about the UPIMC Programme and its objectives; providing an overview of the developed neighbourhood spatial profile that presents the existing urban situation of their neighbourhood; and obtaining their perspectives on the developed spatial profile as well as the challenges and opportunities identified in their neighbourhood in relation to infrastructure, urban environment, transportation, and public facilities.

The first session began with the UN-Habitat team giving an overview to inform the neighbourhood residents about the UPIMC Programme's process and objectives, as well as the intended deliverables of the upcoming stage, which aims to 'Develop a Strategic Vision and Scenario Building'. This was followed by a brief explanation on the spatial analysis of their neighbourhood. Next, two interactive sessions were held with the residents, where they were divided into three groups and had an open discussion to identify and map the existing challenges and opportunities in their neighbourhood from their perspectives.

The sessions ended with each group presenting their collectively identified challenges and opportunities under the four themes of infrastructure, urban environment, public facilities, and transport.





An image showing the neighbourhood validation workshop

Challenges Identified by the Local Community

To trigger the discussion regarding the challenges during the interactive session, the UN-Habitat team prepared images displaying the different challenges at the selected neighbourhood, other neighbourhoods in Jordan, and in other countries in general.

At the beginning, the participants were divided into three groups. In cooperation with the UN-Habitat team member, each group assigned four of its members to sort the challenges into four main themes: infrastructure, urban environment, public facilities and transport.

Afterwards, the other participants were requested to choose an image, highlight the challenges in their selected image, and map the challenge if it exists in their neighbourhood.

The results of this session highlighted the existing challenges at Al-Hashmi Al-Janoubi neighbourhood from the local community's perspective, categorised into the following four main themes:

1 Public Facilities

- **Health facilities**

The residents explained that a main challenge at the neighbourhood is the poor health care service available and the lack of a 24-hour emergency centre. This covers the qualitative side of the analysis, as the spatial analysis had indicated that the neighbourhood is well covered with the existing primary health centre.

- **Recreational facilities:**

The residents highlighted the lack of regular periodic maintenance for the public spaces available in the neighbourhood, including the football fields and the park. Furthermore, they mentioned the lack of public toilet facilities within the park.

- **Educational facilities:**

According to the local residents, the Al Hajjaj Primary School, located in the southeast of the neighbourhood, is in poor condition and is considered unsafe for children.

- **Commercial facilities:**

A main challenge that was consistently identified was the limited commercial facilities, whereby only one small bakery is available which has limited capacity and cannot fulfill the whole neighbourhood's demand. Accordingly, residents highlighted that they must reach other neighbourhoods to fulfill some of their needs.

2 Urban Environment

The participants touched upon the lack of general cleanliness in the neighborhood, where solid waste management has been highlighted as a challenge, specifically regarding the unequal distribution of janitors and waste containers, with some areas lacking any waste collection services. The lack of awareness regarding waste disposal was mentioned as well, where some people throw their waste between fences located at the northwestern area of the neighbourhood.

Regarding the existing street network within the neighbourhood, the residents mentioned that the streets are narrow, deteriorated, and lack signage to guide the vehicles' movement, which makes the streets unsafe in general. Furthermore, some residents use the streets to display and market their goods, which further narrows the cars' pathway. Additionally, they explained that the streets lack proper sidewalks. If available, the sidewalks will have walking obstacles such as trees, which makes it unfriendly to pedestrians and disabled people.

As for the visual aspect of the urban environment, the participants touched upon the vandalism that happens on the walls of the neighbourhoods, leading to an unpleasant and unsafe environment. Stairs are described as unsafe and lack regular maintenance. They also mentioned that the neighbourhood lacks green open areas and trees.

Furthermore, the unlicensed aviculture activities held on the roofs of some houses cause bad odors, which leads to unpleasant environment.

As for housing at the neighbourhood, they explained that houses are in general very old, deteriorated, and in poor conditions.



An image showing the challenges interactive session

3 Basic Services/Infrastructure

- Road infrastructure:

The residents intensively explained that the roads' infrastructure is generally deteriorated, with a lot of speed bumps. Additionally, there are no pedestrian crossings.

- Sanitation (Sewerage) Service:

The lack of periodic maintenance for the manholes was frequently mentioned. Additionally, the fact that some manholes are kept open without lids threatens the safety of people, causes bad odors, and the emergence of different pests.

- Water Service:

Residents explained that there is variance in the water supply, where some areas receive public water for one or more days and other areas receive water for less than one day, which is not sufficient enough to fill their water tanks.

- Electricity Service:

The residents explained that the neighbourhood is poorly lit, and they sometimes suffer from cutoffs. Additionally, there are some electricity posts that are improperly located, which threatens the safety of cars and passerby.

- Storm-water Drainage Service:

The residents highlighted the issue of flash floods and poor storm-water drainage in their neighbourhood.

4 Accessibility and Public Transport

The neighbourhood is served partially with the service taxis (white taxis). They usually use a private car or taxi/service (white taxi) to reach the nearest bus stop. Furthermore, the accessibility to the nearest bus stop is considered unsafe due to the lack of pedestrian pathway or a pedestrian bridge.

Health Hazardous Area



Dangerous Stairs

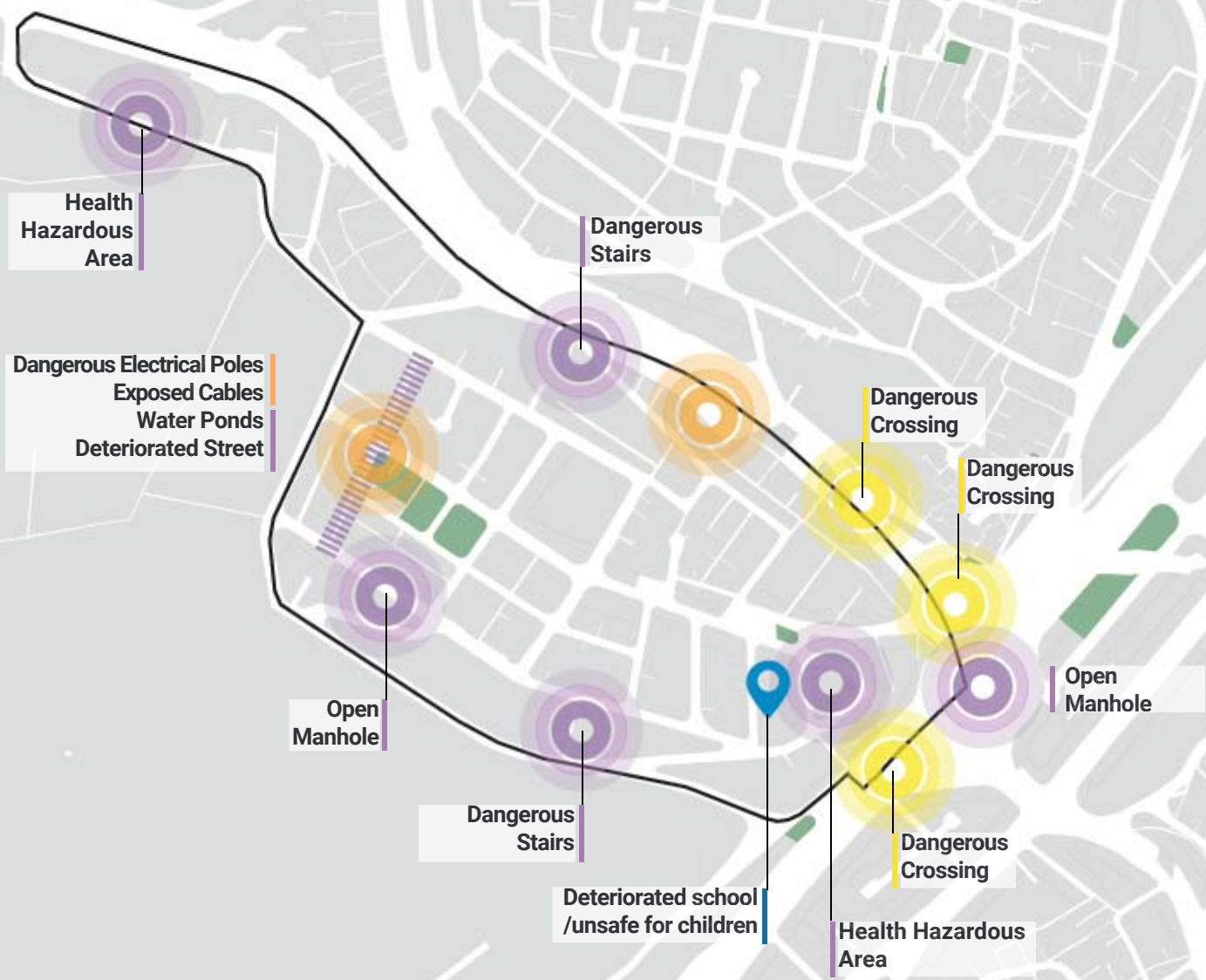


Dangerous Crossing



Deteriorated Street, Electrical Poles





LEGEND

- Neighbourhood Boundary
- Accessibility & Transportation Theme
- Infrastructure Theme
- Urban Environment Theme
- Public Facilities Theme

0 0.25 0.5 Km

Fig. 56: Challenges identified by the Al Hashmi Al Janoubi Residents

Needs and Opportunities Identified by the Local Community

Following the same methodology used to identify the challenges in the previous session, the UN-Habitat team began the needs and opportunities identification session by explaining the importance of this identification for their neighbourhood. Accordingly, the participants highlighted their needs and the potential opportunities available in Al Hashmi Al Janoubi neighbourhood, which were categorised into the following four main themes:

1 Public Facilities

- Health facilities

The residents explained that opening a comprehensive health centre that provides a 24-hour emergency service is of the highest priority for the neighbourhood. They also mapped the potential area to construct this aforementioned health centre, as shown in the map. Additionally, another proposal was to transform the existing primary health centre into a comprehensive one.

- Recreational facilities

The residents explained that the existing park at Al Hashmi Al Janoubi neighbourhood needs a more secure playing area, more games, more light poles, public toilet facilities, shaded seating areas, a kiosk, and regular maintenance. Additionally, they explained the significant need to add inclusive games and activities in the park, specifically at the southern playground, to involve people with disabilities, who represent a relatively high percentage of the neighbourhood's population. Furthermore, they recommended that the open areas of the park and the playground can be utilised for awareness raising campaigns, lectures, and trainings.

- Educational facilities:

According to the local residents, the neighbourhood needs a nursery, a vocational training centre, and a centre specialized for people with disabilities.

- Commercial facilities:

A main commercial centre was requested by the residents to serve them with their basic needs, as the existing ones are very limited and expensive.

2 Urban Environment

To overcome a main challenge identified within the neighbourhood regarding solid waste management, residents explained that awareness campaigns that

address waste disposal and recycling are significantly needed. As for the visual aspect of the urban environment, the participants highlighted the need for the general beautification of the neighbourhood through adding more green elements, in cooperation with the residents. This can include: planting trees, implementing urban agricultures on vacant lots and rooftops, improving the neighbourhood's stairways, street-scape, and sidewalks, as well as adding murals on public buildings, such as schools. Additionally, they proposed painting the residential buildings of the neighbourhood to enhance the neighbourhood's identity and to distinguish it from other neighbourhoods.

3 Basic Services/Infrastructure

- Street infrastructure:

The residents mentioned the need for road maintenance, installing speed bumps, adding pedestrian crossings, and enhancing the street-lighting in general.

- Sanitation (Sewerage) Service:

The need to upgrade the sewerage network was highlighted.

- Water Service:

Residents mentioned the need to improve the water service supply in some areas of the neighbourhood.

- Electricity Service:

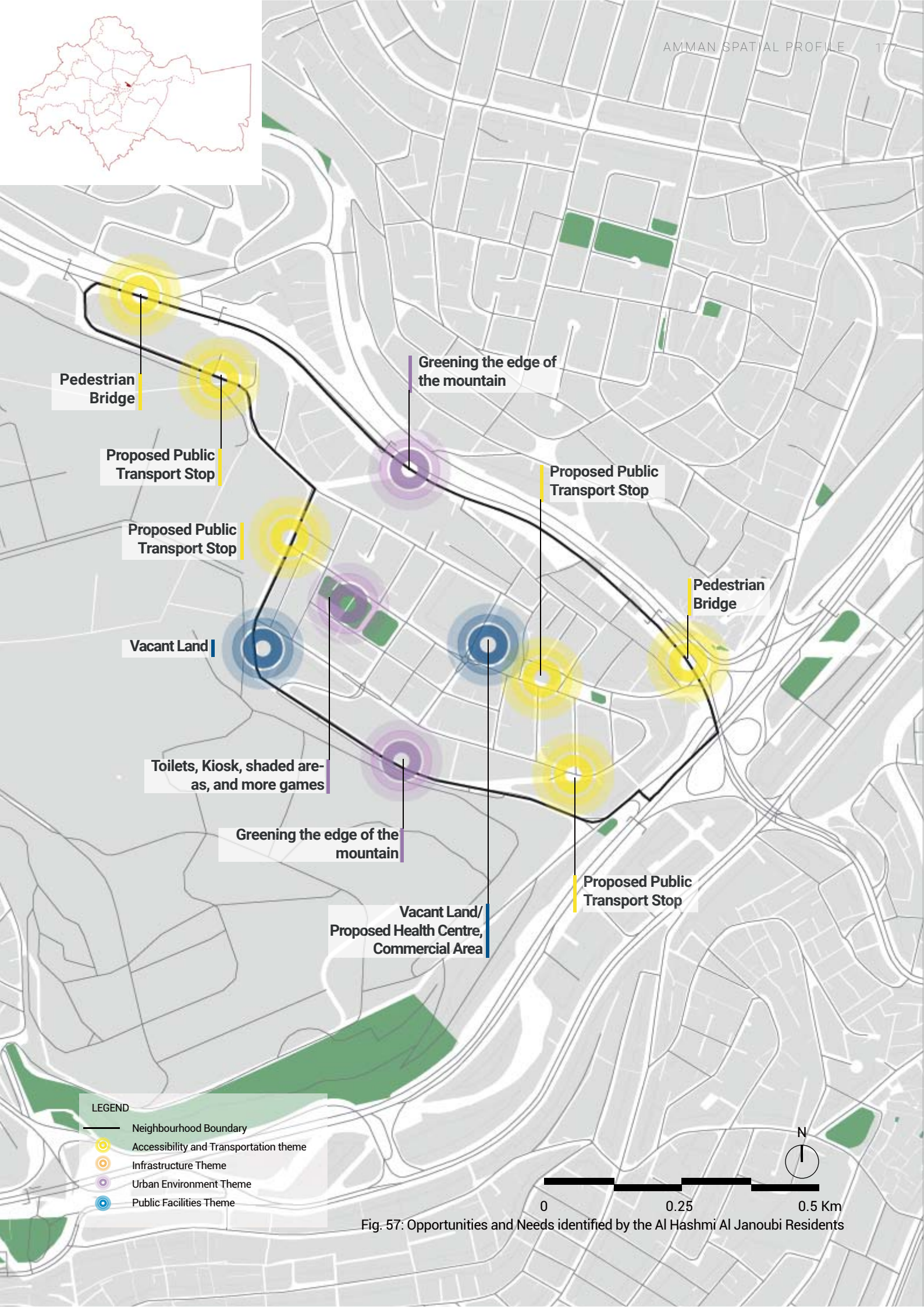
The residents explained that there are some electricity posts that are improperly located in the streets that should be removed, as they threaten the safety of the residents and any passersby.

- Storm-water Drainage Service:

The residents highlighted the need to maintain the storm-water drainage network.

4 Accessibility and Public Transport

The neighbourhood needs public transport stops and extended routes. Furthermore, the residents extensively highlighted the importance of constructing a pedestrian bridge at the entrance of the neighbourhood to facilitate the pedestrians' movement towards the main bus stop located at the main street, named Al Istiklal Street.



Pedestrian Bridge

Proposed Public Transport Stop

Proposed Public Transport Stop

Vacant Land

Toilets, Kiosk, shaded areas, and more games

Greening the edge of the mountain

Vacant Land/
Proposed Health Centre,
Commercial Area

Greening the edge of the mountain

Proposed Public Transport Stop

Pedestrian Bridge

Proposed Public Transport Stop

LEGEND

- Neighbourhood Boundary
- Accessibility and Transportation theme
- Infrastructure Theme
- Urban Environment Theme
- Public Facilities Theme

0 0.25 0.5 Km

Fig. 57: Opportunities and Needs identified by the Al Hashmi Al Janoubi Residents

Conclusion- Challenges and Interventions Needed at Al Hashmi Al Janoubi Neighbourhood

Based on the spatial analysis conducted for the pilot neighbourhood in Amman City (Al Hashmi Al Janoubi) and the challenges, needs, and opportunities highlighted by the neighbourhood's residents, this section summarises the identified challenges and the needed interventions at Al Hashmi Al Janoubi in relation to the SDGs.



SDG 3: Good Health and Well Being

The analysis revealed that there is a lack of access to health care facilities within a 5- and 15-minute walking distance at the Al Hashmi Al Janoubi neighbourhood. This was validated by the neighbourhood residents.

Accordingly, **the needed intervention** is to construct a comprehensive health centre or upgrade and transform the existing primary health center within the neighbourhood to a comprehensive one that includes a 24-hour emergency centre.



SDG 6: Clean Water and Sanitation

Residents described the water service as weak and limited. They also explained that the sanitation network needs regular maintenance. This is aligned with the capacity analysis conducted that revealed that the water and sewerage networks within the neighbourhood are overloaded.

Therefore, **the needed intervention** is to upgrade the water and sewerage networks to accommodate the increase in population.



SDG 9: Industry and Infrastructure

The residents mentioned the need for road maintenance, installing speed bumps, adding pedestrian crossings, and enhancing the street-lighting in general. The field visits conducted by the UN-Habitat team confirmed that the roads need rehabilitation and more lighting. Furthermore, the residents also discussed the issues of flash floods and poor storm-water drainage.

Accordingly, **the needed intervention** is to rehabilitate the road infrastructure and to add more lighting poles in the neighbourhood. There is additionally a need to provide periodic maintenance to the storm-water drainage system.



SDG 11: Sustainable Cities and Communities

The analysis revealed the limited commercial areas within the neighbourhood, which was further emphasised by the residents. Additionally, they mentioned the lack of facilities for children and people with disabilities. Residents also explained that the public recreational facilities in the neighbourhood need significant rehabilitation. Therefore, **the needed interventions** are to add a central commercial area, a nursery, a vocational training centre, and a centre specialized for people with disabilities. Regarding the public recreational facilities, **the needed interventions** include providing more secured play areas, more games (specifically inclusive games and activities for people with disabilities), more lighting poles, public toilet facilities, shaded seating areas, a kiosk, and regular maintenance in general.

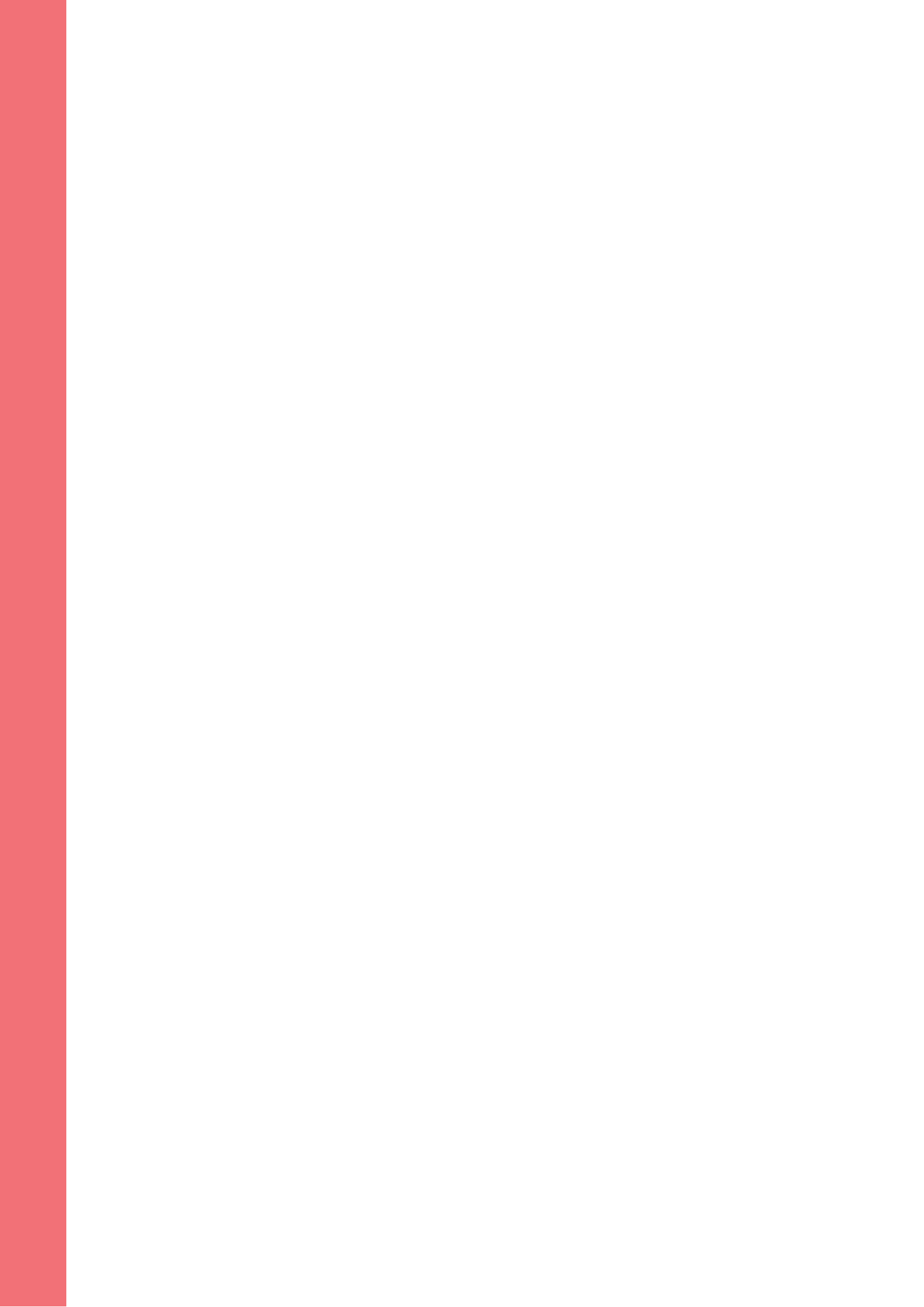
As for transportation, the analysis showed that the neighbourhood residents have good access to public transport means within 5- and 15-minutes walking distances. However, residents highlighted the need for public transport stops and routes. They also highlighted the lack of pedestrian bridges on the main roads that lead to the main nearby public transport stop available, which threatens their safety. The **needed interventions** in this regard is to extend a public transport route into the neighbourhood and to add a fixed stop in the central area of the neighbourhood. Additionally, pedestrian bridges on the main streets are highly necessary.

Furthermore, the unequal distribution of janitors and waste containers was highlighted as a challenge concerning solid waste management in the neighbourhood. Accordingly, **the needed intervention**, is to add waste containers and assign more janitors to serve the neighbourhood equally and efficiently.

Another **highlighted need** is the general beautification of the neighbourhood, with residents suggesting painting murals and increasing the green elements, such as by adding trees and utilizing rooftops and vacant lots for urban agriculture.



An image of Al Hashmi Al Janoubi neighbourhood



07

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