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Draft of the

JORDAN NATIONAL URBAN POLICY

Diagnostic Report

Prepared by Dr. Myriam Ababsa for UN HABITAT

November 2019

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List of abbreviations and acronyms

AFD Agence Française du Développement	JRC Joint Research Center
AFESD Arab Fund for Economic and Social Development	JREEEF Jordan Renewable Energy and Energy Efficiency Fund
ASEZA Aqaba Special Economic Zone Authority	JRP Jordan Response Plan
CES-MED Cleaner Energy Saving Mediterranean Cities Project	JRPSC Jordan Response Platform for the Syria Crisis
CVDB Cities and Villages Development Bank	JSC Joint Service Council
DLS Department of Land and Surveys	JVA Jordan Valley Authority
EBRD European Bank for Reconstruction and Development	KfW Kreditanstalt fuer Wiederaufbau (German Development Bank)
EU European Union	L/C/d Liter per capita per Day
FAO Food and Agriculture Organization	LENS Local Enterprise Support Project
GDP Gross Domestic Product	MCM Million Cubic Meter
GEEREF Global Energy Efficiency and Renewable Energy Fund	MDGs Millennium Development Goals
GEF Global Environmental Facility	MEMR Ministry of Energy and Mineral Resources
GHG Green House Gases	MENA Middle East and North Africa
GIZ German International Cooperation	MoA Ministry of Agriculture
GoJ Government of Jordan	MoEnv Ministry of Environment
GWh Giga Watt hour	MoF Ministry of Finance
HUDC Housing and Urban Development Corporation	MOLA Ministry of Local Administration (ex MOMA)
IDB Islamic Development Bank	MoMA Ministry of Municipal Affairs
IDF Infrastructure Development Fund	MoPIC Ministry of Planning and International Cooperation
IDRC International Development Research Center	MoPWH Ministry of Public Works and Housing
IFC International Financing Cooperation	MSSRP Municipal Services and Social Resilience Project
IFI International Finance Institution	MoT Ministry of Transport
INDC's Intended National Determined Contributions	MWI Ministry of Water and Irrigation
IWRM Integrated Water Resources Management	NCG National Coordination Group
JCP Jordan Competiveness Program	NEEAP National Energy Efficiency Action Plan
JD Jordan Dinars	NGO Non-Governmental Organization
JGBC Jordan Green Building Council	NREAP National Renewable Energy Action Plan
JICA Japan International Cooperation Agency	NRW non-revenue water
JNBC Jordan National Building Code Council	NUP National Urban Policy
JNUP Jordan National Urban Policy	NWMP National Water Master Plan

NWWMP National Wastewater Master Plan

PRM Partnership for Market Readiness

PPP Public Private Partnership

SDGs Sustainable Development Goals

SEAP Sustainable Energy Action Plan

UNDP United Nations Development Programme

UNHCR The Office of the United Nations High
Commissioner for Refugees

UNFCCC United Nations Framework Convention on
Climate Change (UNFCCC)

UN-Habitat United Nations Centre for Human
Settlements

UNRWA United Nations Relief and Works Agency for
Palestine Refugees in the Near East

UPFI Urban Projects Finance Initiative

USAID United States Agency for International
Development

USD United States Dollar

WAJ Water Authority of Jordan

WASH water, sanitation and hygiene

WB World Bank

WFU Unaccounted for Water

WHO World Health Organization

WWTP Wastewater Treatment Plant

1. EXECUTIVE SUMMARY

A stability center for the Middle East, Jordan has managed to keep a fair development growth rate over the past decades, despite welcoming several large refugee waves. GDP per capita has increased from JD 1,512 in 2004 to JD 4,278 in 2019¹. The Kingdom has managed to invest significant resources in infrastructure facilities, and has made remarkable human development achievements. 94% of the population has access to an improved water supply (through networks). 93% of the population has safe sanitation (63% with sewage and 3% with other safe sanitation methods). Access to education and medication is quite evenly distributed in the country. However, the Syrian crisis has put pressure on the education and health sectors (JRP, 2019).

Despite sound economic achievements, Jordan is facing major unresolved challenges: the high unemployment rates (18%), especially among young people (42%) and women (23.3%) (IMF 2019), the occurrence of poverty (14.4% of the population and 18% vulnerable to poverty) and the shortage of affordable housing. These challenges are compounded by the country's energy and water deficiencies. Jordan imports 96% of its oil and gas, accounting for almost 20% of the country's GDP, which makes the country completely reliant on, and vulnerable to, the global energy market. The Kingdom is considered the 2nd poorest country in availability of water resources in the world, among 18 countries in the world at risk of water insecurity (Min of Environment, 2013, UNDP, GEF 2014).

Jordan population has doubled from 5.5 to 10 millions during the same period. This steady increase of the population (at 5.3%) is mainly due to the arrival of two waves of Iraqi and Syrian refugees in 2003-2005 and 2011-2014. 753,000 refugees are registered at the UNHCR, including 662,000 Syrians, 67,000 Iraqis, 14,000 Yemenis and 6,000 Sudanis². 80% of these refugees have settled in the northern cities, within poor neighbourhoods in search of informal job opportunities and cheaper rents and. This is threatening internal social cohesion.

This population increase has happened mainly within cities, which gather now 90.3% of the inhabitants. The five main cities of Amman, Irbid, Zarqa, Mafraq and Russeifa population have doubled during a decade (Amman from 2 to 4 million inhabitants from 2004 to 2019). Under this demographic pressure, and in the absence of sufficient urban planning tools to limit the urban sprawl, cities have expanded horizontally on valuable agricultural land. The country total built up area of the country has doubled over the last 25 years. It reaches now 1,500 km² (FAO 2019). The urban built-up reaches 909 km² according to the Global Human Settlement Layers³.

¹ World Bank 2019, Jordan Economic Update, April 2019, <http://pubdocs.worldbank.org/en/837261553672494334/jordan-MEU-April-2019-Eng.pdf>

² UNHCR 2019, Jordan Fact Sheet, June 2019. <https://data2.unhcr.org/en/documents/download/70161>

³ Calculated by the author, using the Global Human Settlement Layer 2015 developed by the Joint Research Centre of the European Commission. They are based on the LandSat imagery with 30m x 30m resolution. <https://ghsl.jrc.ec.europa.eu/ucdb2018visual.php#>

The large cities of Amman, Zarqa, Irbid, Madaba have not managed to preserve their agricultural lands. The amount of rain-fed agricultural land has been shrinking over the past twenty years due to the absence of protection tools, land fragmentation and urban encroachment on rural land. If no policy is implemented to protect remaining urban agricultural land, it will all disappear in the next two decades (Al Kofahi, Hammouri et al 2018).

The current urban planning practices are inadequate to curb Jordan's urban sprawl on agricultural land, thus creating environmental stress, increasing cost of service delivery, and of greenhouse gas emissions for consumption, transportation and solid waste collection.

The country is plagued with major spatial inequalities in growth patterns and in revenue distribution. The agglomeration of Amman-Russeifa-Zarqa concentrates half of the country population, 70% of salaried workers and 80% of its enterprises registered capital. The northern governorates are affected by the Syrian refugee influx and the closure of the border with Syria. The southern governorates are under populated (with 7.8% of the population) and are lacking economic investments (except for the port city of Aqaba).

With the liberal economic opening of the 2000's, foreign direct investment from the Gulf have been directed toward key development corridors and locations within Amman and Aqaba in Jordan (and Beirut and Damascus). Mega development projects have been accomplished, while some remained as mere projects. Neoliberal urban restructuring has occurred in Amman and Aqaba, promising additional wealth and landmarks to the city, while increasing spatial inequalities. Large subsidies in form of serviced land have been given to private developers, benefiting only to a minority.

82% of the formal companies with a declared capital of more than 0,5 m JD are located in Amman, followed by Zarqa (6%), Aqaba (4%) and Irbid (3%). 45% of all formal enterprises are in Amman, 17% in Irbid, 15% in Zarqa, 5% in Balqa. 64% of the private sector employees are working in Amman (403,448 in 2011), 12% in Zarqa, 11% in Irbid, 3% in Balqa, 2% in Aqaba (DOS 2011). To reduce these wide development gap between governorates, several policies have been initiated in favor of some key regional nodes for a more balanced territorial development. Special economic zones and qualified industrial zones were created in the 1990's. However, as they are located outside of municipal boundaries, they offer limited benefit to the local territories, except for some minimal employment opportunities. In order to foster economic development in secondary cities, infrastructure upgrading policies are conducted by the government, along with the improvement of the education sector.

In the continuation of the Jordan Agenda 21 adopted in 2000, Jordan has launched the "Jordan 2025, A National Vision and Strategy" which includes provisions for climate change, water-energy-food nexus, and disaster risk reduction. Mitigations and adaptations policies to climate change have already been taken with the energy mix, the use of renewable energy, the increase of public transportation. Cities are the main contributors to the GHG emissions and pollution through residential energy consumption and transportation. Jordan National Urban Policy can be a key instrument to coordinate national and local climate policies for the implementation of

the Paris Agreement achieved at COP 21 (the 21st Conference of Parties to the UN Framework Convention on Climate Change).

Highly centralized urban planning

Economic and physical planning is highly centralized in Jordan, despite the ongoing decentralization process. Municipalities are not empowered to control their urban expansion. They are still under the authority of the Ministry of Local Administration (ex MOMA) and they are depending from the approval of any land use modification by the Higher Planning Council. Most of municipalities complain from the fact that the Higher Planning Council delays or rejects much needed land use modification for regularization of informal areas, or for opening new roads. In most of the cases, the Higher Planning Council does not send any expert on site, and rely only on the application files submitted to its approval. By law, municipalities do not benefit from any complaint mechanism nor against the Higher Planning Council, nor against the Ministry. At most, the Higher Planning Council acts as a court of appeals more than a planning body as it does not have comprehensive planning tools. Higher Planning Council serves mostly as an Higher Zoning Council. It lacks any mechanisms to limit the urban sprawl and instead densify the cities.

Jordan lacks coordination between the multiple agencies in charge of urban planning. Cities have zoning and land use plans, but no comprehensive master plans (except for Amman and Aqaba). The Ministry of Local Administration has not yet produced any comprehensive Master plans for the largest cities of Zarqa, Russeifa and Mafraq. The Irbid Master Plan prepared in 2010-2011 with support of Amman Institute, has not yet been approved. The only recent integrated planning efforts have been the preparation of urban growth scenarios for the five largest cities of the country, most affected by the refugee crisis : Amman, Russeifa, Zarqa, Irbid and Mafraq (World Bank 2018a).

At municipal level, the last decentralization law, adopted in 2015, gave too much power to the local councils, without counter balancing the major role played by the Higher Planning Council and the Ministry of Local Development. Those local councils are under the pressure from landowners to expand the zoned and serviced areas. Urban planners are not sufficiently empowered within the municipal councils and they cannot support sustainable urban policies. This is an important domain for reform.

Governorates have not been able to direct growth yet as they are not integrated in regions. Regional authorities have been established for the most strategic areas: Greater Amman Municipality, ASEZA, Petra and the Jordan Valley Authority). The regionalization reform announced in the mid 2000's has never materialized, and has been replaced by the decentralization at the level of the governorates.

Rigid zoning regulations and building codes

Jordan has rigid zoning regulations and building codes that limit the number of units built and

increase the cost of housing units. As zoning and building norms allow only 39% to 53% of a plot to be built upon, with underground parking, apartments are expensive as land form half the costs. Developers are building apartments too large (more than 150 m² for half of them), that do not attract buyers. Low Land Cover Ratios combined with a maximum height of 4 floors height limit induces very low Floor Area Ratios (FAR). The highest FAR in Jordan is 2,4. As a consequence, housing production is expensive. The last Zoning and Building regulation of February 2019 has allowed a fifth floor to be built only in future zoned areas, but not in the current built ones. This will not allow for city densification but will result in more of low-density, high-cost housing development.

These negative trends (untamed urban sprawl, social and urban disparities and an increase in land speculation) will be accelerated by three laws adopted in 2019: the conversion of all informally built treasure land (*miri*) into private property (*mulk*), and the Land property reform which has allowed land fragmentation (it is now possible to subdivide a 4 donums plot of land into 1,5 donums, allowing 15% to be built). This will further reinforce the urban sprawl on the outskirts of cities.

In this bleak landscape, urgent measures must be taken to protect the last plots of rural land in the vicinity of cities to promote urban agriculture, and to build more compact cities, along with decent and efficient public transportation system.

Housing crisis and lack of social housing solutions

Jordan is suffering from a housing crisis, expressed in high vacancy rates at 18% (a record of 23% in Amman), informal housing development and overcrowding for 10% of households. Paradoxically, all the housing stock could be sufficient to cover the needs of the population, but 18% of the stock is locked and kept vacant. The quasi absence of social housing projects (0,02% of the total production including the recent Decent Housing program), in addition to the increase in land price, have forced many from the lower middle class and the more vulnerable to build in informal areas. The expansion of cities has led to the reduction of the quality of service delivery and to increase its costs. Unregistered housing production formed half of the total production between 2004 and 2015.

Land prices have sharply increased due to land speculation and the absence of taxation of vacant land. This has had a negative impact on housing production, as two thirds of formal apartments on the market are unaffordable to the middle and lower-income classes.

The total housing deficit in Jordan reaches over 15.9 percent at a national level (310,926 households), not including the Syrian refugee camps. Of this, 64 percent (199,245) are experiencing quantitative deficit while 36 percent (111,681) suffer qualitative deficit. Over the next decade, Jordan will need to produce between 62,000 to 74,000 housing units annually to reduce the current deficits and keep up with new household formation (World Bank 2018a).

Insufficient public transportation

Jordan is lacking proper public transportation and users are complaining from the bad quality of the services provided, the low frequency of bus and the lack of information on the routes. As a result, public transportation represents only 14% of the transportation mode, whereas private car reaches 35%, pedestrian mode 25%, school bus 13% and taxi 10% (MoT 2012). Public transportation within cities is limited. number of private cars has doubled in a decade, from 0.6 m to 1.2 m (2004-2014), and reaches now 1.5 m in 2018.

Only large cities such as Irbid and Zarqa have internal bus transportation. Most of cities are connected to Amman by bus lines. Over the past ten years, with the doubling of the population, and of the number of cars, most of Jordanians are suffering from traffic congestion. This ever-increasing traffic congestion is reducing the public transport operators productivity and revenues, as the vehicles are spending an increasing time to complete their routes, which reduce the number of passengers they carry. It has been suggested to limit or ban private vehicles from congested street along which public transportation routes run during peak hours.

GAM is suffering from traffic congestion and lack of women economic participation (partly due to the absence of public transportation). GAM Bus Rapid Transit vision is to provide a premium quality, economic, car-competitive mass transit system that will attract the entire spectrum of Amman citizens including car owners, will significantly contribute to Amman's aspirations of efficiency, inclusivity and sustainability. Amman BRT will be the city's first bus rapid transit system, in which high-capacity buses run on 32 km of segregated lanes. An extensive network of feeder services is being designed along with the BRT (buses and smaller vehicles to reach densely inhabited areas of East Amman with narrow streets).

Jordan National Urban Policy

The National Urban Policy has been conceived to assist the Government of Jordan in transforming current urbanization patterns into an engine for development. By allowing integrated regional and local urban planning for compact and inclusive cities, better connected and resilient to climate change, it will enable the transformative power of urbanization. Controlled urbanization can produce wealth, reduce land consumption and foster job creation. The NUP will provide legal framework to good urbanization, creating the environment for better living conditions, including public transportation development, affordable housing, energy and greenhouse gases consumption and emission reduction and shared friendly communal spaces.

In a context characterized by liberal policies and privatization, urban policy remains a key tool to support the Government of Jordan to protect the public realm and coordinate large investments for the benefit of all. NUP can direct the urban growth to resilient, compact and productive cities, while protecting the agricultural land, the environment and preserving natural resources. NUP is also an avenue for public participation in consultation and decision-making. The NUP can assist in preparing a National Master Plan, integrating regional Master plans, municipal plans, and transport and energy projects.

With 90% of its population located in urban areas, and more than 80% of its wealth produced in cities, Jordan needs to control its urban sprawl, preserve its agricultural land, and plan infrastructure services delivery to allow cities to become more compact, resilient and vibrant.

Sustainable development needs sustainable urbanization with adequate housing and services, and efficient institutions, based on the NUP and public participation. The National Urban Policy will need to review current planning methods and designs, enhance municipal finances and fostering of horizontal and vertical coordination between elected bodies and line ministries. In the context of increased decentralization since 2015, municipal councils' plans must coordinate with governorate development plans and national strategies (MOPIC 2015).

The National Urban Policy (NUP) allows national governments to guide the urbanization process. It is a guiding tool that provides a clear and coordinated view of the directions to be taken by public policies on the territorial development of cities, enabling greater and better vertical and horizontal coordination. It can help reform the relations between the municipalities, the higher planning councils and the Ministry of Local Administration for better vertical and horizontal coordination. It can help preserve Jordan agricultural land by limiting urban sprawl through the production of more compact cities. As Jordan is one of the most energy and water deficient countries, the NUP will focus on directing development toward sustainable energy efficient cities, following a cross sectorial methodology, such as the one adopted by the Amman Climate Plan presented in 2019.

The preparation of JNUP allows to implement the New Urban Agenda. An agreement was signed in 2018 between the Ministry of the Municipal Affairs (Local administration), Greater Amman Municipality, Public Works and Housing and the United Nations Human Settlements Programme (UN-Habitat) for the development of a National Urban Policy. A National Workshop was held in November 2018, followed by a Technical Committee in January 2019.

The NUP proposes to develop a balanced territory and liveable, safe, resilient and sustainable cities based on adequate and solid institutional, regulatory and financing frameworks. It sits on six principles: equity in accessing the city; the territorial balance between the urban and rural system; completeness in the fight against poverty and inequality; care for the environment, resilience and climate change; economic opportunities for social and economic development; and democratic governance and social participation.

2. NUP for SUSTAINABLE DEVELOPMENT

Cities are the engines of growth and sustainable development. They are playing an increasingly prominent role in global discussions of sustainability and development. They are crucial players in achieving the UN Agenda 2030 Sustainable 17 Development Goals, a global framework for coordinating efforts around ending poverty and hunger, combating inequality and disease and building a just and stable world. One of the 17 global goals specifically addresses the need for cities that are “inclusive, safe, resilient and sustainable” (Sustainable Development Goal 11). Cities are also recognized as crucial actors in meeting emissions-reduction targets of the 2015 Paris Agreement on climate change.

The New Urban Agenda was adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador, on 20 October 2016. It was endorsed by the United Nations General Assembly at its sixty-eighth plenary meeting of the seventy- first session on 23 December 2016. The NUA aspires to the creation of cities and human settlements that are fair, safe, healthy, accessible, resilient and sustainable. Sustainable spatial development is defined by its compactness, social inclusiveness, integration, connectivity and resilience of cities. The NUA includes five pillars of implementation: work on national urban policies, review of urban legislation and regulations, integration of urban planning and design, and development of local economy and municipal finance, and local implementation.

Quito Declaration on Sustainable Cities and Human Settlements for All (2016)

Principles and commitments

(a) Leave no one behind, by ending poverty in all its forms and dimensions, including the eradication of extreme poverty, by ensuring equal rights and opportunities, socioeconomic and cultural diversity, and integration in the urban space, by enhancing liveability, education, food security and nutrition, health and well-being, including by ending the epidemics of AIDS, tuberculosis and malaria, by promoting safety and eliminating discrimination and all forms of violence, by ensuring public participation providing safe and equal access for all, and by providing equal access for all to physical and social infrastructure and basic services, as well as adequate and affordable housing;

(b) Ensure sustainable and inclusive urban economies by leveraging the agglomeration benefits of well-planned urbanization, including high productivity, competitiveness and innovation, by promoting full and productive employment and decent work for all, by ensuring the creation of decent jobs and equal access for all to economic and productive resources and opportunities and by preventing land speculation, promoting secure land tenure and managing urban shrinking, where appropriate;

(c) Ensure environmental sustainability by promoting clean energy and sustainable use of land and resources in urban development, by protecting ecosystems and biodiversity, including adopting healthy lifestyles in harmony with nature, by promoting sustainable consumption and production patterns, by building urban resilience, by reducing disaster risks and by mitigating

and adapting to climate change.

In 2016, the OECD, UN-Habitat and Cities Alliance launched “the National Urban Policy Programme”, as a global joint initiative aiming for half of the world’s countries to adopt national urban policies by 2025. A regional programme of “sustainable, inclusive and evidence-based national urban policies in selected Arab states” was initiated to strengthen policy-making capacities in four Arab states (Tunisia, Lebanon, Jordan, Sudan). The National Urban Policy has been recognized internationally as a tool for the implementation and monitoring of global urban agendas including the SDGs (particularly SDG-11), NUA, Paris Agreement and Sendai Framework on disaster risk reduction. In the NUA, Member States committed to developing and implementing NUPs and building integrated national systems of cities and human settlements, toward the achievement of national development targets. NUP is described as “the most relevant part of the New Urban Agenda”.

Fig 2. 1. Global frameworks for sustainable urban development

Box 1. Global Normative Guidance – Global frameworks for sustainable urban development

Provisions in major new global frameworks that were established in 2015 that are relevant to or supportive of National Urban Policy include the following:

- The 2030 Agenda for Sustainable Development, Goal 11 (Make cities and human settlements inclusive, safe, resilient and sustainable), particularly Goal 11.3 (By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries), Goal 11.a (Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning), and Goal 11.b (By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels);
- The Paris Agreement, the 2015 global agreement to address climate change, including the Preamble (Recognizing the importance of the engagements of all levels of government and various actors, in accordance with respective national legislations of Parties, in addressing climate change), and Article 6.8 (c) (Parties

recognize the importance of integrated, holistic and balanced non-market approaches being available to Parties to assist in the implementation of their nationally determined contributions, in the context of sustainable development and poverty eradication, in a coordinated and effective manner, including through, inter alia, mitigation, adaptation, finance, technology transfer and capacity building, as appropriate. These approaches shall aim to: Enable opportunities for coordination across instruments and relevant institutional arrangements);

- The Sendai Framework for Disaster Risk Reduction; particularly Global Target (e) (Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020); Guiding Principle (f) (While the enabling, guiding and coordinating role of national and federal State Governments remain essential, it is necessary to empower local authorities and local communities to reduce disaster risk, including through resources, incentives and decision-making responsibilities, as appropriate); and Priority Action 2 (a) (To mainstream and integrate disaster risk reduction within and across all sectors and review and promote the coherence and further development, as appropriate, of national and local frameworks of laws, regulations and public policies, which, by defining roles and responsibilities, guide the public and private sectors).

(UN Habitat 2016)

Urban planning is a technical and political process to control the use of land and design the urban environment (including transport and communication networks), in order to promote the welfare of people whilst also protecting the natural environment. To reach this goal, the government needs to agree on specific objectives for its territory, at national, regional and local levels. Robust land policies must be implemented to rationalize its use, and direct investments. They must include proper housing policies. Urban planning needs an institutional setting, and

appropriated laws, and most importantly, a consensus between major actors. Urban planning aims to provide sufficient building land for economic activities and general interest activities, for the satisfaction of present and future needs in terms of housing and public facilities.

National Urban Policy (NUP) is defined as a coherent set of decisions derived through a deliberate government-lead process of coordinating and rallying various actors from a common vision and goal that will promote more transformative, productive, inclusive and resilient urban development for the long term (UN Habitat, 2014). A NUP is both a process and an outcome that harnesses the dynamic of cities and urbanization. It sets the principles from which urban policy interventions are formulated, and implementation is conceived. Results on a clear strategy and effective coordination between policies that affect national territorial concerns across and supranational scales. (United Nations, 2016)

Fig 2. 2. UN-HABITAT Supporting Countries on National Urban Policy



(UN Habitat, 2018)

2.1. National Policy Framework and core policies

In 2000, Jordan launched its multi-sectorial National Strategy for Sustainable Development which was called "Jordan Agenda 21". The Jordan Agenda 21 involved the participation of numerous organizations and individuals and was the most important participatory and learning-by-doing policy formulation effort in Jordan to date. Between 1998 and 2006 an array of sectorial policies, strategies and action plans were developed and provided basis for a solid policy framework. A total of 17 environmental related policies and action plans, were developed between 1998 and 2006 encompassing water, poverty, agriculture, tourism, biodiversity, energy, youth, socio-economic development plan, childhood and desertification. There is limited monitoring and evaluation capabilities to assess the impact of the policies on land management and desertification. Also the level of implementation is hindered by limited

financial resources⁴.

But most of development policies are facing main shortcomings in Jordan:

- Absence of streamlined sectorial policies. There are a number of individual strategies, programs and plans with no integrated framework. These strategies and plans are not coherent with one another, thus failing in extracting benefits of the potential synergies between similar activities implemented by different institutions.
- Policy framework in Jordan is reactive rather than proactive. The problems are addressed as they arise instead of being anticipated.
- Weak linkages between scientific research and policy making.
- Limited financial resources to implement the sectorial policies
- Lack of public participation, information and accountability

To solve these shortcomings, the Government launched in 2015 *Jordan's 2025 National Visions and Strategy*, which charts a path for the future and determines the integrated economic and social framework that will govern the economic and social policies based on providing opportunities for all. Jordan 2025 includes more than 400 policies or procedures with performance indicators (including energy, water, waste, agriculture and other mitigation-oriented sectorial policies, procedures and indicators) which will lead to reduction of GHGs that will be implemented through a participatory approach between the government, business sector and civil society. Core elements of this program are investment climate reform, labor market reform with a focus on legalizing the status of the Syrian Refugees, investment promotion and facilitation, education of the Syrian children, the Jordan Response Plan, and Macro-Economic Stability.

After the Syrian refugee crisis has started, current development policies have been reoriented to cope with the impact of the arrival of more than 660,000 Syrian refugees. The core ones are the Jordan Responses Plan and the Compact. The 2015 and 2019 JRP objectives are to meet the immediate needs of Syrian refugees both in and out of camps, as well as vulnerable Jordanians affected by the crisis, and to support the government budget to cope with the additional financial obligations and income losses resulting from the Syria crisis. The JRP aims to strengthen the capacities and resilience of the health, education, justice, and water and sanitation service systems at local and national levels and mitigate the negative impact of high concentrations of refugees on service delivery sectors. At the local level, the JRP assist municipalities to restore and reinforce municipal services and infrastructure, in particular solid waste management, environment, energy and transport. It aims to address the social imbalances and foster social cohesion between Jordanians and refugees in communities hosting large number of refugees through providing employment opportunities, in solid waste collection for instance, to both groups (MOPIC 2015, 2019).

The Compact's approach is anchored on three interlinked pillars, to support Jordan's growth agenda whilst maintaining its resilience and economic stability: (i) turning the Syrian refugee

⁴ <http://moenv.gov.jo/En/EnvImpactAssessmentStudies/Documents/Jordan%20IFS%20Final%20Report.pdf>

crisis into a development opportunity that attracts new investments and opens up the EU market with simplified rules of origin, creating jobs for Jordanians and Syrian refugees whilst supporting the post-conflict Syrian economy; (ii) rebuilding Jordanian host communities by adequately financing through grants the Jordan Response Plan 2016-2018 and JRP 2019, in particular the resilience of host communities; and (iii) mobilizing 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 program with the IMF (World Bank 2019).

2.2. The guiding principles of the NUP

National Urban Policy is comprehensive and cross-sectoral as it recognizes the need to work on integrated and inclusive approaches. As part of the three-year NUP Program in Jordan, this diagnosis report aims to propose a framework for the country by which spatial planning and urban policies could operate. It presents a key outcome of the NUP in Jordan, developed from January and until October 2019.

- Social and economic inclusivity (local economic development, economic opportunities and potentialities, gender, social-mix, equity, culture and conviviality);
- Integration (coordination/partnerships, opportunities, holistic approach, effective decentralization, uniform legislation);
- Connectivity (productivity, effective transport, spatial integration, fluid mobility and accessibility);
- Compactness (land, water, energy, sanitation resources efficiency, liveability);
- Public participation and improved access to basic services
- Resilience and environmental sustainability (efficient natural resources exploitation, especially water and energy, disaster prevention and management, risk reduction, adaptation and mitigation).

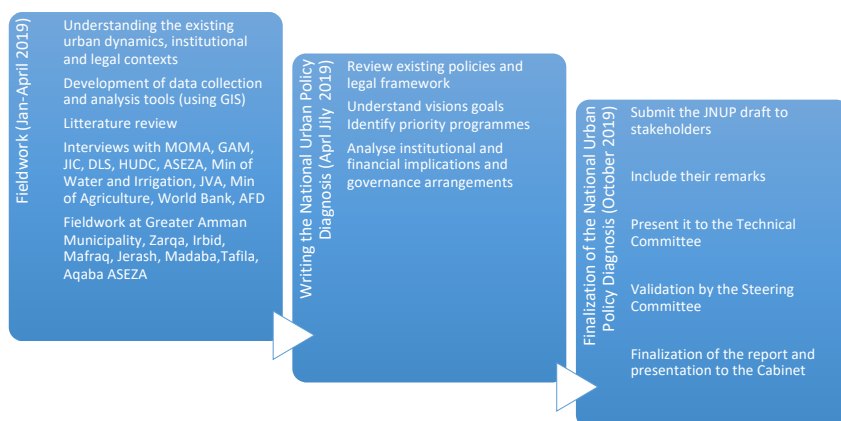
The aims of sustainability are to reduce urban sprawl, create more compact cities, reduce socio-spatial segregation and solve the mobility congestion by proper public transport

UN-Habitat proposed five phases in the development process of a National Urban Policy: feasibility, diagnosis, formulation, implementation and monitoring and evaluation. The feasibility study has been conducted between April and November 2018. It led to the organization of a national workshop in November 2018.

Methodology

Interviews have been conducted with the majority of key stakeholders for the National Urban Policy (table 2.1 and Annex 3).

Fig 2. 3. National Urban Policy Diagnosis Phases



Mapping of key stateholders for the National Urban Policy

Table 2. 1. Mapping key stakeholders for the National Urban Policy:

Institution	Role in Urban Planning
The Ministry of Local Administration (former Ministry of Municipal Affairs).	Responsible for the definition of zoning and building regulations, preparation of Master Plans for all cities.
The Higher Planning Council (MOLA)	The Higher Planning Council approves all zoning modifications in the country (and within GAM and ASEZA in case of contestations)
The Higher Planning Council (within MOLA) chaired by the Minister of the Interior, the Minister of Local Administration, and comprising the Attorney General, the Secretary General of the Ministry of Health, the Secretary General of the Ministry of Public Works, the Secretary General of the Ministry of Planning, the General Manager of the Housing Authority, the Director of the Central Planning Department, and the President of the Engineering Association.	The Higher Planning Council has the authority of temporarily approval of the Master Plans either totally or partially and it is considered officially approved according to clause no. (21) / 4 of this law, and it is published, and it is considered valid since published in the official gazette. · The temporarily approved Master Plan should be submitted under the (clause no. 20) of this law and will be subject to the same procedures mentioned in the (clause 21) regarding the objections and instructions until the final approval and implementation of the plan.
The Ministry of Public Works and Housing.	Gives direction to all infrastructure and housing policies in the country (through the HUDC) : for main roads, railways, airports and ports infrastructures
The Housing and Urban Development Corporation	In charge of monitoring housing dynamics, downzoning, and preparation of served land to be sold to developers. In charge of Housing Strategy Action Plan. Used to Upgrade informal areas.
Municipalities	Category 1, 2, 3 and 4.

	<p>The concerned committees for approval of the Master Plan:</p> <ul style="list-style-type: none"> · Local City Planning Committee (<i>allajnah almahaliyah</i>) / in the Municipality / Municipal council · Provincial planning committee (<i>allajnah alluwaiyah</i>) / in the province / headed by the governor · (In the case of Amman Greater Municipality / Amman Council – Headed by the Mayor) · Supreme Planning Council (<i>majles Altanthen ala'ala</i>) / Headed by the minister of MOMA
Greater Amman Municipality	Created in 1987, GAM administrates the agglomeration of Amman and its 22 districts. It is autonomous both financially and for its urban regulations. It reports to the Prime Minister office.
Aqaba Special Economic Zone Authority (ASEZA)	Created in 2000, ASEZA is an independent institution in charge of the economic development and management of Aqaba region. Its main activities are the promotion of international tourism alongside with industrial activity linked to the ports.
The Petra Development and Tourism Regional Authority (PDTRA)	Founded in 2009, the PDTRA aims to develop the Petra region, economically, socially, culturally, and as a tourist destination, as well as contribute to local community development.
The Jordan Valley Authority (JVA)	Placed under the Ministry of Water and irrigation, it is entrusted with the integrated socio-economic development of the Jordan Valley since 1977. It has its own zoning and building regulations.
The Department of Land and Survey	In charge of land registration, tax on registration and transaction
Jordan Engineers Association	Plays a major role in building regulations modification and validation. Part of building permit delivery.
Jordan Housing Developers Association	Corporation of the main housing developers in Jordan discuss building regulations with the Minister of Local Administration, HUDC and housing finance facilities
The Ministry of Finance	Property tax definition and collection for small municipalities
Ministry of Education	Schools management and creation
Ministry of Health	Hospitals and public clinics
The Department of Statistics	Census 2015 data at municipal level, (neighborhood if possible) and income and expenditure 2017 results.
Ministry of Work	Set policies to develop decent work for men and women. Creation of vocational training centers.
International Labor Organization	Help the government to set labour standards and enhance social protection. Currently develops youth employment projects, vocational training and intensive work program in infrastructure and construction.
Jordan Investment Commission	Urban planning competences on economic zones to attract developers
Ministry of Antiquities	In charge of heritage site protection projects in coordination with the municipalities
Green Building Council	Promotes green building implementation
World Bank	Provides financial support and technical Assistance for Urban Growth Models, for Energy transition, Building upgrading, Energy transition, reduction of GHG emissions (Partnership for Market Readiness in Climate

	sector including Amman Climate Plan and Energy Efficiency Retrofit in Residential Buildings)
Agence Française du Développement AFD	Supports financially the BRT in Amman, several PPP infrastructure projects. In charge of the Urban revitalization for 8 cities (RLDP 2) with the World Bank
Universities and research centers	University of Jordan, University of Yarmouk, Jordan University for Sciences and Technology JUST (Irbid) German Jordanian University Center for the Study of the Built Environment Columbia University Middle East Center (Studio X) French Institute for the Near East (Ifpo)
Cities civil societies (Jabal Lwebdeh association, Jabal Amman Association, Sahab association, etc...)	These local communities structures develop initiatives to stimulate the local economy while promoting their neighbourhood architectural preservation

2.3. JNUP November 2018 Workshop and Technical Committee Meeting (January 2019)

Consultations for the preparation of JNUP started mid 2017. A feasibility study has been conducted in 2018 by Dr. Kamel Jaluqa (German Jordanian University). A launching workshop was organized the 6th November 2018 in Amman, in presence of members of the Ministry of Municipal Affairs, of UN Habitat Arab States office, the HUDC, the MPWH, Ministry of Environment, of Social Development, of Transport, of Water and Irrigation, of Education, of Interior, of the Jordanian National Commission for Women, the Department of Land and Surveys. Several municipalities were invited (GAM, Zarqa, Irbid, Salt, Sahab, Shoubak), along with members of the ASEZA, the JIC, the JVA, the Dead Sea Development Zone Commission. International donors were invited along, UN agencies members, academics, NGO's members. The participants were divided into five working groups: Urban Planning, Environment, Municipal Governance & Legal Frameworks, Urban Economy & Municipal Finance and Housing and Infrastructure. Annex 4 presents the thematic group discussions.

The main points highlighted are the following:

- Master plans are not implemented which is a loss of money and energy
- Urban Planning Laws and regulations are outdated and the revision process of land uses and zoning are lengthy.
- Unbalanced urban sprawl on agricultural lands
- Lack of public transportation and pedestrian friendly sidewalks
- Cities are suffering from traffic congestion and pollution
- Climate change and DRR are not taken into consideration in planning (floods risks)
- Municipal services are unequally distributed between neighborhoods
- PPP are not working well due to lack of proper legal framework
- No incentive to create jobs outside city centers
- Weak municipal finance
- Housing finance initiatives are not reaching the middle and lower income groups and areas.
- Market imbalances in the housing sector due to supply-demand related issues and unwillingness of the private sector to meet demand from low income families.

A technical committee has been set and its first meeting has been the 15th January 2019 (annex 3). Participants highlighted the following issues:

- the lack of coordination between key urban planning institutions.
- the absence of an integrated GIS databank with land use, land cover, infrastructure, statistical data. The Royal Jordanian Geographic Center is selling its layers to the ministries. Utilities (such as Miyahuna⁵, Amman Water Company) are not sharing easily their data with the Ministry of Local Administration.
- The urban sprawl on agricultural land is a major issue, both in highlands and in the Jordan Valley
- Water is part of Jordan natural heritage and should be protected as undergrounds are over exploited, and sewage networks not existent in large parts of the country (outside main cities boundaries, and in the Jordan Valley). Buffer zones must be respected around the wadis as informal building encroaches on floodable areas across the Kingdom.
- Climate change adaptation policies should guide Jordan physical planning policies
- In the absence of sufficient public land within cities, sites and services solutions are offered by the Housing and Urban Development Corporation in rather remote locations, which increase costs of transportation and infrastructure delivery.
- National Physical Planning is much needed both to protect our urban and rural landscapes, reduce urban sprawl and ease municipalities service delivery in more compact cities. In most of cities, influential actors are thinking of personal land gains by including new settlements to the zoned areas, which increases municipal insolvency.
- National Physical Planning should be done at country level, but also regions and cities, in order to offer investors precise locations, by sector of activities. Urban planning should be integrated within investment policies, for service development, industry and for tourism (valorisation of archaeological sites), for agriculture too.
- Urban planning departments should be empowered within municipalities, including within GAM, in order for them to transmit key message to the highest spheres of power leading to a enhanced protection of remaining land and resources. Phasing out of urban development project is the only way municipalities have to limit the land speculators greed. GAM has managed to stop some development projects. It must now focus about hierarchies of open spaces, at the level of local plans and district urban planning.

⁵ The name of Amman Water company means « our waters » in Arabic.

3. URBANIZATION PATTERNS AND POPULATION GROWTH

Overview

A country of 10 million inhabitants in 2019, Jordan is experiencing an exceptionally rapid population growth due to its high fertility rate, and to the influx of nearly one million Syrian refugees between 2011 and 2014 (662,000 registered at the UNHCR, July 2019). These Syrian refugees have joined past waves of Palestinian refugees (1948 and 1967) and Iraqi refugees (1991 and 2003-2005). Between 2004 and 2015, Jordan's demographic growth rate has been at 5.3 percent per year⁶. This population increase has happened mainly within the country's five main cities of Amman, Irbid, Zarqa, Mafraq and Russeifa. Their population has doubled during this decade (Amman from 2 to 4 million inhabitants). Under this demographic pressure, and in the absence of sufficient urban planning tools to limit the urban sprawl, cities have expanded horizontally on valuable agricultural land.

Land use in Jordan is characterized by limited arable land (2,6%) as it is a semi-arid country with over exploited water resources (FAO 2019). In the context of land speculation, most of the rural and pastoral land has been urbanized over the past thirty years. A shifting of land uses has occurred with the conversion of agricultural land in part due to growing water scarcity exacerbated by climate change. Former agricultural land is progressively urbanized. Their owners build and progressively try to include their plots within the municipal zoned areas in order not to pay the utilities installation costs.

This rapid urbanization happened at a moment of accelerated climate change. It has affected the already tiny amount of arable land. In the absence of proper control over its urban expansion, in addition to a lack of proper urban planning, and a lack of comprehensive urban planning, the peri-urban and rural areas are under threat.

3.1. Jordan Land Cover and the Scarcity of Arable land

Jordan spreads over 88,785 km² of land and 533 km² of the Dead Sea (FAO 2019). It consists of three distinct ecological systems from East to West: the Jordan Valley - a narrow strip of 1000 km² along the border, located below sea level (warm winters and hot summers), the Western Highlands – an area of 7850 km² where three quarters of the population is living and the main cities are located (Mediterranean mountains climate with moderate precipitations); and the semi-arid steppes and the arid inland where precipitations are under 200 mm per year, the Badia. This last zone covers 89% of the territory (table 3.1). The main Jordanian cities are located on fertile agricultural land and are receiving over 250 mm of precipitation per year (Amman, Salt, Irbid, Madaba, Kerak and Tafila). Russeifa, Zarqa, Mafraqa, Maan and Aqaba

⁶ From DOS Population Census 2004 and 2015: from 5,103,639 persons in 2004 (table 3.1) to 9,531,712 in 2015 (table 3.1).

are submitted to a semi-arid climate and their agricultural land are limited.

Table 3. 1. Jordan's Agro-Ecological Zones, Annual Rain Levels, Area and Land-use

Agro-ecological Zone	Annual rain (mm)	Area Km ²	Area (%)	Agricultural Land use
Arid	< 200 mm	79,412	89.0 %	Range, small ruminants, irrigated cereal & forage
Marginal zone	200-300 mm	5,620	6.3 %	Wheat & barley, small ruminants
Semi arid	300-500 mm	1,338	1.5 %	Wheat, barley & food legumes, small ruminants
Sub-humid	500-800 mm	892	1.0 %	Fruit trees, dairy farming
Jordan Valley	200-350 mm	1,070	1.2 %	Vegetables, fruit trees, irrigated cereals, dairy farming
Water bodies		986	1.0 %	
Total		89,318	100 %	

(IUCN 2013. MOA 2011 Compiled by Sidahmed for IFAD Evaluation Mission April 2011; DOS 2011)

The highlands form the central urban axis of the Kingdom, between the Jordan Valley and the desert. It is divided in four areas by three gorges (wadis) that gave the limit of the ancient Iron Age Kingdoms of Ammon (south of wadi Zarqa), Moab (south of Wadi Mujib) and Edom (north of wadi Hasa). Its altitude increases from 600 m in the north (Irbid, Ajlun), to 1000 m in the center (Amman), and 1500 m in the south (Sharah mountains). Many wadis drain from the east to the Jordan River (Wadi Zarqa for instance). The highlands are a succession of catchments and sub-catchments, falling within the semi-arid zone (350-500mm annual rainfall) and a small sub-humid zone (over 500mm annual rainfall). The cities are located within the maamoura.

The steppe is plains located between the highlands and the eastern desert (Badia). The area, which extends from Irbid through Mafraq and Madaba all the way south to Karak was formerly covered with steppe vegetation. Much of this has been lost to desertification. Rainfall ranges between 200mm in the East and 350 mm in the West. More than 50% of the arable land is in this zone. The rainfed crops are mainly barley (areas of 200-300 mm of rainfall) wheat and fruit trees (where rainfall ranges between 300 and 350mm) (IUCN, MoA, 2013, *Updated Rangeland Strategy for Jordan*, 27 p.)

Fig. 3. 1 Jordan Land Cover (FAO 2019)

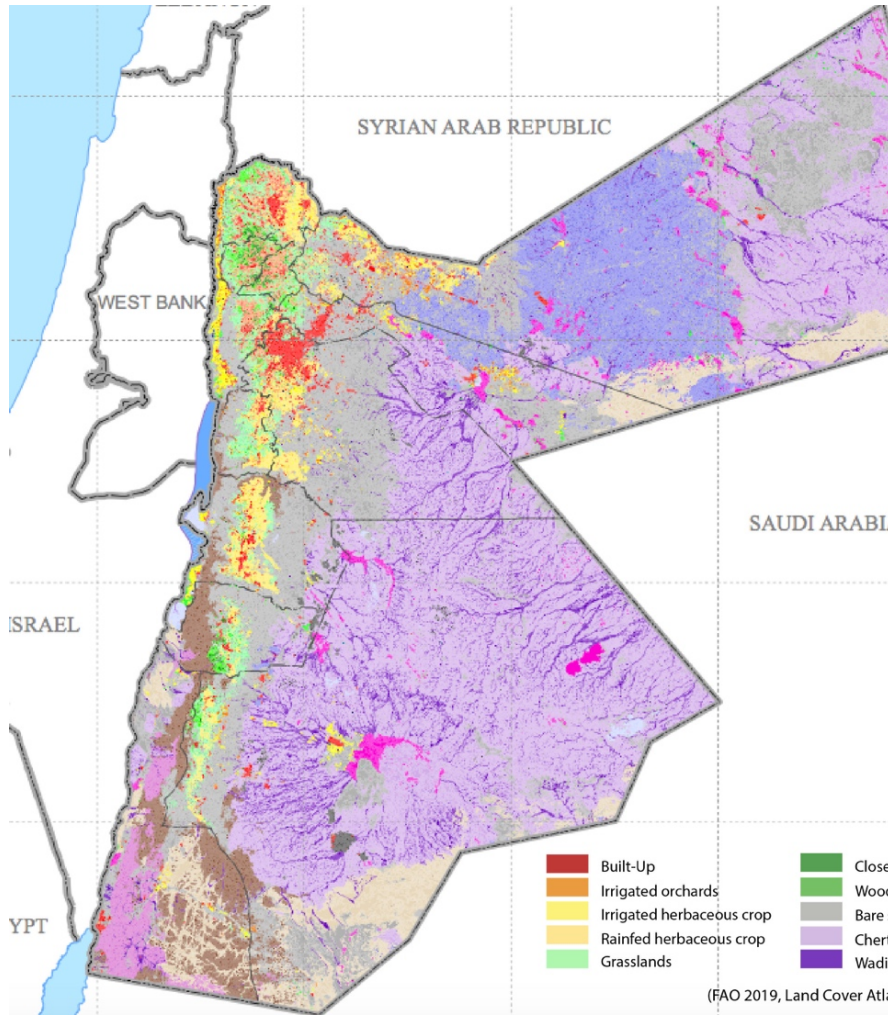


Fig. 3. 2. Aggregated land cover statistics of the Country by Governorate (FAO, 2019)

GOVERNORATES														TOTAL
LAND COVER CLASSES	Ajloun	Amman	Aqaba	Balqa	Irbid	Jerash	Karak	Ma'an	Madaba	Mafraq	Tafilah	Zarqa		km ²
Irrigated orchards	2.53	27.96	12.75	22.38	63	3.02	20.82	35.80	8.40	109.57	3.83	53.75		363.82
Irrigated herb. crop	2.77	57.66	40.61	174.26	70.90	1.80	74.45	103.52	7.59	98.46	2.60	87.96		722.58
Rainfed herb. crop	8.68	431.64	0.49	34.30	350.68	11.92	515.21	175.45	180.69	417.76	101.76	8.05		2,236.62
Rainfed orchards	123.92	97.93	0	134.05	281.56	161.70	1.95	0.53	28.31	48.75	2.37	36.79		917.88
Closed trees	50.70	10.30	0.97	14.06	25.97	38.14	3.75	9.38	1.39	2.91	21.85	1.50		180.93
Open trees	68.30	12	5.90	23.37	97.19	26.96	6.13	22.25	1.25	3.54	44.16	20.28		331.34
Woody vegetation	1.10	2.82	5.55	31.61	9.71	1.81	32.05	14.34	11.42	51.15	23.85	10.87		196.27
Grasslands	111.33	173.46	11.70	174.19	385.97	120.50	148.41	249.49	218.14	170.42	173.09	67.25		2,003.95
Built-up	25.40	423.72	69.23	84.79	206.85	31.64	115.74	103.30	35.07	203.55	38.55	163.52		1,501.38
Bare soil	19.97	3,360.85	1,192.80	401.56	53.59	10.16	1,634.08	4,203.66	330.62	7,114.78	853.59	1,825.53		21,001.21
Undirt. bare rocks	4.76	11.39	2,146.71	9.82	13.35	0	295.64	682.33	108.07	0.61	466.45	2.14		3,741.26
Bare rock granite	0	0	1,423.06	0	0	0	0	18.28	0	6.67	29.08	0.90		1,477.99
Chelt plain	0	2,222.50	212.69	0	0	0	300.83	19,516.04	0	7,620.79	255.64	1,197.14		31,325.62
Basaltic plain	0	0.24	0	0	0	0	0	39.08	2.21	7,108.30	28.94	355.57		7,534.35
Sandy areas	0	0	1,466.05	2.40	0	0	5.43	2,675.20	0	1,666.84	52.23	351.19		6,219.34
Saline soil	0	0	0.03	0.52	0	0	169.71	155.80	0	0	2.50	11.62		340.19
Extraction site	0.80	30.98	1.06	3.57	2.53	0.76	70.44	217.69	0.96	37.88	39.95	28.52		435.16
Saline waterbody*	0	0	4.78	1.60	0	0	19.95	0	5.43	0	0	0		31.77
Natural waterbody	0	0.22	0.04	0.32	2.14	0.65	0.42	0.39	0	0.15	0	1.14		5.47
Artificial waterbody	0.01	2.33	0.73	6.87	2.32	1.28	2.98	2.57	0.79	5.87	1.35	4.08		31.18
Wetlands	0	6.03	0.09	0.41	0.21	0	0.15	2.45	0	16	0.02	5.53		30.89
Wadi	0	714.04	282.19	0.51	0	0.02	51.27	4,033.90	0.80	1,020.16	66.07	357.12		6,526.07
Mudflat	0	5.49	37.85	0	0	0	29.64	580.05	0	801.22	4.95	171.04		1,630.25
TOTAL LAND	420.29	7,591.57	6,915.29	1,120.60	1,565.97	410.37	3,499.05	32,841.52	941.14	26,505.37	2,212.84	4,761.49		88,785.52

* Dead Sea is not included in the

(Source : FAO 2019, Land Cover Atlas of Jordan).

According to the Department of Statistics (2003), 93% of the country is dominated by non-cultivated areas, classified as rangeland. Cultivated areas form 2.7% of the total area of Jordan. These figures proportion a broad categorization of land use in Jordan. However, for climate change studies more detailed information and maps are needed.

Analysis of land use/cover map showed that agricultural areas cover 5% of the country's total land. Figures of land use showed that 93% of the area is not cultivated, due to limitations of climate, water availability, soil suitability and surface cover of stones. Intersecting land use/cover and agro-climatological maps show that 90% of rainfed agriculture is taking place in the northern and southern highlands. Irrigation is taking place in Jordan Valley, highlands and desert areas. Although the eastern and western arid lands and deserts are used as open rangelands, however irrigation is practiced in these hot areas (MoEnv 2014).

According to the FAO Land cover Atlas 2019, the total built-up area of Jordan reached a high 1501 km² in 2016. This includes all cities, towns, villages, but also roads, airports, sea ports, and industrial zones. This is a wide expansion from the 393 km² of built-up area in the 2006 satellite image produced by the RJGC (Ababsa 2013).

3.2. Land degradation

According to the Rangelands strategy, "About 41 percent of Jordan's total land area is characterized as degraded. The main factors are overgrazing, unsustainable agricultural and water management practices, and over-exploitation of vegetative cover. Dryland farmers and herders are increasingly adopting unsustainable land use practices to produce more food in order to meet their needs in the country's rangelands".

Pastoral and desert land is state-owned (miri land). Until 2019, the State granted only the right of use (tasaruf), but not the full property. This was changed to full property for farmed land. However, it has remained “miri” for the pastoral land. The customary management of pastoral land is only slowly being reintroduced (*al hima* system) (USAID 2018).

Jordan’s population density is of 112 inhabitants per km² (10 m on 88,785 km²). But it reaches more than 1000 inhabitants per km² on the Highlands. In 2004, the Ministry of the Environment estimated that Jordan population density per km² of arable land was amongst the highest in the world (about 26,000 persons per square kilometre of cultivable land) (UNDP MoE, 2004). But it has even increased with the conversion of former agricultural land into towns, cities and informal settlements.

3.3. Exceptionally High Population growth

Jordan demographic rate is high, due to a natural relatively high growth rate (with fertility at more 3.4 children per women) and to forced migrations nearly every decade. In 1967, 350,000 Jordanians of Palestinian origin moved to Jordan. In 1991, 300,000 Jordanians were expelled from the Gulf countries. In 2003-2005, around 200,000 Iraqis took refuge in Jordan. The demographic growth rate stayed high at 4.8% during a forty-year period (1952-1994), went down at 2,6% a year (1994-2004), and surged to 5,3 between 2004-2015; mainly due to a 22 percent annual growth of non-Jordanians in the aftermath of the Arab Spring and regional unrest. According to the Government of Jordan more than one million Syrian refugees moved to Jordan (660,000 have an UNHCR asylum seeker card).

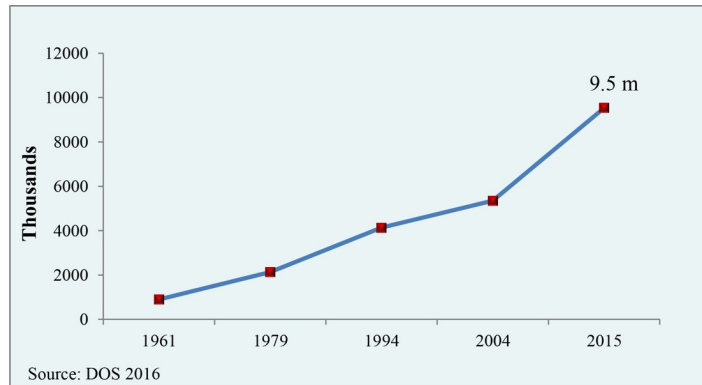
753,000 refugees are registered at the UNHCR, including 662,000 Syrians, 67,000 Iraqis, 14,000 Yemenis and 6,000 Sudanis⁷. Jordan presents a worldwide exception concerning refugees as two million of its citizens are also refugees receiving services from the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)⁸.

According to the 2015 census, the total population is 9.5 million of which 69 percent are Jordanians (6.6 million) and around 31 percent non-Jordanians including 1.3 million Syrians. The country currently has a well-educated labor force of about 1.6 million people, nearly 65 percent of the population is estimated to be under the age of 30, and literacy rates are 95 percent for men and 91 percent for women.

⁷UNHCR 2019, Jordan Fact Sheet, June 2019. <https://data2.unhcr.org/en/documents/download/70161>

⁸ <https://www.unrwa.org/where-we-work/jordan> 2,206,736 Palestinian refugees registered by UNRWA in Jordan in July 2019. They were all granted the Jordanian citizenship in 1949, except the 150,000 refugees from Gaza.

Fig. 3. 3. Jordan Population Growth According to Censuses during the Period 1961-2015



Source: DOS 2016
(DOS, 2016, *General Population and Housing Census 2015. Main Results*, 60 p.)

Table 3. 2. Population Growth Rates

Year	Rate
1952-1961	4.8 %
1961-1979	4.8 %
1979-1994	4.4 %
1994-2004	2.6%
2004-2015	5.3%

(DOS, Statistical Yearbook 2017)

63.5% of the population is concentrated within the central governorates (Amman, Zarqa, Balqa, Madaba). The northern governorates gathers a third (28.6%). The southern governorates gather only 7.8% of the total population in 2015, in regression from 2014 when it gathered 9.3% of the Kingdom total population.

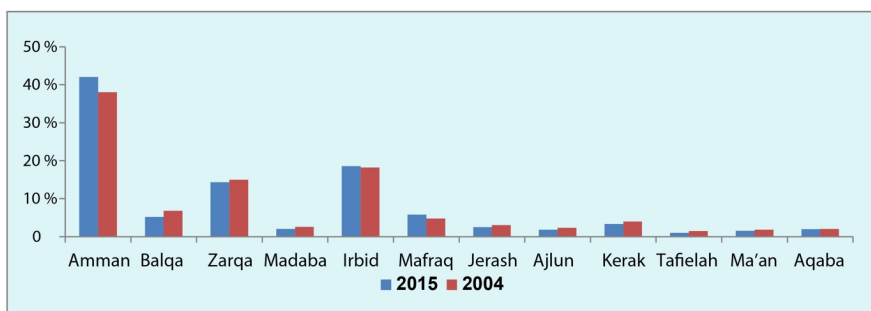
Table 3. 3. Distribution of the population by Governorates and Citizenship in 2004 and 2015

	2015				2004			
	Jordanians		Non Jordanians		Total Population		Total Population	
	Number	%	Number	%	Number	%	Number	%
Amman	2,554,923	38.63	1,452,603	49.78	4,007,526	42.04	1,942,066	38.05
Balqa	396,939	6	94,770	3.25	491,709	5.16	346,354	6.79
Zarqa	923,652	13.97	441,226	15.12	1,364,878	14.32	764,650	14.98
Madaba	156,787	2.37	32,405	1.11	189,192	1.98	129,960	2.55
Irbid	1,316,618	19.91	453,540	15.54	1,770,158	18.57	928,292	18.19
Mafraq	314,164	4.75	235,784	8.08	549,948	5.77	244,188	4.78
Jarash	167,751	2.54	69,308	2.38	237,059	2.49	153,602	3.01
Ajloun	157,162	2.38	18,918	0.65	176,080	1.85	118,725	2.33
Karak	272,449	4.12	44,180	1.51	316,629	3.32	204,185	4
Tafielah	90,108	1.36	6,183	0.21	96,291	1.01	75,267	1.47

Ma'an	127,989	1.94	16,093	0.55	144,082	1.51	94,253	1.85
Aqaba	135,045	2.04	53,115	1.82	188,160	1.97	102,097	2
The Kingdom	6,613,587	100	2,918,125	100	9,531,712	100	5,103,639	100

(DOS, 2016, *General Population and Housing Census 2015. Main Results*, 60 p.)

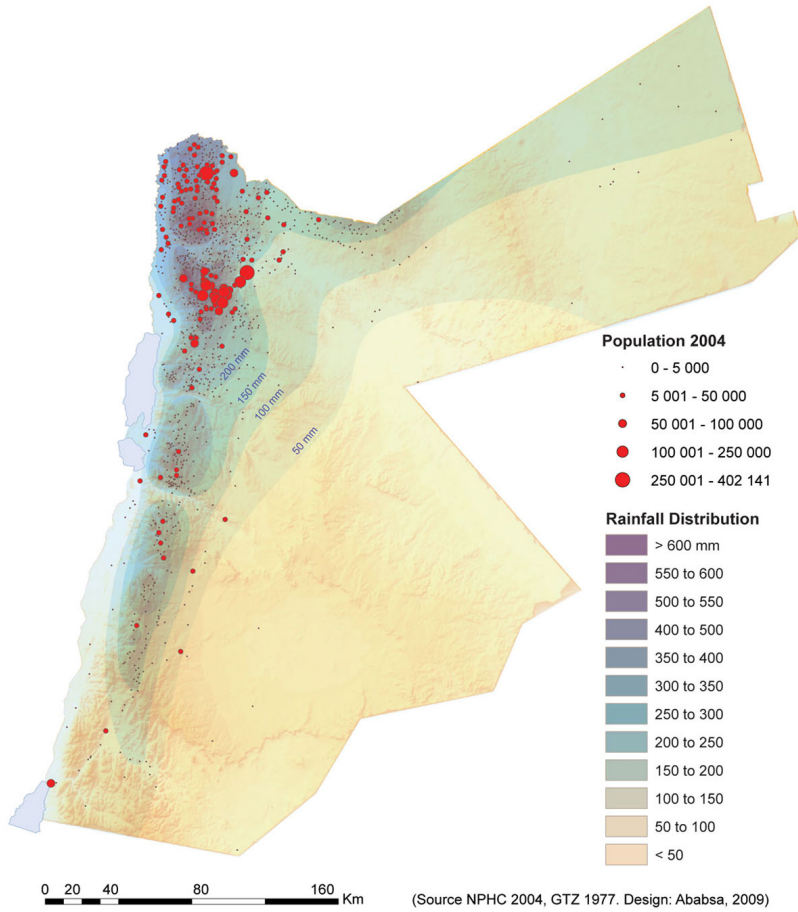
Fig. 3. 4. The distribution of the population by governorate in 2004 and 2015



(DOS, 2016, *General Population and Housing Census 2015. Main Results*, 60 p.)

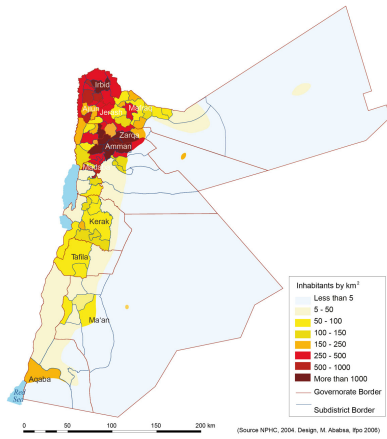
For centuries, community settlement in modern Jordan was concentrated in the highlands and in the Jordan Valley (in the north-west of the country) leaving arid regions unpopulated. However, from the twentieth century, natural population growth and migration as well as improved irrigation techniques and road networks led to the settlement of hundred communities beyond the *Ma'mura*, the limit between cities and the desert, which with less than 250 mm annual rainfall, is an area which does not allow rain-fed dry farming. During the twentieth century, the settlement of communities spread considerably in the Jordan Valley with the arrival of Palestinian refugees in addition to improved irrigation techniques. Settlements also spread eastwards, particularly due to the proliferation of well-drilling in and around Mafraq and Azraq, as well as along the road to Iraq. Thus, although most communities still decided to settle in areas with sufficient rainfall, this was no longer always the case.

Fig. 3. 5. The correlation between population distribution and rainfall (2004)



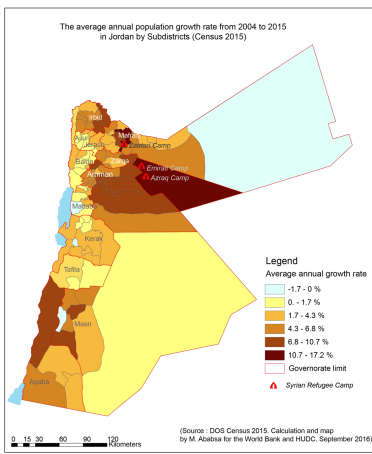
(Source: Ababsa 2013, Atlas of Jordan).

Fig. 3. 6. Population Densities in 2004.



(Source: Ababsa 2013, *Atlas of Jordan*).

Fig. 3. 7. Average Population Growth Rate 2004-2015



Jordan counts 16 refugee camps: 13 Palestinian camps (10 administrated by UNRWA and 3 by the Government), 2 Syrian refugee camps (Zaatari and Azraq) and one Syrian Emirati camp. These camps hosts only 20% of the refugee population only, as 80% of the refugees are living in the main cities of Amman, Irbid, Zarqa, Russeifa and Mafraq.

29% of the registered refugees are living in Amman governorate, or 195,321 persons. 24,5% are within Mafraq governorate, but this includes 76,892 in Zaatari refugee camp⁹. 20,8% of the refugees are in Irbid governorate (137,354), and 95,360 in Zarqa governorate, this including 35,709 refugees in Azraq camp¹⁰ (Fig. 4.2).

Fig. 3. 8. Number of Registered Syrian Refugees in Jordan by Governorate (July 2019)

Total Persons of Concern JSON

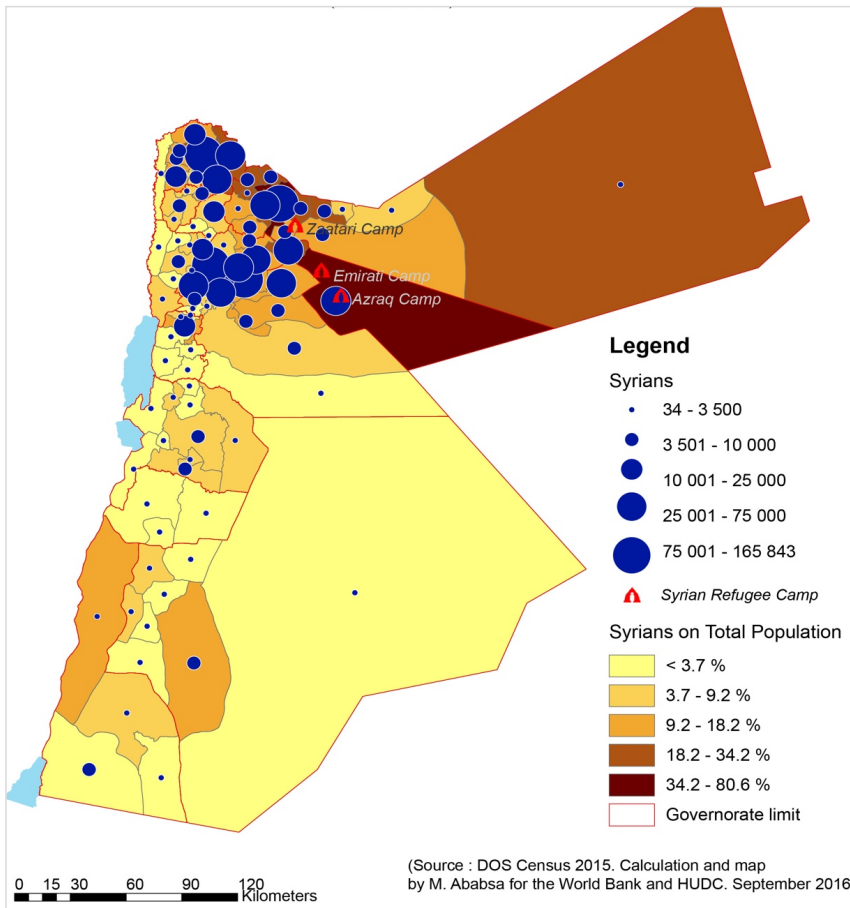
Location name	Source	Data date	Population
Amman Governorate	UNHCR	4 Jul 2019	29.5% 195,321
Mafraq Governorate	UNHCR	4 Jul 2019	24.6% 162,399
Irbid Governorate	UNHCR	4 Jul 2019	20.8% 137,354
Zarqa Governorate	UNHCR	4 Jul 2019	14.4% 95,360
Balqa Governorate	UNHCR	4 Jul 2019	2.9% 18,969
Madaba Governorate	UNHCR	4 Jul 2019	2.0% 13,210
Jarash Governorate	UNHCR	4 Jul 2019	1.5% 9,680
Karak Governorate	UNHCR	4 Jul 2019	1.3% 8,856
Maan Governorate	UNHCR	4 Jul 2019	1.2% 8,134
Ajlun Governorate	UNHCR	4 Jul 2019	1.0% 6,781
Aqaba Governorate	UNHCR	4 Jul 2019	0.5% 3,541
Tafilah Governorate	UNHCR	4 Jul 2019	0.3% 1,683

(Source: UNHCR, 2019, Operational Portal. Refugee Situation.
<https://data2.unhcr.org/en/situations/syria/location/36>)

⁹ <https://data2.unhcr.org/en/documents/details/70183>

¹⁰ <https://data2.unhcr.org/en/documents/download/70193>

Fig. 3. 9. Syrian refugee's distribution in Jordan (numbers and ratio in 2015)



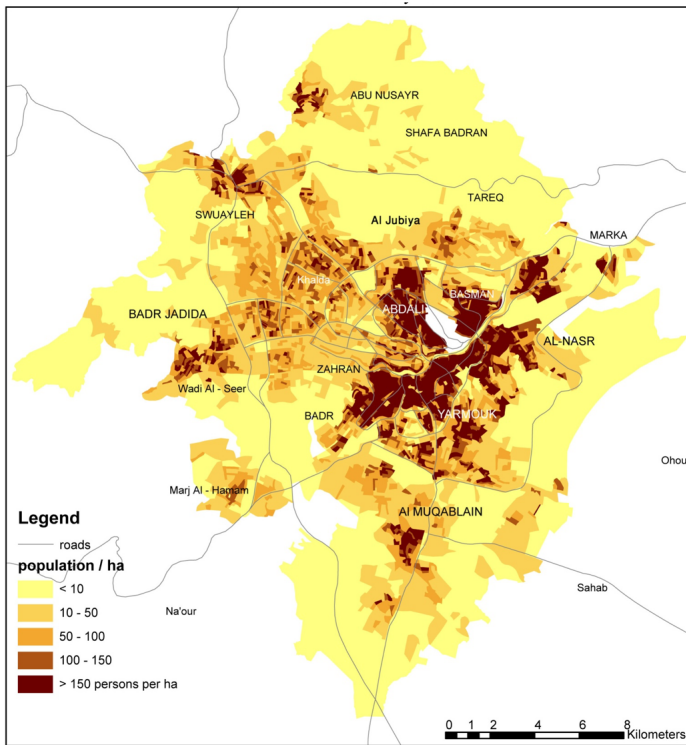
(World Bank 2018a)

Municipal services have been adversely affected by the Syrian refugee crisis, and delivery performance is for the most part declining rapidly. Jordanian host communities are witnessing declining service levels and social tension is rising.

As Greater Amman Municipality expanded in 2007, its population density grew to reach 40 inhabitants per hectare (or 4,000 inhabitants per km²). However in Amman's central districts (Wadi Hadadeh, al-Nozha, al-Hashemi al-Shamali, al-Hashemi al-Janubi, Hamza, Jabal al-Nasr, al-Amir Hasan, Jabal Jofeh, al-Manarah, al-Taj, al-Mudarraaj, al-Ashrafieh, al-Nadhif, al-Akhdar, al-Awdeh and al-Thera) the population density is over 20,000 inhabitants per square

kilometre (with a maximum of 31,240) which is among the highest urban densities in the world (Ababsa 2013).

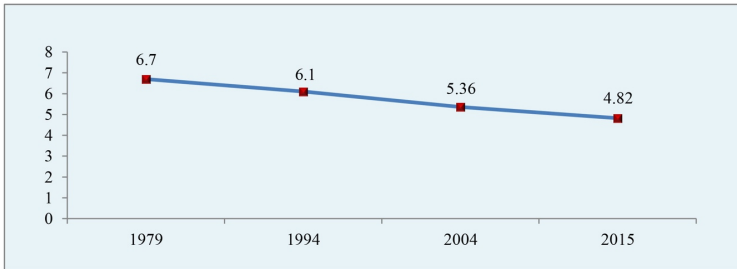
Fig. 3. 10. Amman Population Density in 2004



(Source: Ababsa 2013, *Atlas of Jordan*).

Jordan's population is undergoing major changes in its demography and its family structure. The country started its demographic transition in the sixties, and has maintained a high fertility rate with 3.6 children per woman in 2007, while the rates in Lebanon and Turkey fell to 1.9 and 2.2. This high fertility rate is even more surprising considering that 90% of women are educated and 80% of the population lives in urban areas, as shown by the study of urbanization and population distribution (De Bel Air, Ababsa 2013). The household size has been reduced from 6 to 4.8 persons in twenty years (fig 3.11).

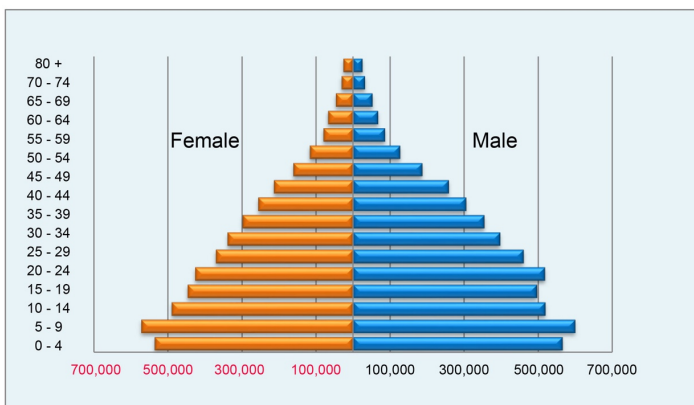
Fig. 3. 11. The Household size reduction (persons)



(DOS, 2016, *General Population and Housing Census 2015. Main Results*, 60 p.)

The arrival of Syrian refugees has widened the base of the age pyramid.

Fig. 3. 12. Jordan Population Age Pyramid 2015



(DOS, 2016, *General Population and Housing Census 2015. Main Results*, 60 p.)

The Department of Statistics has published population projections carried out according to three scenarios: the high-basic (continuation of the current situation), the medium scenario and the low scenario for the period 2015- 2050 (DOS 2016). The assumptions for the Jordanian and non-Jordanian population categories in the Kingdom were adopted by the Population Projections Committee.

Table 3. 4. Population projections according to the three Growth Scenario (2015-2050)

	<i>Basic Growth Scenario</i>	<i>High Growth Scenario</i>	<i>Medium Growth Scenario</i>	<i>Low Growth Scenario</i>
2015	9,401,993	9,401,993	9,401,993	9,401,993
2020	10,466,345	10,294,911	10,044,153	
2025	11,641,209	11,188,353	10,644,336	
2030	12,919,279	11,995,549	11,145,040	
2035	14,275,995	12,394,488	11,614,924	
2040	15,727,857	12,778,164	12,077,487	
2045	17,306,979	13,136,053	12,515,598	
2050	19,042,373	13,447,942	12,901,390	

The results of population projections indicate that the population of the Kingdom will increase during the period 2015-2050 to reach 12.9 million in 2030 according to the basic high scenario (the continuation of the current situation). In the medium growth scenario, the population will reach 11,9 million, reduced to 11,1 million in the low growth scenario.

3.4. Urban definitions in Jordan

The definition of urban localities in Jordan follows the statistical threshold of 5,000 persons. It does not include the density of population, nor the functions. Jordan department of statistics states that the urbanization rates reaches 90.3%. But this is an overestimation of what is urban. Small localities of 5,000 to 20,000 inhabitants are little towns, offering basic services to their residents, but rather few job opportunities in the service sector. Their economic dynamism depends from the proximity to a larger city and to their territorial integration to neighbouring cities.

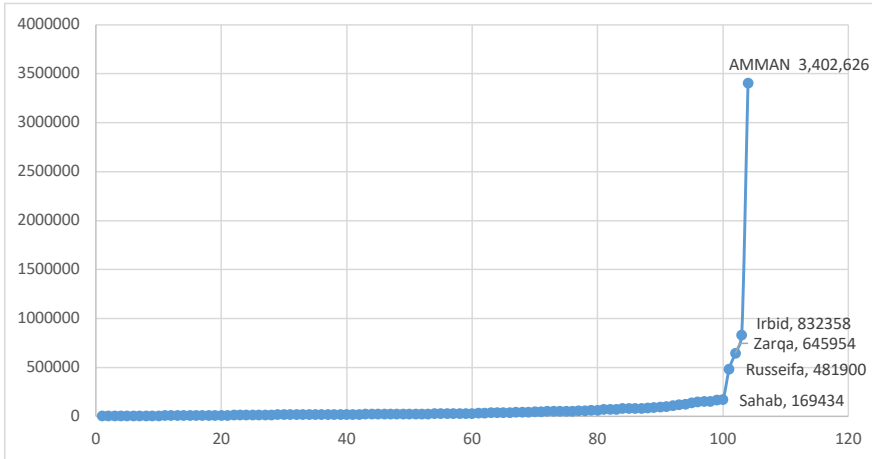
Locality: It is the place of abode in permanent or mobile housing units for individuals or groups. Locality may be a center for practicing one economic activity or more, localities differ with regard to size of population and have discrete names. The boundaries of each locality were clearly delineated and each locality may consist of one block or more.

Urban and Rural: For the purposes of the Population and Housing Census 2004, each locality with 5,000 or more population, as revealed by the 1994 Population and Housing Census was considered "Urban", the remaining localities were considered "Rural".

Department of Statistics, 2004 Census of Population and Housing.

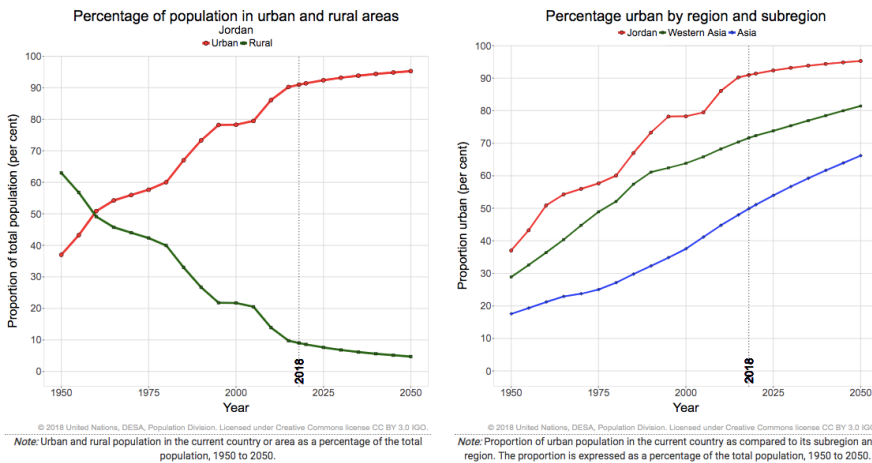
In detail, one must distinguish between seven large cities of more than 100,000 inhabitants (Amman, Irbid, Zarqa, Russeifa, Sahab, Aqaba, Mafraq, Madaba). These main cities are the economic engine of the country, with their middle class population, political and economic leaders (fig. 3.13).

Fig. 3. 13. Cities by Municipal Rank (Population 2015)



Jordan rural to urban migrations occurred mainly in the 1960's and 1970's, with the economic boom given by the increase in oil prices in the 1970s, and the wave of Jordanian expatriates in the Gulf countries, sending remittances to the country. Jordan urbanization rates are much higher than the world level and the middle east. This is partly due to the concentration of the refugees within the main cities in search of job opportunities in the informal market (fig 3.13).

Fig. 3. 14. Jordan Rural and Urban Population evolution (1950-2050)



(UN DESA, 2018, *World Urbanization Prospects*. Jordan. <https://population.un.org/wup/Country-Profiles/>)

Fig. 3. 15. Jordan Urban Population Growth (1950-2050)

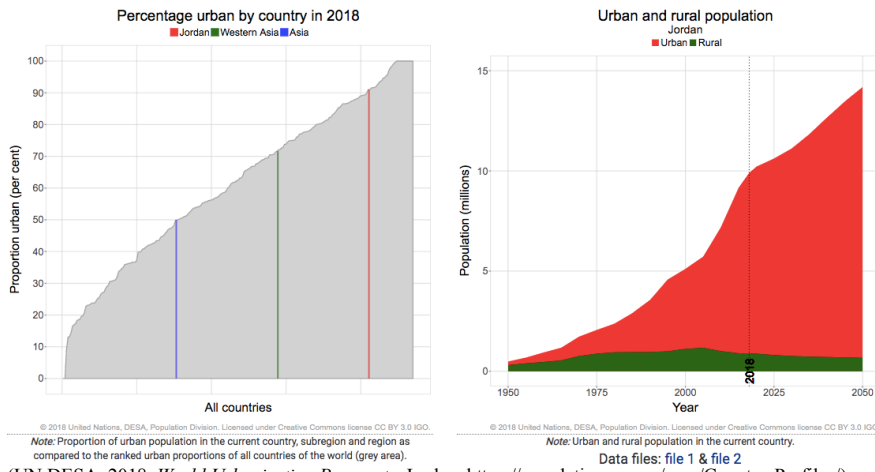
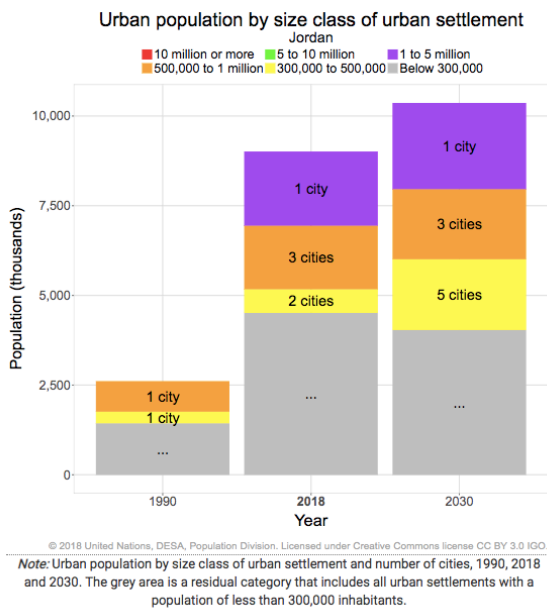


Fig. 3. 16. Jordan Urban Population by Size Class of Urban settlement (1990-2030)



However functional definitions are used only for municipalities, not for the total 1029 localities classified according to their population (Census 2015). 34 localities have a population of more than 50,000 inhabitants. Some are included in Greater Amman Municipality limits (table 3.6). 180 towns have a population of between 5,000 and 50,000 inhabitants. Jordan counts 815 villages (under 5,000 inhabitants) (table 3.6).

Table 3. 5. Jordan's Most Populated Localities (more than 50,000 inhab) in 2015

Governorate	Locality	Population 2015		Governorate	Locality	Population 2015	
Zarqa	Zarqa	635,160		Aqaba	Aqaba	148,398	
Irbid	Irbid	502,714		Amman	Marka	148,100	* in GAM
Zarqa	Russeifa	472,604		Amman	Ras Al 'Ain	138,024	* in GAM
Amman	Basman	373,981	* in GAM	Amman	Zahrán	107,529	* in GAM
Amman	Quaismeh	296,763	* in GAM	Mafraq	Mafraq	106,008	
Amman	Al Nusr	258,829	* in GAM	Madaba	Madaba	105,353	
Amman	Tla' El-Ali	25,000	* in GAM	Balqa	Al_Owla	99,890	
Amman	Wadi Essier	241,830	* in GAM	Amman	Um Qsair & Moqabaleen	99738	* in GAM
Amman	Badr Al Jadeeda	229,308	* in GAM	Amman	Jizah	95045	
Amman	Al Jbeiha	197,160	* in GAM	Amman	Marj El-Hamam	82788	* in GAM
Amman	Khraibet Essoq	186,158	* in GAM	Amman	Abu Nseir	72,489	* in GAM
Amman	Al Yarmouk	180,773	* in GAM	Amman	Shafa Badran	72,315	* in GAM
Amman	Tariq	175,194	* in GAM	Balqa	Baq'ah	68,816	
Amman	Sahab	169,434		Balqa	Ain El-Basha	60,191	
Amman	Al 'Abdali	165,333	* in GAM	Irbid	Aidoon	58,565	
Irbid	Ramtha	155,693		Zarqa	Dhlail	50,931	
Amman	Sweileh	151,016		Jerash	Jerash	50,745	

* in GAM : included within Greater Amman Municipality limits in 2019 (UN Habitat 2019, JNUP. DOS, Census 2015 by locality)

3.5. Urbanization Growth Rates

Several academic papers allow us to calculate the urbanization growth rates for Jordan. Using Landsat images, Dr Al Bilbisi from Jordan University reached the following precise calculations: Amman's urban growth rate has been high since 1946 at more than 3% until 2005. Amman's built-up area reached 294 km² in 2015, from 215 km² in 2007, 196 in 1997 and 147 km² in 1987. The growth rate has been of 3.3% between 1987 and 1997, but was then reduced slightly to 0.9% between 1997 and 2007 and 1.1% between 2007 and 2017. This is thanks to the adoption of the Metropolitan Growth Plan 2008 and the phasing of zoning.

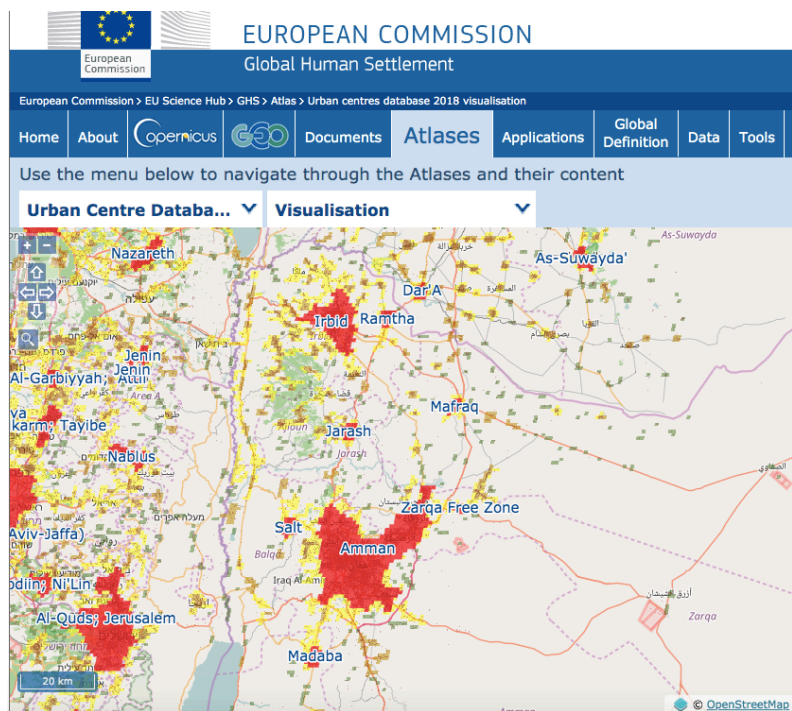
Table 3. 6. Amman Built-Up Expansion and Average Annual Growth Rates (1987-2017).

Amman	1987	1997	2007	2017
Built-Up Area	147	196	215	238
Average Annual Growth Rate		3.3%	0.9%	1.1%

(Source: Al-Bilbisi 2019 using Landsat satellite images)

The Global Human Settlement Layers developed by the Joint Research Centre of the European Commission allows to calculate similar urban growth rates across the world with the same rasters. Global Human Settlement Layer is based on the LandSat imagery with 30m x 30m resolution. Built-up areas are automatically detected using an algorithm and machine learning using satellite imagery from Sentinel 2 with a 10m by 10m resolution (Freire et al. 2018). It uses population data compiled by Columbia University CIESIN Gridded Population of the World. The data is available with population density at a 250m by 250m resolution. It is open source data, compatible with QGIS and ESRI softwares.

Fig. 3. 17.. Northern Jordan in the EU GHSL Urban Centers Database (2019)



Settlement Model

Urban centre (City):

■ Urban centre (City)

Urban cluster (Town & suburb):

■ Dense and semi-dense urban cluster (Town)

■ Suburban cells (Suburb)

Rural grid cells (Rural area):

■ Rural cluster (Village)

□ Low density rural grid cells (Dispersed rural area) - transparent

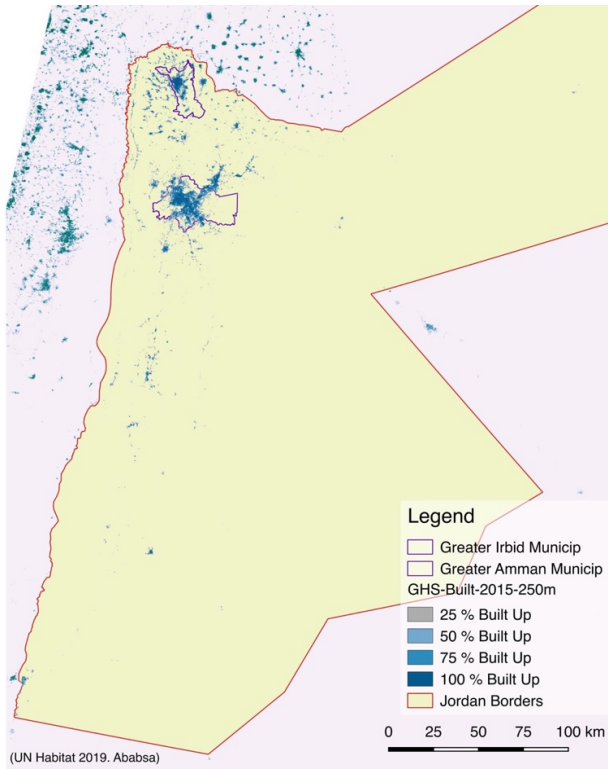
□ Very low density rural grid cells (Mostly uninhabited area) - transparent

<https://ghsl.jrc.ec.europa.eu/ucdb2018visual.php#>

In 2016 the first GHSL data package was released (GHS P2016), as open and free data. It consists in several multi-temporal and multi-resolution products, including built-up area grids (GHS-BUILT), multi-temporal population grids (GHS-POP), settlement model (GHS-SMOD) and selected quality grids (data mask and confidence grids for GHS-BUILT). GHSL defines an urban cluster of cells which built-up area is greater or equal to 40%, the mean value of the population is greater or equal than 1500 people per km². The total number of persons in adjacent cell of one sq km is greater or equal to 5,000.

Using the same methodology, it was possible to calculate the urban built-up area growth rate for Jordan main cities, and to produce the following maps:

Fig. 3. 18. Jordan Total and Urban Built-Up Areas (GHSL 1990-2015)



(Ababsa 2019, using EU-GHSL)

According to GHSL, GAM total urban built-up area is of 242 km², or Irbid's 75 km² (table 3.6). But the total built up area reaches 328 and 112 km².

Fig. 3. 19. Northern Jordan Built-Up Expansion (GHSL 1990-2015)

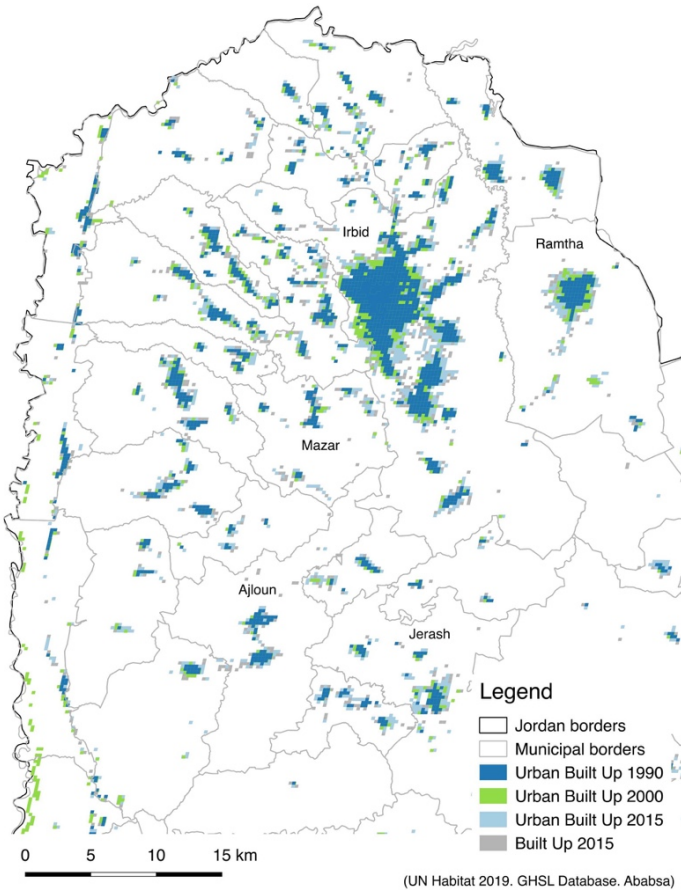
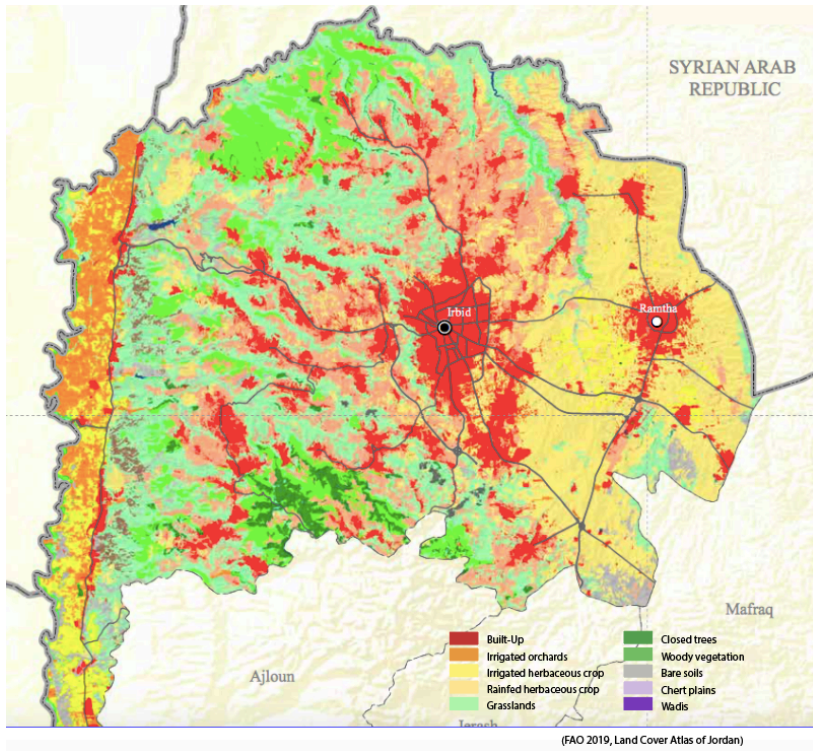


Fig. 3. 20. Irbid Governorate Land Cover (FAO2019)



Note the difference between the large built-up footprint represented in the Land cover Atlas of Jordan (in red), as it includes roads, industrial installations, bus stations etc, compared to the reduced strictly urban areas according to GHSL raster images.

Fig. 3. 21. Amman Built-Up Expansion (GHSL 1990-2015)

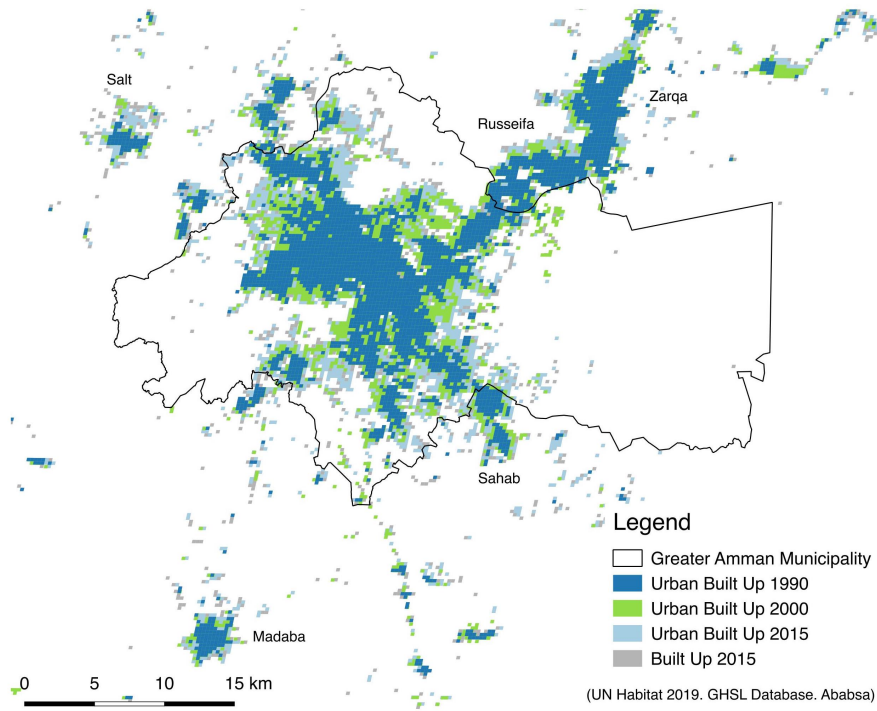


Fig. 3. 22. Amman Governorate Land Cover (FAO2019)

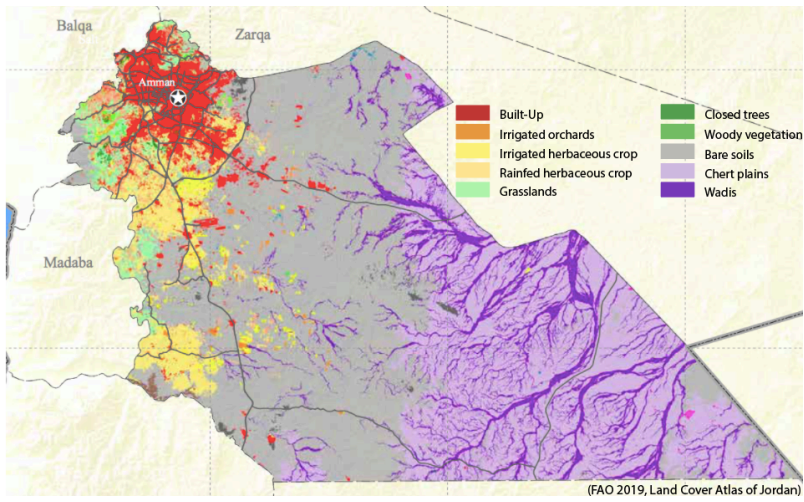


Fig. 3. 23. Kerak and Tafila Governorates Urban Built-Up Areas (GHSL 1990-2015)

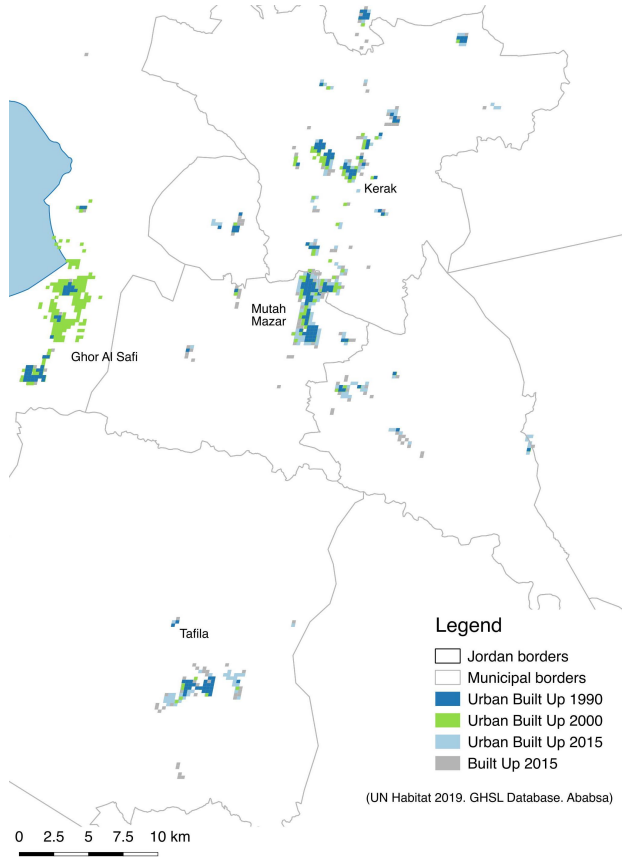
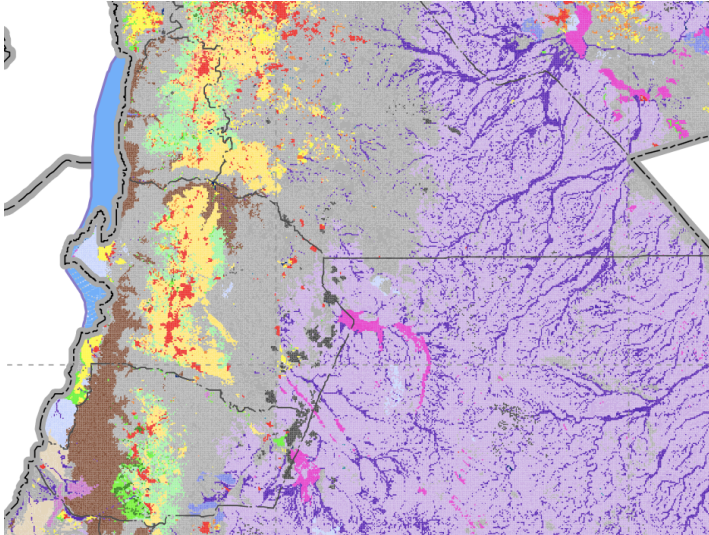


Fig. 3. 24. Madaba, Kerak, Tafila Governorate Land Cover (FAO2019)



A team of researchers from Zarqa Hashemite University has calculated the rate of urban sprawl of Amman and Irbid on their agricultural land between 2003 and 2015 using Landsat imagery. They found similar high growth rate at 1.3% per year for Amman and 1% per year for Irbid over the period. “These rates of losing agricultural lands are alarming and need to be regulated through sustainable and recent urban planning approaches” (Al Kofahi, Hammouri et al 2018).

“The urban land in 2003 represented 18% of Irbid’s land area which is equal to 58.3 km² (total Irbid land area is 324 km²). In 2015, the urban area represented 30% of the city land and equals 97.2 km². The urban area of Irbid land during the past 12 years was increased by 66.7% of the original urban area in 2003. This change is equivalent to 12% or 39 km² of the total Irbid’s land area turned into urban area.

On average, the percentage of Irbid’s land area that had been converted to urban area in the past 12 years (2003–2015) was 1% (3.24 km²) annually”. This represent 33 km² of agricultural land lost to urban expansion. “Assuming the percentage of land transformation to urban area continued at the same rate—without increment—the agricultural lands of Irbid are expected to be eliminated totally after 38 years. Such reduction in the agricultural and farmlands will impact the country’s food security and the country’s water resources”. (Al Kofahi, Hammouri et al 2018).

Table 3. 7. Amman and Irbid Loss of Agricultural Land (2003-2015).

	<i>Irbid</i>	<i>Irbid</i>	<i>Amman</i>	<i>Amman</i>
	2003	2015	2003	2015
<i>Built up Land (km²)</i>	58.3	97.2	200	328
<i>Agricultural land (km²)</i>	155.5	122.5	216	112
<i>Agricultural land loss (urbanized) (km²)</i>		33		104
<i>Average Annual Loss growth rate</i>		1%		1.3%
<i>Average agricultural area lost every year (km²)</i>		2.7		10.7
<i>Undeveloped land (km²)</i>	110	104	384	360
<i>Total Area (km²)</i>	324	324	800	800

(Calculated from Al Kofahi, Hammouri et al 2018)

Note that Irbid total built up area is a bit high as it includes the airport, all the industrial facilities. Concerning Amman, these 328 km² of built up area within GAM includes 221 km² of residential areas, 17 km² of commercial areas, 8 km² of gardens, 10km² of streets (GAM GIS database 2015).

*

Jordan current urban planning policies have not been efficient in limiting the urban sprawl and preserving the agricultural land around the cities. Only GAM has managed to reduce this urban sprawl with the phasing of its Metropolitan Master Plan since 2008. The proliferation of informal settlements outside zoned areas destroys rural landscapes and generate pressure on municipal service delivery. Uncontrolled urban expansion at 1% per year is of the major concern the government of Jordan must address through proper master planning, empowerment of municipalities in urban planning and the revision of the Higher Planning Council role.

4. URBAN LEGISLATION AND RESPONSIBILITIES

Jordan's political and administrative system is in transition to progressive decentralization. Local governance operates on two complementary administrative levels in Jordan: Governorates under the Ministry of Interior, and a municipal system including Municipalities and Joint Services Council under the Ministry of Municipal Affairs. The governors are appointed by the cabinet and act as representatives of the Ministry of Interior (MoI). Two different ministries (MoI and MoMA now MoLA) are in charge of the two tiers of governments, and there was limited coordination between the two until the adoption of the Decentralization Law in 2015.

The Decentralization Law was adopted in 2015, and the first Governorate councils elections were held in August 2017. The country is currently promoting a more bottom-up approach to the identification of service needs and policy priorities based on the suggestions from the new elected councils at municipal and governorate levels. In practice, the coordination mechanisms are still being put in place between elected governorate councils and municipal councils. The elected governorate councils has been given a specific budget, but they still lack genuine fiscal decentralization.

“One of the most outstanding aspects of the municipal situation in Jordan is the big gap between the wide functions and responsibilities that the Law assigns to the municipalities and authorizes them to exert, on the one hand, and the extremely limited number of services which they provide and functions which they assume, on the other” (MOTA UNDP, 2005). Although the municipalities have a general local development mandate, the Ministry of Interior and the Ministry of Municipal Affairs exhibit major tutelage roles over the sector and only 6 per cent of total government expenditures occur in Municipalities.

The Municipalities are not able to develop their own local policy in response to specific local needs. They lack trained staff, equipment, financial autonomy. But the main issue is institutional and legal, as they lack administrative autonomy from the MOMA, especially for urban planning.

Greater Amman Municipality (GAM), which includes 40% of Jordan's population, exists under different democratic preconditions from other Municipalities in Jordan. It did not implement any decentralization policy within its borders and its 22 districts are not empowered: they have no urban planners, and only deliver permits.

To this structure, one must add the Aqaba Special Economic Zone Authority (ASEZA), managed independently with broader jurisdictions than typical local authorities and supervised directly by the Prime Minister. The Petra Development and Tourism Regional Authority (PDTRA) is placed under the Prime Minister authority for its extreme sensitivity as Jordan's primary tourism attraction. The Jordan Valley Authority administrates the strategic region for food production (fig 4.1).

4.1. The creation of the Municipalities, the 2001 Amalgamation Law, GAM municipal boundaries expansion (2006-2013)

Most of Jordan municipalities were created during the Ottoman era of the Tanzimat, at the end of the 19th century. Following the Ottoman Law of the Municipalities of 1877, town councils were instituted in all of the important cities and localities in Trans Jordan like elsewhere in the Ottoman Empire. This is the case, of the towns of Salt, Ajloun, Karak and Irbid, whose first Town councils go back to this date.

Since the establishment of the Jordanian State in 1921 and the first constitution of 1928, the legal framework concerning the municipalities was modified on several occasions. Municipalities were established by the Law of the Municipalities of 1955, three years after the adoption of the Constitution. The municipal system only covers the inhabited zones of Jordan and excludes the *badiya* (MOMA map of municipal boundaries).

The Law of the Municipalities of 1955, inspired from the British laws, continues to constitute the legal base for the definition of the territory, the functions and the authority of the municipalities and their councils. The Law of 1955 defines the Municipality as being "a financially independent national institution", having a "legal personality" and an administrative autonomy, which is managed by a Town council composed of the Mayor (*rais al-baladiyah*) and 6 to 11 councilors. However, many provisions of this Law limit the authority and the autonomy of the municipalities and establish the base for a relationship of dependence and subordination to the State.

Until 2015, the Law 1955 set four categories of municipalities: governorate centres (eleven plus the GAM), district centres (with a population of over 15,000), caza centres (with a population of between 5,000 and 15,000), and a fourth category for all other municipalities. In 2015, the two last categories were merged.

Table 4. 1. Number of municipalities by category in Jordan in 2015

<i>Municipality Category</i>	<i>Criteria</i>	<i>Number of Municipalities</i>
<i>1st Category</i>	Governorate seat or population above 100,000	12
<i>2nd Category</i>	District seat of population between 15,000 and 100,000	56
<i>3rd Category</i>	Under 15,000 inhabitants	32

Census 2015, Municipal Law 2015.

Jordan experienced during the last decades a remarkable increase in demographic growth and a movement of accelerated urbanization. The rate of urbanization went from 44 % in 1961 to 73.6 % in 1999 and 90% in 2015. This rapid urban growth of the cities and villages led to the proliferation of the municipalities and village councils. Between 1979 and 1989, the number

of municipalities almost doubled from 90 to 173, and reached 214 in 1994, making each local administrative unit responsible for 10,000 people at most. The number of village councils rose from 287 to 354 between 1979 and 1994. This large number of municipalities was directly related to the tribally base system of patronage: they serve to create municipal jobs and provide services and specific zoning (Clark 2018).

However, those multiple municipalities were not able to perform their requisite duties, and became severely indebted to the Cities and Villages Development Bank. The idea of municipalities amalgamation was introduced in 1990 by the Minister of Municipal Affairs as a solution to municipalities' economic problems and inefficiencies. The aims of the process were cost savings, the rationalization of service delivery, and the will to strengthen municipal voices. The amalgamation law was presented as a draft to the Parliament in 1993, and was ratified in 1994. The fusion of municipalities occurred during a period of two months in 2001. The large number of municipalities was directly related to the tribal-based system of patronage (Clark 2018, 114).

In 2001, municipalities were amalgamated based on their similarity to each other, the largest integrating with the smallest ones. 328 municipalities were merged into 99 (plus GAM). As no proper study was conducted to determine which municipalities to get rid of or amalgamate, service delivery costs increased as some small localities peripheral to the municipal boundaries, had to receive the services from the main municipality. It also led to a worsening of intra municipal inequalities in service delivery.

Municipal debts towards the Cities and Villages Development Bank were recalculated. Recruitment of municipal employees was stopped because the main item of expenditure (55% of the total budget) was the wages of a plethora of under-qualified employees (only 4.4% of employees had a university degree in 2001). The number of municipalities in the 4th category fell from 63% to 13% of municipalities in 2001, while the largest municipalities in categories 1 and 2 rose from 9.5 to 54.4% of the total (Mopic 2006).

Table 4. 2. The 2001 Municipal Amalgamation Process

Population	Before Amalgamation		After Amalgamation	
	Number of Municipalities	Percentage of total number	Number of Municipalities	Percentage of total number
2 500 or less	103	31 %	6	6 %
2 500 – 5 000	105	32 %	7	7 %
5 000 – 15 000	89	27,5 %	32	32,3 %
15 000 and above	31	9,5 %	54	54,5 %
Total	328	100 %	99	100 %

Mopic 2006, *Municipal Joint Service Councils Assessment Study*, ERM, p. 10.

The village councils were dissolved. The Joint Service Councils were reduced from 38 to 20. Technical managers were appointed by the central authority to the municipal governments to head the newly created Local Development Units (Clark 2018, 115).

Table 4. 3. Change in the number of municipalities, village councils, and joint service councils (1976-2019)

	1976	1996	2000	2001	2007	2013	2019
Governorates	5	12	12	12	12	12	12
Municipalities	68	301	328	99	93	100	100
Village Councils	138	354	324	0	0	0	0
Joint Service Councils		40	40	20	22	22	22

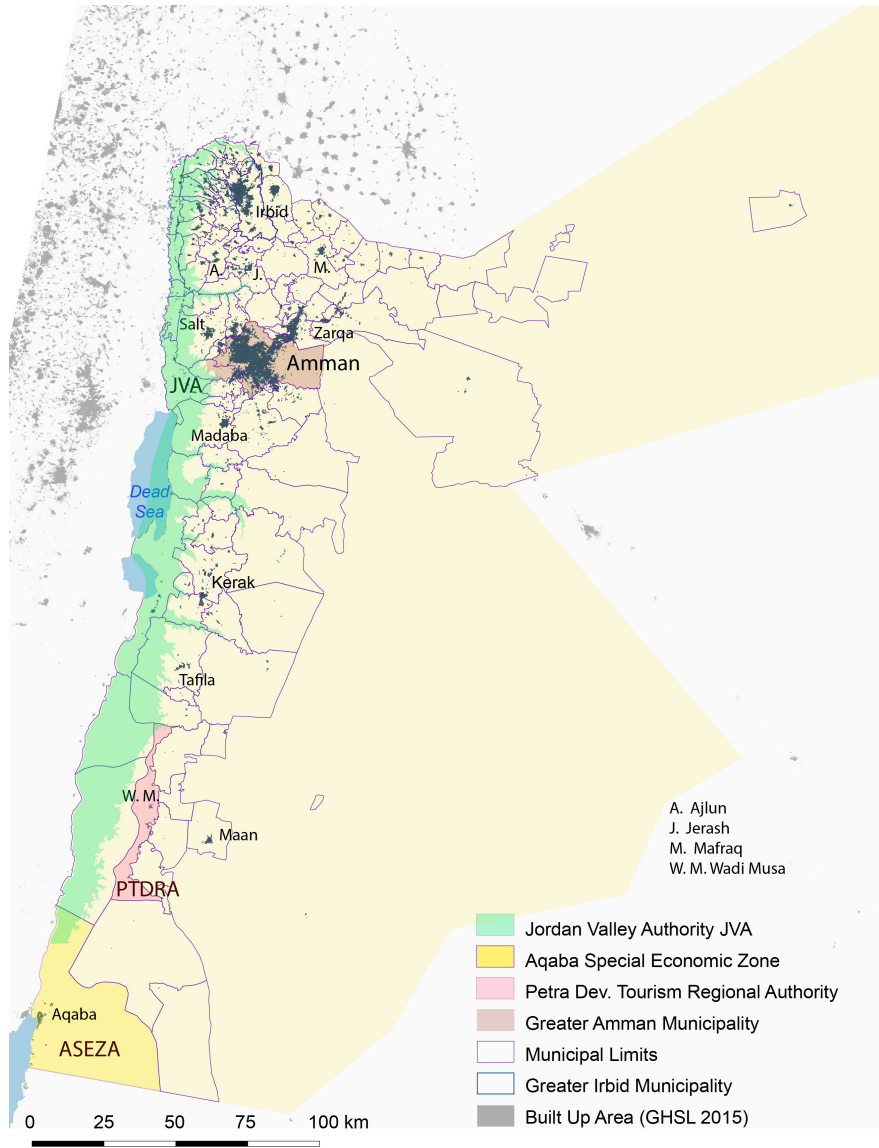
(MoTA, UNDP, 2005 and UN Habitat JNUP 2019).

In 2005, the promulgation of the National Agenda came as an answer to direct municipal and governmental actions. In December 2006, as part of the National Agenda to amalgamate lower-tier municipalities, the National Assembly expanded GAM's boundaries by annexing the former municipalities of Sahab, Al- Mouwaqer, Al Jeeza, Marj-Al-Hamam and Na'our, Um Besateen, and Hesban. As a result of this expansion, GAM's geographic boundary increased from 680 to 1662 square kilometres and an additional 190,000 residents were absorbed into the City (GAM 2008).

During the Arab Spring, several former municipal mayors asked to be desamalgamated. The MOMA announced in 2011 that any village with a population of over 5,000 could apply to its own municipality. 180 towns and villages applied for separation. But after several political tractations, it was decided to keep the situation as it was, but allowing more power to local council (representing former municipalities). But the six municipalities included within GAM in 2006 became autonomous: Sahab, Al- Mouwaqer, Al Jeeza, Marj-Al-Hamam and Na'our, Um Besateen, and Hesban.

The Greater Amman Municipality is very autonomous. Its creation dates back to 1963 when the Council of Ministers designated a "Greater Amman Region" including metropolitan area around Amman. In 1975, it was extended in the "Amman Urban Region", under the jurisdiction of the Amman Region Council, an administrative body attached to the Ministry of Municipal and Rural Affairs (MMRA).

Fig. 4. 1. Jordan Territorial Divisions in Municipalities and Special Economic Zones with Built Up (2019)



(Source: EU-Global Human Settlement Layers, GAM and MOLA. Ababsa 2019)

4.2. Municipal Functions and Empowerment

According to article 41 of the Law of 1955, the municipality is in charge of exerting 39 functions, which vary from city planning to hygiene and public health. They have been reduced to 27 by the 2007 amendment to the law. These functions cover multiple fields:

- Planning and urban management: town-planning, construction, and maintenance of roads; laying out and maintenance of spaces and public places such as parks and gardens; organization of traffic and transport and laying out of car parks; construction and organization of markets, commercial and industrial activities, and of services and places for their exercise; control of advertising boards and signs; construction of cemeteries; delivery of building permits;
- Supply of urban services: water, electricity, sewage networks, collection of household refuse;
- Hygiene and Public Health: putting in place and control of establishments of health and care; construction and monitoring of slaughter-houses; medical and sanitary control, in particular for trade and foodstuffs, and taking measures necessary to maintain public health and to prevent the risks and epidemics;
- Education, culture and sport: construction and control of educational, cultural, and sportive institutions and amenities;
- Assistance to victims of fires and other disasters, and construction of residences for the old people;
- Public Safety: prevention of fires, civil defense; ordering the demolition of buildings presenting risks;
- In the field of regulations: to prescribe, with the agreement of the Government, regulations allowing to exert its functions and responsibilities and to collect local taxes.
- In the field of advisory services: the municipality must be consulted if one of its functions is taken over by the Government.

However, the definition of these functions and responsibilities was made in 1955 and was almost not modified since. It reflects neither the evolution of the socio-economic and urban stakes, nor the current stakes of management and local development, or the effective capacities, functions and responsibilities; which the Jordanian municipalities assume today.

In practice, the government and the utilities companies provide all basic services, including water, electricity, sewerage, primary education, healthcare. Municipalities are only responsible for urban planning, building and construction regulation, waste collection, road maintenance and lighting, regulation of local markets and street vendors, regulation of local business, cemeteries and crematoria. The heavy presence of line- ministry activity in the important

sectors of health and education leave little room for municipalities to do important work in the municipalities.

But even after the adoption of the decentralization law, Municipalities face difficulties to influence service delivery policies prepared by public and private agencies. They are not even involved in, or consulted by, the agencies delivering basic urban services, such as water and electricity. This creates major distribution issues. The Municipalities are still not able to develop their own local policy in response to specific local needs. They lack trained staff, equipment, financial autonomy and administrative autonomy from the MOMA and the governorates.

Irbid Municipality (interview March 2019)

Urban legislation and governance:

The Greater Irbid municipality has 24 districts and each district has a local council of 5 elected members.

Town council:

Each member shall represent a member of the local council, provided that the elected member shall be the highest-ranked of the five members.

According to Irbid Municipal staff, the members of the local council do not have sufficient technical expertise to make the right decisions regarding organizational matters such as the transfer of land use provisions. As a result, it is suggested that two technicians should be added to each committee to facilitate and guide their decisions.

The Municipal staff are suggesting to have technicians and representatives from the Ministry of Works and the commercial sector (Irbid Chamber of Commerce and Irbid Chamber of Commerce) at the governorate council.

3. Laws and planning regulations

Planning Problems in Irbid Municipality:

1 – residents of the city center are converting their houses into shops, removing the residential character of the center.

2 – Irbid city keep on expanding the zoned areas, without taking into account the planning standards and the Comprehensive Master plan prepared in 2010-2011 (but not approved yet).

In 2018, the World Bank helped in producing urban growth scenarios. Unfortunately, they are not followed, and Irbid is even planning to include rural land east of the city within the zoned areas. The municipality is working on including a large area of 15 km² within the zoned areas (large streets, gardens, services).

The city has several infrastructure and service projects: the central market, the rehabilitation of downtown Irbid, a new slaughterhouse. Some are supported by the French Development Agency and the World Bank in the framework of the Regional and Local Development Program 2

Budgeting Course were given to the municipal finance staff by the US Agency for Development and the World Bank's Budgeting Cycle in 2018 and 2019.

Joint Service Councils were created to provide services (especially waste collection) for several groups of Municipalities and villages (their number was reduced from 44 to 21 in 2001), but

only 16 of them manage waste collection, and the majority operates under the impetus of the Ministry of Municipal Affairs.

According to a 2013 report released by MOPIC, the presence of Syrians outside the refugee camps in the northern Governorates has incurred an additional cost for municipal finances of approximately USD 40.5 million annually by the end of 2013 (MOPIC, 2013). Data for estimated municipal expenditures carried out as part of the same review indicated that current expenditures increased in the majority (67 per cent) of 21 municipalities reviewed between 2012 and 2014. Furthermore, there are large disparities between municipalities (from +22 per cent increase to -10 per cent decrease of their expenditures), with a total volume increase of 6 per cent. Certain Municipalities have significantly increased their current expenditures plan, while others have contracted expenditures. According to the Jordan Response Plan 2019, the cost for the municipalities of hosting Syrian refugees reaches 26 million JD for 2019-2020. In total, the cost of hosting Syrian refugees reaches 998 m JD in 2019, including 462 m for security, 217 m of subsidies for water and electricity, 171 m for accelerated infrastructure depreciation and 145 m for income loss due to the border closure (JRP 2019).

4.3. Decentralization

Centralization has prevailed in Jordan since Independence on the 25th May 1946. Despite successive policies to foster public participation and develop local governance since 1993, Jordan remains highly centralized. Twelve Governors 'coordinate' the work of governmental departments and public services in the Governorates. They have responsibility for approving the budget of 99 municipalities, except for GAM (which falls directly under the jurisdiction of the Prime Minister). But Governors have very little autonomy and can only make decisions on projects of less than JOD 100,000 (US\$ 142,000) (Hallaj, Ababsa 2015).

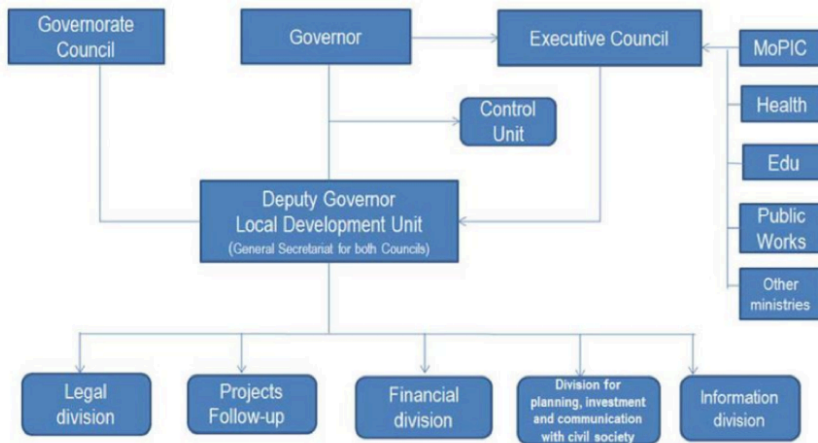
The 12 governorates represent the intermediate level between central and local government institutions. All Ministries and public services agencies (except the Ministries of Defence and Foreign Affairs) have departments or regional offices in the Governorates. Each Governorate is managed by a Governor who is designated by the Council of Ministers based on the recommendation of the Minister of Interior. The Governor is assisted by two councils: the Executive Council and the Advisory Council. The Executive Council is composed of the Regional Managers of the various ministries, particularly the ministries concerned with the delivery of public services. With those line-ministries, the governor acts as an extension of the central government. The Advisory Council is composed of 15 members designated by the Minister of Interior based on a recommendation by the Governor and chosen from local stakeholders (deputies, mayors, trade unions, private sector, organizations, civil society, etc.) Having a purely advisory role, this Council makes recommendations, which are submitted to the Executive Council and to the Governor. The latter may either adopt or reject them.

Decentralization was announced by His Majesty King Abdallah II on 27th January 2005, stating that "political development should start at the grassroots level, and then move up to

decision making centres and not vice versa”. Plans prioritized three regions, which were to create their own indirectly elected assemblies and regional capitals. The intention was that each region should manage its own services and decide on a policy to encourage local development. Local authorities were to be given greater leeway in guiding the implementation of development programs on the local level. However, the creation of regions was not pursued, partly because of a lack of political preparedness, but also owing to a lack of inter-ministerial coordination. In October 2008, in a new discourse, HM King Abdallah II called for more public participation at the level of Governorates. Local development programs were then transferred from the Ministry of Planning to the Ministry of Interior. In November 2010, His Majesty promised Parliament a draft law on decentralization, including the creation of Governorate Councils.

During the Arab Spring, the decentralization project was brought back to light in response to the heightened democratic aspirations of the population. The need for citizens’ participation in decision-making processes and for the management of infrastructure and local development projects became a priority as it seemed to meet some of the demands for greater local self-determination. Decentralization was strongly linked to an urgent need to create jobs. The enablement of local authorities to engage the participation of private sector companies in the fight against unemployment was deemed an important part of the strategy. The creation of jobs across the country in both rural and urban areas was part of a critical need to slow the exodus towards the capital. Various projects were subsequently created to support Local Economic Development, such as Baladyati, PLEDJ (EU) and LENS (USAID).

Fig. 4. 2. New Governorate Organogram, with Governorate Councils (2015)



Source: Author based on Government of Jordan (2016a), Background report of the OECD Strategic Assessment of Jordan, unpublished working paper.

The 2015 Decentralization Law envisions a closer interaction between the two tiers (governorates and municipalities) in a bottom-up planning process.

“Decentralization rests on three building blocks:

- **Political decentralization**, which is concerned with defining the political system, the form of the regional councils, the mechanism of their election, and their number.
- **Administrative decentralization**, which defines the structure and setup of the required local administration. It also defines the organizational relationship, powers and responsibilities of all administrative structures.
- **Fiscal decentralization**, which establishes the fiscal authority its role in the preparation of policies and planning, as well as the appropriate allocation of available funds to effectively carry out activities and spending” (USAID 2017).

The new governorate councils are in charge of setting a suitable environment for investments on all levels and enhance the cooperation between both, public and private sectors. They are in charge of identifying the governorate needs, then prepare annual development plans for the governorate. Governorates must prepare their local capital budget in cooperation with the executive and consultative councils. This budget must meet the needs of the citizens regardless of their location and residence. This is an issue as no proper planning policies is implemented and scattered urbanism has occurred all around the country. Executive Boards are composed of Administrative Governors, Government departments and offices, Development zones and industrial estates, Security and civil defence departments and the Executive Managers of Municipalities.

2017 local elections

Local democratic governance was given impetus by the 2015 Decentralization Law and Municipality Law. Local elected councils are closer to citizens’ needs, and it can be expected that the delivery of public services will become more responsive and balanced across the country, and within both poor and rich neighbourhoods. Citizen-driven initiatives taken by the elected councils should be fostering transparency and increased accountability, if civil society organisations would be better integrated to the decision process.

Until the 1999 municipal elections, the mayors were elected. This was suspended for the 2003 municipal elections. Mayors were then appointed in all municipalities. One of the results was a low voter turnout in most cities during the 2003 elections. The 2007 Municipal Law allowed citizens to elect all the municipal council, including the Mayor, with a quota giving 20% of seats to women. New elections were carried rather successfully in 2013. During last August 2017 elections, mayors and municipal councils were fully elected (except for GAM which Mayor and 25% of the council members are government appointees).

On August 15th 2017, Jordan held its first “local elections”. These added the election of Governorate councils members to the usual Municipal Elections (which are governed by the Municipal Law) in accordance with the Decentralization Law 2015. These new twelve Governorate councils include 380 seats, 32 of which are reserved for women (10% quota) and 45 are appointed by the government. Governorate Councils incorporate elected mayors and elected members. They function as an intermediate body between the Governorate Executive councils and the elected Municipal Councils. Within each governorate, voters also elected also members of the Executive Council. Municipal councils of the 100 municipalities include 1,188 seats, of which 333 are reserved for women (25% quota). Note that a quarter of Greater Amman Municipality seats are designated (this is reduction from 50% in the 2013 Municipal Law).

The incentive behind the decentralisation reform is increasing of popular participation in the decision-making and development planning, based on a bottom-up approach to the identification of policy priorities and service needs. Quotas for women have introduced - 10% at the governorate council and 25% at the municipal councils. However, youth interests might still not be taken into account by representatives who must be at least 25 years of age. And civil society, represented by local NGOs, is not sufficiently integrated into the consultations with the local government. “CSO activity is often rooted within the tribal system and has a long tradition of providing charity and welfare services”. Civil organisations are submitted to registration hurdles and bureaucratic obstacles (OECD 2017). A solution could be to create local society committees within the governorate council.

Delegation and devolution without local empowerment

The new legislation introduced in 2015 can be seen as an amalgamation of different forms of decentralization. It introduces delegation as a third pillar of Jordanian decentralization through the installation of a new, quasi-democratic entity in the form of Governorate Councils, supported by Executive Boards. Delegation means the shifting of management authority for specific functions from national governments to para-statal organizations or area development agencies. But it retained vertical de-concentration, or redistribution of administrative responsibilities from central to subnational administrative levels by maintaining the line-ministries’ directorates. Finally, it has introduced some devolution by strengthening the municipalities with elected local councils, and financial reforms, but without really empowering them (Hallaj, Ababsa 2015).

The Decentralization Law of 2015 has allowed for the election of representatives bodies at the governorate level, i.e. the Governorate councils. However, the executive branch is still appointed by the central government among tribal leaders. The law has led to increased power being granted to the governors, but not to the mayors and their councillors. On the contrary, the appointed executive directors have gained considerable power and responsibilities at the expense of elected mayors and councillors (Clark 2018, 118). By law, the executive director must attend regular bi monthly meetings at the governorate councils. However, the new structures are suspicious of the municipalities, for fear that they would request part of their allocated budgets. The decentralization process has created in Jordan what scholars qualify as

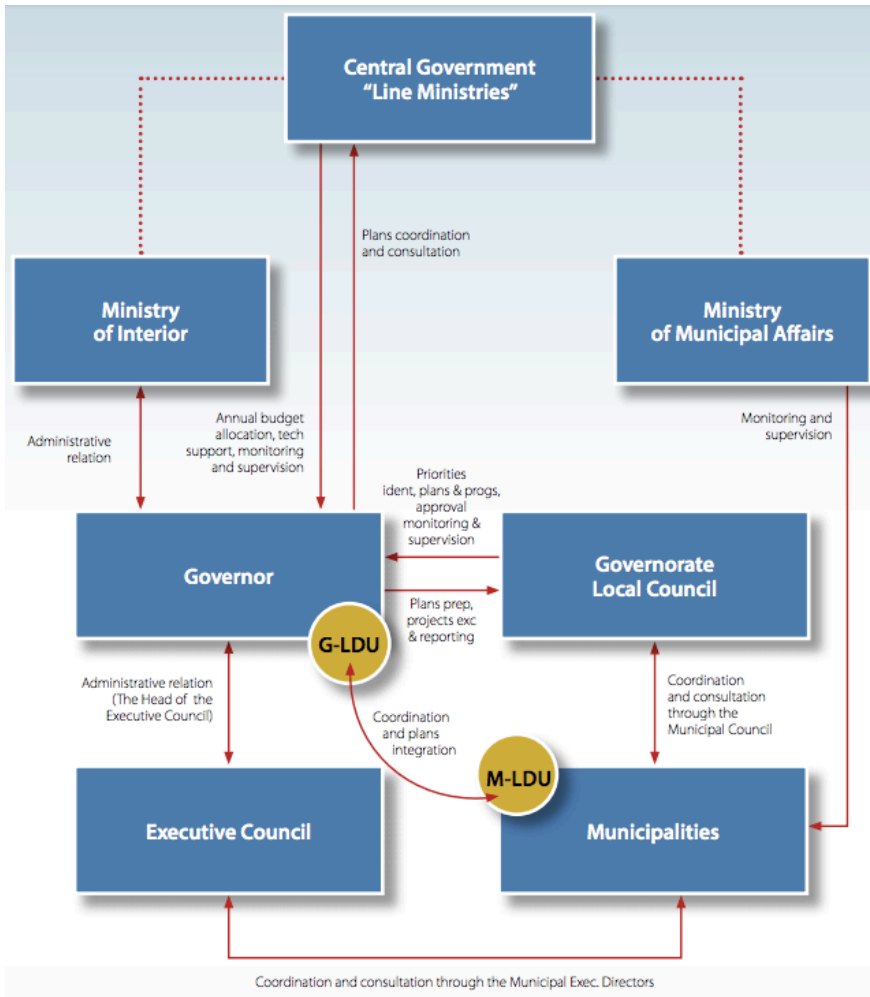
an “elite capture” as appointed executive directors in municipal councils have been given an increased role at the expense of the elected local councils.

MOMA name was changed into the Ministry of Local Administration in May 2019 in order to supervise the implementation of the Decentralization law. The strategy of MOLA aims at significant municipal reforms (legislative, financial, and administrative). Its mission is to develop the performance of the municipal sector and enhance its efficiency; enhance service delivery to the local community; contribute to the fight against poverty and employment; contribute towards the achievement of balanced development among governorates and districts; solve environmental problems that are within the responsibility of municipalities and joint services councils and contribute to solving traffic problems by proper traffic management and public transportation.

But in practice, the ministry retains a strong power over the municipalities through the approval of master plans and the Higher planning council. Municipalities can deliver permit and design local zoning updates. However, they are not empowered to prepare their own master plans and local plans. This is a major constraint for municipalities to control their urban expansion and serve its residents with proper transportation, health and solid waste collection services. Municipal councils are weak and devoid of any real authorities or responsibilities. Municipalities still lack autonomy. They are highly dependent from the Ministry of Local Administration for urban planning, the Ministry of Interior for security (submitting even cultural activities to its approval) and the Ministry of finance for local finance.

The new institutional setup introduced by the 2015 laws expanded the role of the Local Development Units. They act as the secretariat of the governor, manager and elected councils, they are asked to develop proposals for coordinated policies; and they are called to be a cornerstone of governorate and municipal public administrations (OECD 2017). However, LDU's were not included in the preparation of the Governorate Development Plans. Governorate and Municipal LDU's do not coordinate, and lack proper communication channels. Their capacity to develop policies and projects based on studies should be reinforced.

Fig. 4. 3. The Decentralization Structure including coordination between LDU's



(OECD 2017)

4.4. The role of the other local authorities: Jordan Valley Authority (JVA), Aqaba Special Economic Zone Authority (ASEZA) and Petra Development and Tourism Regional Authority (PDTRA)

Jordan's most strategic areas fall under the direct administration of the Prime Minister's office. This is the case with the Jordan Valley Authority, who control the border with Israel and the agricultural production in the country. Jordan's main international tourist destinations are

administrated by special authorities for strategic purposes, due to their importance in attracting visitors and reflecting the cultural and historic legacy of the Kingdom. The Aqaba Special Economic Zone Authority (ASEZA) was established in 2000; the Petra Development and Tourism Region Authority (PDTRA) was created in 2009; and tourism development zones in the Dead Sea and Aljoun were created in 2010. Each of these regional authorities has developed a Strategic Master Plan for its respective region/zone with the key objective of guiding development in each region/zone to ensure it occurs in an efficient, balanced and sustainable way over the next 20 years.

The Jordan Valley Authority (JVA)

The Jordan Valley Authority (JVA) is placed under the Ministry of Water and irrigation. It is entrusted with the integrated socio-economic development of the Jordan Valley since 1977.

The Jordan Valley is part of the Great Rift Valley that extends from south Turkey to the horn of Africa. In the Hashemite Kingdom of Jordan, it extends for about 400 km from the Jordanian borders south of Lake Tiberias in the north to the Gulf of Aqaba in the South. JVA controls all land under 300m above sea level and 500 m in the south. “The Valley is constituted from the following: 1. The area between the Northern Frontier of the Hashemite Kingdom of Jordan to the North and the Northern edge of the Dead Sea to the South and the Jordan River to the West until elevation 300 meter above the sea level to the East. 2. The area between the Northern edge of the Dead Sea to the North, and to the Southern Boundary of Qatar village to the South, and to the Western frontier of the Hashemite Kingdom of Jordan to the West, and to elevation 500 meter above sea level to the East” (JVA Law 2001).

The Jordanian Government, through the Jordan Valley Authority (JVA) and its predecessor organizations, started since the early fifties of the last century to implement infrastructure and irrigation projects development in the Jordan Valley. In 1958 the construction of the East Ghor Canal (now King Abdullah Canal) allowed the conveyance of water from the Yarmouk River to irrigate lands in the JV. The first phase was 70 km long ending at the Zarqa River and irrigating 12000 hectares. The canal was later extended by 8 kms, 18 kms and finally by 14.5 kms in 1989 for a total length of about 110 kms.

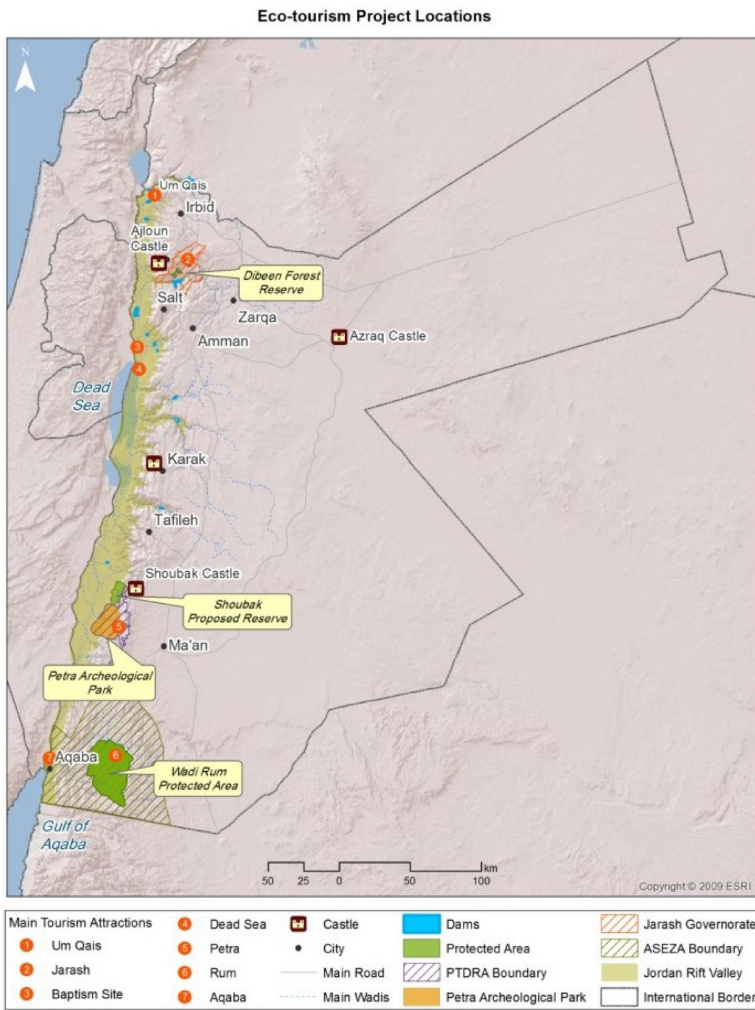
The Jordan Valley Authority (JVA) was established in 1977 with a broad mandate for the integrated development of the Jordan Valley encompassing all aspects of life. In 1988 the JVA became part of the Ministry of Water and Irrigation (MWI). Its mandate includes:

- The development and use of water resources of the Jordan Valley for purposes of irrigated agriculture, domestic and municipal uses, industry, hydropower generation and other beneficial uses, for the protection and conservation of these resources, and the implementation of all works related to the development, utilization, protection and conservation.
- The development and improvement of the environment and the living conditions in the

Jordan Valley, and implementation of the related works including: setting rules and regulations for areas of land outside town and village borders on which construction of buildings is permitted, setback lines, rights of way, etc. The development of land zoning to define land-use: residential, industrial, agricultural, etc. Planning, design and construction of farm roads.

- The development of tourism in the Jordan Valley including construction of touristic and recreational facilities. Social development of the Valley inhabitants including the establishment of private institutions in order to help them contribute to the improvement of the Valley and to the achievement of development objectives.

Fig. 4. 4. The localization of the JVA, the ASEZA, the PDTRA



(PNUD 2013, *Mainstreaming Biodiversity Conservation in Tourism Sector Development in Jordan*, 115 p.)

JVA urban planning aims at providing site and services plots of land to the residents of the Valley, outside of municipal zoned areas. The rationale is to limit rural exodus to Jordanian main cities. The Jordan Valley includes large poverty pockets, with some inhabitants under tents. Offering subsidized housing is a form of settlement policy of the local inhabitants (tawtin). The JVA sells land at a symbolic price to keep the inhabitants in the Valley.

According to the Jordan Valley Authority law, every citizen has the right to receive 30 donums irrigated land and a plot of land to build a house. This plot of land used to be of 288 m², they now reach 400 m² per household. They are sold at 0,25 JD per square meter. The building height must be of less than 9 meters, and not more than two floors. According to JVA building regulations, only one building per plot can be built, of less than of 260 m² on the plot. In addition farm and agricultural buildings for production uses are allowed. The real cost of the served land sold at 0,25 JD is between 5000 to 15000 JD according to the projects. Note that the JVA is selling the right of use on State land (takhsis), not a property. After ten years, it becomes a full property.

All municipalities located along the Jordan Valley and Wadi Araba are zoned in Residential D, allowing rather high densities. But the extensions outside municipal boundaries are with special building norms that are space consuming and do not allow for high densities. Only two levels are allowed and plots of land are around 700 m² for each household. By law, any Jordanian living in the Jordan Valley without land has the right to buy a plot of land of 300 m² to build a house at the very low price of 0,25 JD per m².

The JVA is supporting the development of residential areas outside of municipal boundaries. It has currently 11 extensions projects in several villages and small towns. For instance, the JVA has prepared the master plan for the extension of the eastern part of Suwaima village. Table 1 present as an example Al Suweima zoning. 701 donums of land has been zoned and divided into 894 plots of land for the construction of 883 housing units on 415 m² plots average size. 32% of the area is allocated to roads (12 and 18 m wide). 9 donum for parks, 10 donums for commercial areas. The plots will be sold 0,25 JD per sq meter. As those prices are subsidized, it is forbidden to sell the land during a period of ten years. This plan has received the agreement of the Prime Ministry and of MOMA.

Note that this creates very low densities (one household per 850 m²) and could be an issue by 2030 at a growth rate of 2.14% a year as valuable agricultural land might be transformed to cater with the small localities expansion. Densification measure should be taken in this region.

Table 4. 4. Zoning in Al Suweima Extension Master Plan by the JVA, 2019.

Zoning regulations			
Zoning Type	Number of plots	Area (donums)	Percentage
Streets and roads	-	222.3	31.8%
Investment lands	2	2.68	0.38%
Commercial lands	3	9.90	1.4%
Gardens and rounds abouts	4	9.43	1.3%
Rocky and rugged lands	-	10.1	1.4%
Valley bed		34.02	3.2%

Public buildings	2		8.34	1.1%	
Housing units	883	Min	351.4 m ²	415.6	59.4%
		Max	2114.5 m ²		
		Mean	468.8 m ²		
Total	894		701.186	100%	

(Source: Jordan Valley Authority, appointment Ababsa 19-2-2019).

In 2016, the Wadi Araba Society has been set in order to develop Wadi Araba. It will build schools, hospitals, centres for youth, halls for weddings. But unfortunately, there is no sewage in the Jordan Valley as it is technically difficult to install. Major pollution issues result from the release of contaminated water in the wadis.

The Aqaba Special Economic Zone Authority (ASEZA)

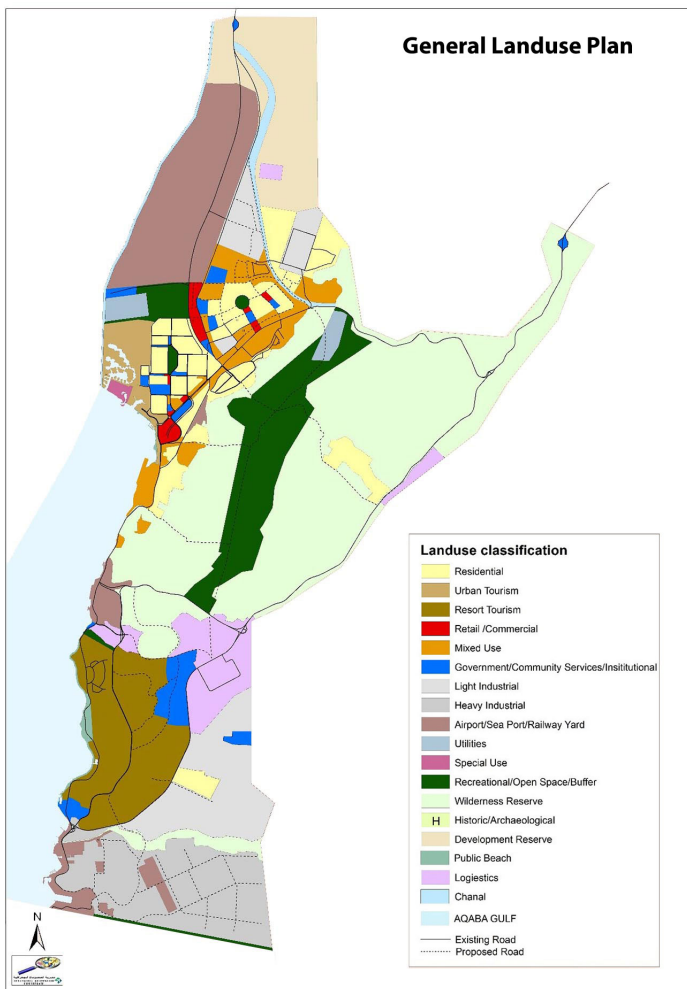
Located on the Red Sea in the south of the Kingdom, the city of Aqaba is strategically important for Jordan as it is its only seaport. During the 1970's and the 1980's its industrial activities have expanded to include the exportation of Jordanian phosphate and other new products. The port of Aqaba at that time served Iraq as well as Jordan. However, after the Gulf War in 1991, all Iraqi imports were conveyed through the Syrian ports. Due to the war in Syria, in 2011 Iraq began to import through Aqaba once again and port traffic has since doubled.

In the context of increased liberal economic opening in Jordan since 2000, the Aqaba Special Economic Zone Authority (ASEZA) was created to attract investments and promote international tourism as a key activity alongside existing industrial activity. The zone covers a total 375 km² of land, including 27 km of coastline. Following the promulgation of the Aqaba Special Economic Zone Law 32 for the year 2000, the ASEZA took over the former Aqaba Region Authority and the Municipality of Aqaba. Its aim is to foster the conditions for increased investment and create jobs opportunities for Jordanians. The ASEZA is a financially and administratively independent organization. It offers one-stop-shop assistance to businesses.

According to the ASEZA law 2000 article 15, the ASEZA board assumes all the municipal council functions in accordance with the Municipal Law. For this purpose, the chief commissioner assumes the powers of the minister as stipulated in the relevant applicable legislations. It has the functions of the Higher Planning Council. It is responsible for the zoning of cities and villages, municipal affairs, issuing permits and certificates, protecting the environment, water resources, and the natural environment. One of its duties is to produce development plans for economic and social development. The Authority can administrate State properties, but the DLS is responsible for collecting the fees that are generated from executing the State lands registration transactions.

“The Aqaba Special Economic Zone Authority plays a leading role at the administrative and governmental level in the Hashemite Kingdom of Jordan and applies the principle of good governance based on transparency and effectiveness in the decision-making process. The Authority is an independent institution that deals with the development and management of the Aqaba Special Economic Zone and provides integrated services to investors and registered companies. The Authority is administered by a six-member Board of Commissioners headed by the Chairman of the Board of Commissioners, each responsible for organizing and managing legislative, legal and regulatory activities in the region. The Aqaba Special Economic Zone Authority is the symbol of renewal and is committed to ensure transparency through its modern and effective laws and regulations” (ASEZA website).

Fig. 4. 5. Aqaba Master Plan



(ASEZA website, <http://aseza.jo/Pages/viewpage.aspx?pageID=3>)

The central development arm of the ASEZA is the Aqaba Development Corporation (ADC) created in 2004 to accelerate the economic growth and attract foreign direct investments. The ADC is owned equally by the central government and ASEZA. It administrates the ports (including the phosphate terminal, Sheikh Sabah Al Ahmad Terminal- for liquefied natural gas, in addition to the King Hussein International Airport).

The first ASEZ master plan was adopted in 2001, and designed to endure until 2020. It divides the zone into five special areas for urban development, touristic infrastructure, and commercial, academic and other investment sectors. The initial plan was to attract 6 billion USD of investments by 2020. In reality, this objective was tripled, reaching 18 billion USD by 2008. However, this slowed down after the world economic crisis, and only 2 additional billion were invested from 2008-2017. The Aqaba development plan for 2025 plans to attract an additional 10 billion USD and create an additional 30,000 jobs.

The city includes 45 hotels, (comprising 4650 rooms) and the sector employs 4000 workers. In 2018, Aqaba welcomed 931,000 tourists (mainly Russians), including 423,000 local visitors.

The Aqaba Industrial Estate has been developed on 1,7 million sq meters. It offers favourable tax incentives, including an exemption of 5% of the corporate income tax rate on all profits (except for banks and financial institutions, insurance and reinsurance companies, and road transport companies). Companies are exempted from customs duties on the import of goods, and on building, land and capital gains taxes. Companies are involved in engineering as well as metals, plastics and food industries and more recently in high-tech manufacturing and garment companies (Oxford Business Group 2017).

In 2015, ASEZA signed an agreement with the Shenzhen Chamber of Investment in China to develop and operate an industrial and logistics estate in its southern area (700 m USD). “Backed by Saudi Arabia, one flagship regional development is the Neom project, a \$500bn, 26,500-sq-km industrial zone along Saudi Arabia’s Red Sea and Gulf of Aqaba coastline. The project will connect Asia to Africa by creating a special zone spanning Saudi Arabia’s borders to Jordan and Egypt. The zone is expected to strengthen the economies of the three countries, enhance trade and open new markets for their exports” (Oxford Business Group 2017).

Most of the Gulf real estate companies have developed marinas and gated communities in Aqaba. The largest project is the Marsa Zayed marina built on 3.2 million sq meters for 10 billion USD. It is developed by the Abu Dhabi-based investment company Eagle Hills Properties. This same company is developing Saraya Aqaba, built on an artificial lagoon, with 850 residential units.

The ASEZA development plan for 2025 includes the construction of six industrial zones and

10 logistic centres at a cost of 30 billion USD in investments. These are particularly needed in the governorate due to ever-rising unemployment.

Petra Development and Tourism Regional Authority (PDTRA)

The Petra Development and Tourism Regional Authority (PDTRA) is an independent financial and administrative Authority, founded in 2009, that aims to develop the region, economically, socially, culturally, and as a tourist destination, as well as contribute to local community development. The PDTR manages the entire Petra region (755 km²) including the Petra Archaeological Park (PAP) which covers 264 km². Petra is a strategic destination, and its 826,993 visitors in 2018¹¹ (in increase from 620,441 in 2017) contributes to a large part of the government incomes with 3.2 billion USD in 2017.

Petra was inscribed on the UNESCO List of World Heritage Sites in 1985. On four occasions, between 1996 and 2002, Petra was placed on the World Monuments Watch list of the 100 Most Endangered Sites. In July 2007, Petra was voted on the list of the New World's Seven Wonders

The PDTRA replaced the Petra Regional Council created in 1995 with UNESCO support. Before, Petra was administrated remotely from Amman since 1934, by the Ministry of Tourism and Antiquities. The PRC was officially established by the government of Jordan so as to protect Petra as a World Heritage Site including the "Sanctuary" area and to protect the archaeological, cultural and environmental features of the surrounding areas. Since its establishment, the Park's ruling body has evolved over the span of 15 years and acquired its own laws with financial and administrative independence reporting directly to the Prime Minister.

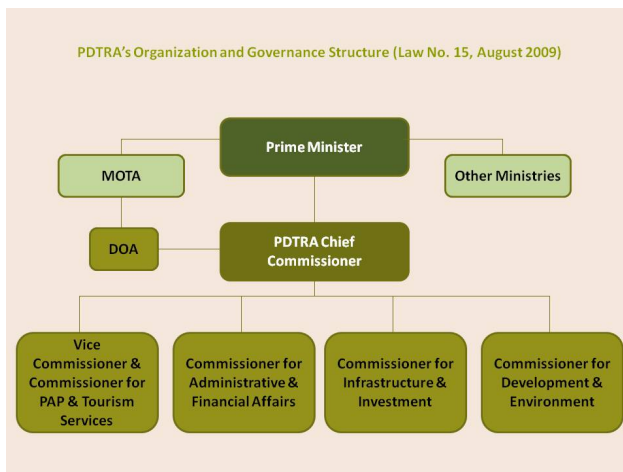
In September 2009, Law Number 15 was enacted to define the Petra Development and Tourism Region. The PDTRA administrates and supervises the Petra Region. It manages and develop the tourism industry in Petra and coordinate with national and international entities that are related to the economic sector. It aims at providing a desirable investment environment to engage in various economic activities. It has for task the development of comprehensive strategies for the protection, maintenance and restoration of archaeological sites, in coordination with the Department of Antiquities. It should identify the areas and sites of heritage value in the region, which can be used for tourism purposes. It has also for mission to protect the environment in the region, including water resources, natural resources and biodiversity, by setting the standards, rules and regulations. The development of human resource development plans is in his mandate. Including the enhancement of the social status for the local committee and private institutions, and providing support to the traditional crafts projects and the tourism industry.

¹¹ <http://jordantimes.com/news/local/petra-visitors-continue-increase-first-quarter-2019>

The intent of creating the PDTRA was to streamline the management of the Petra Region and the Park with a focus on tourism. Petra Archaeological Park (PAP) is a subordinate organization of the PDTRA mandated with the management of the archaeological sites. But the jurisdiction over archaeological research, conservation, restoration and preservation however lies with the Department of Antiquities, a subordinate Department to the Ministry of Tourism and Antiquities. The establishment of the PDTRA heralded in a change in the management of the PAP and the Region. As such the new management structure for Petra is responsible for developing a comprehensive strategy and specific controls for protecting the Park. There is, however, a caveat in the new law that designates the responsibility of conservation to the Department of Antiquities¹².

The PDTRA reports directly to the Prime Minister and is headed by a Chief Commissioner who is assisted by four Deputy Commissioners. The Deputy Commissioners make up a council called “Commissioners Council” that manage the Authority and oversee its affairs. The PDTRA has a commissioner for Development and Environment and Local Community. The members are appointed by the Prime Ministry and approved by His Majesty King Abdullah II¹³.

Fig. 4. 6. The Petra Development and Tourism Regional Authority (PDTRA) Organization



(Source: Petra National Trust)

¹² <http://www.pdtra.gov.jo/Pages/viewpage?pageID=79>

¹³ <http://www.pdtra.gov.jo/Pages/viewpage?pageID=79>

The Jordan Investment Commission

The Jordan Investment Commission is Jordan key institution to promote and direct foreign direct investments to the Kingdom, in particular from the Gulf countries. It was set in 2014 from the merging of all the different bodies involved in economic development and free zones. As placed under Prime Minister office, it has much power over the other institutions, such as local municipalities. It has its own zoning and building regulations, specific to each project.

It administrates 160 km² of economic and industrial zones throughout the country. All taxes collected in these areas are directed to the Treasury, and not to the local municipalities to support service delivery (roads, solid waste management). JIC has its own training centers, expressing its social corporate responsibility. JIC would like to freeze the development of industrial zones within municipalities, in order to rationalize the investments to its free zones.

“The 2014 Investment law unified tax exemptions in annexes to be modified by the Council of Ministers. All applications for investment are received by a single office, which processes them at concerned ministries, and local government and autonomous public entities. If an application is not responded to within a month, it is considered, ipso facto, approved. So far, the experience has not revealed its merits in tangible terms. Inter-departmental frictions still hinder the process because each insists on its terms of reference.

Jordan has also established new governance and transparency entities, and armed them with the legal leverage to mount serious anti-corruption and counter-corruption campaigns. Complaints about the slow judiciary proceedings have been addressed both legally and operationally. Several amendments to laws and procedures have been adopted to expedite court proceedings. However, large infrastructural projects that Jordan needs and shall soon embark on require special legal arrangements. Potential investors are reluctant to oblige if the red tape and lethargy continue to inhibit the decision-making apparatus. A law was prepared to try to circumvent impediments and speed up matters in order to create an environment that entices the Saudi capital to take risks in main infrastructure projects connecting the two countries.

Such projects, which will be limited to the proposed investment fund, include railways, grid connection, large infrastructure for Al Matal tourist site in Aqaba and an oil pipeline to the refinery. Other project could be considered in the future. Other Gulf and foreign countries are welcome to join the company(ies) that will be in charge of studying, designing, operating and managing such projects. The draft law is generous and should have sufficient appeal to investors. It remains to be seen how investors respond to it.” Jawad Anani, Jordan Times, 2016.

*

The creation of those special economic zones aimed at counterbalance the weight of Amman in the economy. Aqaba and Petra are performing well. But the special industrial zones are lacking skilled workers and trained local managers.

5. URBAN REGULATIONS

Overview

Land is one of Jordan's most valuable assets. A total of 11,604 km² are privately owned in Jordan¹⁴. The rest is desert Treasure Land (78,000 km²). One of the foundations of Jordan's political stability is the fact that its prominent urban families and tribes have not been affected by any major land reform (Fischbach 2000). Major landowners try to manipulate the municipal power to further their own interests, for example to organize land zoning within municipal boundaries. Land property ownership is a predominantly male domain in Jordan. Women own only 7% of land and 7% of housing units (DOS 2012). Social pressure is frequently exerted on women to renounce to their inheritance.

Land registration started in the 1880's, during the Ottoman Empire. The Ottoman Land Code of 1858 is still the source of law concerning property. However, in 2019, the *miri* land category (right of use of treasure land) was converted into full private property (*mulk*).

In the absence of taxation on vacant zoned land, speculation has been growing over the past thirty years. It has led to a rapid increase in urban land prices. The price of land constitutes half of the cost of formal housing production. As a result, only one third of the housing units produced between 2004 and 2015 were licensed up front. One third was licensed after construction and the remainder built without any permit (World Bank 2018).

The current building and zoning regulations applied in Jordan, in GAM, ASEZA and JVA consumes a lot of land and do not allow for proper densifications. The maximum FAR is 2.4 and as incentive, it can only reach 3¹⁵. To date, only four floors have been allowed, however the new 2019 Building regulations allow for a fifth floor to be built in newly zoned areas.

During the past ten years, several amendments to the building regulations have been made by the government and GAM in order to simplify zoning and housing production. Investors and developers have been complaining of the lack of communication from GAM on zoning and building regulations, and of the lack of detailed regulations for specific project categories. The high degree of discretion and unpredictability in development fees have resulted in a weak investment climate for developers.

5.1. Land Titling and Registration

The Jordanian Constitution provides a guarantee of the economic rights of individuals; namely, the right to ownership, prohibition of expropriation except for in exchange for just compensation, the right of work, and freedom of trade and manufacture. Private property is protected by the article 11 of the Constitution, "No property of any person may be expropriated except for purposes of public utility and in consideration of a just compensation, as may be

¹⁴ DLS, Database, 8th November 2015, Ababsa 2016.

¹⁵ Interview at Greater Amman Municipality Comprehensive Planning Department, 3rd July 2019

prescribed by law.” Additionally, Article 12 of the Constitution provides: “No loans may be forcibly imposed and no property, movable or immovable, may be confiscated except in accordance with the law”.

Accordingly, the following laws relate to immovable property:

- Lands and Water Settlement Law and its Amendments No. (40) of 1952.
- The Disposition of Immovable Property Law No. (49) of 1953.
- The Management of State Property Law and its Amendments No. (17) of 1974.
- The Housing and Urban Development Corporation Law and its Amendments No. (28) of 1991.

The Ottoman Islamic Land Code of 1858 is still the main inspiration for the real estate law (n°13, 2019). It classified properties into five types: private land (*mulk*), state-owned land (*miri*), religious endowment (*waqf*), abandoned land (*matruk*), and barren land (*mawat*). Agricultural private and state-owned lands were commonly exploited by men, under the *musha'a* system of collective land use, on a system of rotation. When Transjordan was established, the considerable social control over land was highlighted by the prevalence of the *musha'a* exploitation system.

Private property, or *mulk*, was by definition restricted to urban land (land within the municipal boundaries of villages and towns) and to orchards and olive trees. This private land was governed by the Sharia principles of the Civil Code (Mejelle) introduced in 1869. The best agricultural land was mainly under communal exploitation (*musha'a*). Farmers and shepherds had rights of use (*tasarruf*), but the property belonged to the State (*miri*). Customary law (*'urf*) intervened for *miri* land and, as a consequence, *tasarruf* rights were inherited equally between men and women (Ababsa 2016).

The acquisition of land with recognized tenure is the initial step in the land development process. Two parallel form of tenure exist in Jordan with different level of recognition: formal titling and registration is done by the Department of Land and Surveys and informal (unauthorized) registration is achieved through written *hujja* agreements or contracts. *Hujja* means the proof, it is a written unformal agreement between a seller and a buyer signed in front of witnesses. Formal land property is *mulk* (private land), and shared property (*mulk mushtarak*).

In the case of a *hujja* contract, a former owner sells his land and makes a written agreement, the *hujja* ('proof'). *Hujja* is not legally binding and not recognized by the Land and Survey Department, but it provides a basis for the assertion of ownership in court. In the 1980's and the 1990's, the government of Jordan has given compensation to poor households holding only *hujja* documents in case of eviction and demolitions during the informal areas upgrading process (Ababsa 2012).

Jordan is a country of landowners for the majority of its population. In 2014, 73.1 percent of households owned their house or apartment and less than a quarter rented (23.1 percent). Most of these landowners have added a second or third floor to their properties and have even built houses for their children. This is the case in particular for Jordanians residing in the cities and villages of Irbid, Salt, Ajlun Madaba, Kerak, Ma'an, and Aqaba governorates.

In informal areas, developed as extensions of UNRWA Palestinian camps, more than half of the inhabitants have land tenure as they have bought land on which a house was self-built. In East Amman, the price used to be JD1 per square meter in 1967 (Ababsa 2012). As a result, 59.8 percent of East Amman inhabitants in informal areas own land (HUDC 2000).

Low and moderate-income households avoid the formal titling process because of its related costs. The property tax roll of the Ministry of Finance reveals that 71,7% of the housing units are registered in Jordan (except Amman). The highest number is in Tafila governorate, with 83.9%, followed by Aqaba governorate with 76,5% where the ASEZA keeps a strict control over housing production. Irbid and Zarqa have a relatively high percentage of registered properties at more than 73%¹⁶.

According to the Expropriation Law No:12 of 1987, expropriation of private property is allowed only for public utility and with the payment of adequate compensation. Expropriation Law governs, among other things, the basis for compensation and the procedure for challenging the expropriation and proposed compensation before regular courts. The Expropriation Law underscores the importance of adequate compensation by imposing a 9% annual rate of interest on the compensation amount if it is not paid within one month of its due date (article 14). Furthermore, the Expropriation Law provides that expropriation claims are to be adjudicated on an expedited basis. According to the Expropriation Law, the proceedings shall be concluded not later than one year from the date on which the claim is filed (Obeidat 2012).

5.2. Gender inequality in land and housing property

Property ownership is a male domain in Jordan, where women are dependent on men for housing. A patriarchal pattern of power dominates both inheritance and property. The rights of men and women to inheritance are guaranteed by the Jordanian Civil Law n°43 of 1976 (Article 1086) and the last amendment of the Provisional Jordanian Personal Status Law, number 36 of 2010. According to this law, women receive half of their brothers' share, but more of their husband's estate: a quarter if the widow had no children and an eighth if she had children (Ababsa 2016).

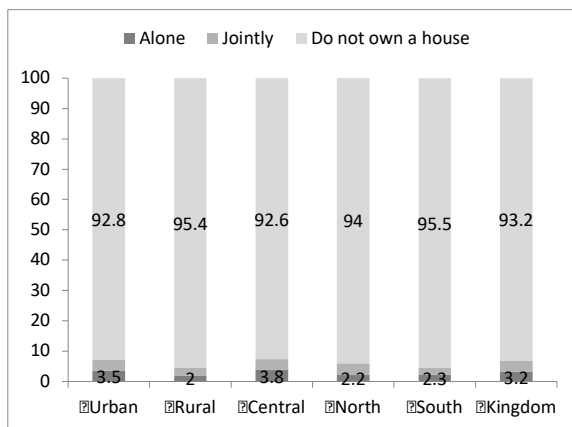
While the inheritance rights of women are formally enshrined in the constitution, in Islamic law (Sharia), and in the customary law particularly common in the steppe regions, female heirs continue to face social pressure to renounce their rights in favor of male heirs. Most women either do not receive the share of inheritance that the law entitles them to or they are simply denied their right to housing and land. Jordanian Sharia Court data show that in 2014 a third of heirs fully relinquished their inheritance rights through the process of *takha ruj*, the voluntary "opting out" of their rights (exclusion). Records do not specify their gender, but survey evidence shows most of those who requested *takha ruj* were women (Ababsa 2016).

¹⁶ Ministry of Finance, Property Tax Database, November 2017.

The Jordan Population and Family Health Survey 2012 was the first to include a section on women’s ownership of assets. Conducted on a representative sample of 15,190 households and 11,352 ever-married women aged 15–49, it gave for the first time a clear picture of women’s property in Jordan. In 2012, only 6.8 percent of married women owned their house (3.2 percent alone and 3.5 percent jointly with men), and only 7 percent owned land (3.3 percent alone and 3.5 percent jointly with men), according to DOS and ICF in 2013. Rural women are keener to own land than urban women (9.3 percent versus 6.4 percent). Women who reside in the north of the country, where agricultural land is considered better quality, and in the south, where the ethnic group community is larger, tend to own more land than those in the central region, where, over the years, agricultural land has become increasingly urbanized (near Amman, Russeifa and Zarqa, for example).

Rural women are less keen to own their house, as they are most of the time hosted in their husband’s family building. Of rural women, 4.6 percent own their house (2 percent alone and 2.6 percent jointly) compared to 7.2 percent of urban women (3.5 percent alone and 3.7 percent jointly). However, women who live in the central region, near to the capital, are more likely to own and co-own their house; 7.4 percent versus 6 percent in the north and 4 percent in the south (figure 5.1).

Fig. 5. 1. Percentage of Ever-Married Women House-owners, 2012



(Source: DOS and ICF 2013, JPFHS 2012, table 13.5.)

According to UNHCR 2019 Syrian Refugees Vulnerability Assessment Framework report, 78 per cent of the refugees living in urban setting are highly or severely vulnerable according to the VAF shelter indicator. Security of tenure and shelter conditions are the primary drivers for vulnerability (UNHCR 2019) (box 1).

Box 1. Syrian Refugees Shelter Vulnerability Assessment in Jordan (April 2019)

“95 per cent of both male and female-headed households live in finished buildings. Most male and female-headed households live above ground (84 and 87 per cent respectively) while a smaller proportion live at basement level (eight to nine per cent). However, males are almost twice as likely as females to live at the roof level: over seven per cent (7.1) of men do so compared to approximately four per cent (3.8) of women.

Six per cent of cases live in sub-standard buildings (any type of building, for example, school, factory, warehouse, garage, shop, that is not designed as accommodation, which require some upgrade and transformation to meet the minimum requirement for accommodation) or informal accommodation (any makeshift shelter built by refugees themselves with or without connection to water and sanitation facilities). 28 per cent of the population live in households identified as lacking protection from the elements or as having leaking openings.

There are important geographical variations in shelter conditions. Mafraq stands out as a region with a relatively high proportion of households residing in substandard buildings or informal settlements and has the highest overall sub-standard shelter scores. Whereas Zarqa and Amman have the highest proportion of households living in finished buildings with the least living in informal settlements. Regions with the lowest sub-standard shelter score (or the best relative shelter conditions) are Irbid and the South.

43 per cent of cases report not having a formal agreement with their landlord, which is an increase from 25 per cent in 2017.

The mean and median total rent per case is 74.06 JOD and 70 JOD respectively. The per capita mean is 34 JOD and the median is 20 JOD. The mean and median electricity expenditure per capita is ve and three JOD respectively.

UNHCR 2019, *Vulnerability Assessment Framework. Population Study 2019*. 116 p.

5.3 Land Fragmentation, Urbanization and the Conversion of Miri Land

Since the 1930's, land fragmentation has been ongoing in Jordan. The 1927 British land policy and taxation reform included the registration of former communal owned land (*mushaa*) into private property plots (*mulk*). The aim was to increase land productivity and expand the areas planted with fruit trees. Private ownership was believed to give better yields. However, starting from the 1950s plot size, through inheritance, began to shrink. From an average size of 40 donums (4 hectares) in the 1920s the average plot size had decreased to 10 donums in the 1950s and farmers had to rent their land (Fischbach 2000). The old system of *musha'a* keeping land in various forms of collective exploitation had worked over decades to prevent plot fragmentation as only shares of the production were divided.

Land fragmentation continues to be a major issue in Jordan. Small properties of less than 10 ha are forming now 41.6 percent of the cultivated land, while medium size properties were reduced by half (61.9 percent in 1953 to 32.4 percent in 2007)¹⁷. Large estates, went down from 451 to 212, but increased the surface farmed over the same period. To counter further land fragmentation, landowners prefer not to divide the farmed land and pastoral land at the death of a father or even a grandfather. The elder sons agree about the use of the land, and in most of the cases, the *musha 'a* collective system of exploitation is then reintroduced within the members of extended families¹⁸.

Until 2001, the minimum plot size for sale purposes outside municipal boundaries was set at 10 donums. It was then reduced to 4 donums in 2001¹⁹. Some landowners and deputies have put pressure on the DLS to have this brought down to 2 donums, which would be an easier plot to be sold for building on near the cities and villages. They have reached their objective in February 2019.

According to the last Zoning and Building Regulations law amendments, a 4 donums plot of land can be divided into 1,5 donums plots. Before 2019, only 5% of a 4 donums plot could be built for residence or agricultural uses (hangars), or 200 m². Now 15% of the 1500 m² can be built, or 225 m². The rationale is to allow all Jordanians to build their own house, with the current land price increase. However, this further accelerates the urban sprawl, and municipalities should be cautious to not provide services to the future informal settlements that will develop outside of municipal boundaries.

With the demographic growth and the increase in the value of land since the mid 1960's, members of the major Jordanian tribes have started to encroach on their former pastoral land (*wajihat*), in particular near the main cities of Amman, Russeifa and Zarqa. The progressive encroachment of tribes on public land became a political issue in the 1960's and 1970's. Members of the prominent tribes started to informally divide and sell plots of land (one JD per meter), using *hujja* contract. This allowed for the development of informal settlements in East Amman.

The DLS has tried several times – in 1974, in 1998 and in 2008 – to solve this problem by surveying these lands and registering the lands in the names of those occupying them, after they pay a nominal sum to the government. However, many of the beneficiaries have not paid, and the issue remained pending until 2008 when His Majesty King Abdullah the Second offered the squatters the land in the Zarqa region for a nominal fee of 1 JD). Additionally, a State Property Court was created in order to protect the treasure land from further encroachments. In December 2015, registered *miri* land accounted for a quarter of the plots, but only 10 percent of the land owned by Jordanians (constituting 119,337 ha (1,193 m donums) (table 5.1)).

¹⁷ DOS 2007 Agricultural Census, table 1.2.

¹⁸ Author interview at the Department of Land and Surveys, November 2015.

¹⁹ Regulation of the size of land divided between co-owners No. 70, 2001. *Nizam al masaha al mafrūza bayn al shuraka*.

Table 5. 1. Distribution of Property by Type *mulk*, *miri* by Number of Plots and Area in 2015

	NUMBER	%	AREA	%
	OF PLOTS		(DONUMS)	
MULK	2,356,206	76 %	10,411,622	90 %
MİRİ	727,797	24 %	1,193,377	10 %
TOTAL	3,084,003	100 %	11,604,999	100 %

(Source: Department of Land and Survey database, data collected 8th December 2015).

In February 2019, a major policy change occurred concerning the “*miri*” land. This is the first policy change of its kind since the adoption of the Ottoman Land code in 1858. All rights-of-use (*tasaruf*) have been converted into full property rights. However, it was stipulated that the transfer of state-owned properties (*miri*) located outside the municipal boundaries to private property (*mulk*) under the provisions of this article are not to be considered an extension of municipal boundaries.

5.4. Zoning regulation and building codes

Jordan suffers from zoning regulations and building codes that limit the number of units built and increase the housing unit cost. First, a third of land in residential zones cannot be built as it is set aside for public purposes: 25% for the roads (expropriated for free by law) and 8% for the services (public building, schools, mosques). In certain areas, such as the newly urbanized ones, extra land needs to be used for city infrastructure and services, and sometimes even for productive uses in order to create employment. On average, 29% of the land in residential areas is set aside for public purposes and cannot be used for housing.

Four stories above street level remains in force today limiting density and promoting sprawl. Standards for Land Coverage Ratio (LCR) reduce the area of developable land to a range between 39% and 55% of the site. Apartment must also include costly underground parkings. A very low height limit of 4 stories above street level is enforced. This height limit-which was already an improvement from the 3-story limit before 1991- remains in force today. The World Bank has pushed for the adoption of 5th and 6th floors and the development of mixed-use areas, as in other Arab cities (Damascus, Beirut). A fifth floor has been authorized by the new Building and Zoning Regulation 2019, but only for newly zoned areas.

Minimum plot size is set at 250 m² within all Jordanian cities (including GAM). This is to large and discourage the development of small housing. Several recommendations have been made by the 1987 Housing Strategy and the 2018 Housing Sector Assessment to allow for smaller plots of 175 and 200 m² as HUDC does (World Bank 2018a). For land used for housing, plot

size affects how much and what type of housing will be built; minimum lot size in different categories of zoning is quite high, affecting housing affordability. Jordan has four types of residential zones. The minimum lot size for each category is as follows: 1000 m² for Residential Zone A; 750m² for Residential Zone B; 500m² for Residential Zone C; and 300 m² for Residential Zone D in municipalities other than Amman, and 250 m² for Residential Zone D in Amman. Residential Zone A is for villas and luxurious housing, Residential Zone B lower-density, higher-end housing, and Residential Zones C and D higher-density, more-affordable housing.

Housing units built on smaller plots are much affordable than on bigger plots, as land is the most important cost factor. The generous minimum plot sizes in Jordan imply that the option of building smaller, cheaper is quite difficult. As an exception, HUDC has its own land use regulations, as variations on the type C, including that buildings can be semi-detached, with no setback on C type. HUDC has the possibility of building in Type E with a minimum lot size of 175 m² (World Bank 2018a).

Low land coverage ratio, wide setbacks and a height limit combined lead to low density development. For each plot designated for housing, only 39-55 percent of the area can be built. Furthermore, the building needs to abide by the requirements of wide setbacks—for example, for Residential Zone A houses, the front setback is 5 meters, side setback 5, and back setback 7.

Figure 5.2. is a visual illustration of these requirements. “The combination of low land coverage ratio, wide setbacks and height limit directly translates into low floor area ratio (FAR), a key indicator of density. The residential FAR in Jordan ranges from 2.4 in high density zoning to 1.56 in low density zoning. This is significantly lower than international standards. Table 3 has detailed calculation of how these building codes translate into developable land within each plot for different types of residential zones” (World Bank 2018a).

Fig. 5. 2. Building Regulation Codes



Source: World Bank 2018a. TAG-Consult, Housing Value Chain Report, Nov 2017

Table 5. 2. Building norms per zoning type in Greater Amman Municipality

	Plot surface (sq m)	Plot width (m)	Front setback (m)	Side setback (m)	Back setback (m)	# Floors	Building max height (m)	percent of plot that can be built (Law)	Buildable area within setbacks, m2	percent of plot that could be built within setbacks
Resid A	1000	25	5	5	7	4	15	39 percent	390 to 420	39 to 42 percent
Resid B	750	18	4	4	6	4	15	45 percent	316 to 336	42 to 45 percent
Resid C	500	15	4	3	4	4	15	51 percent	191 to 228	38 to 46 percent
Resid D	300	13	3	2,5	2,5	4	15	55 percent	135 to 140	45 to 47 percent
Resid Popular	150	10	2	0	2	4	11	-	90 to 110	60 to 73 percent
Resid rural	4000	40	12	10	10	2	8	10 percent	1560 to 2240	39 to 56 percent
Resid agric	10000		15	15	15	2	8	4 percent	-	-
Green A	2000	40	5	5	7	2	8	39 percent	1120 to 1140	56 to 57 percent
Green B	2000	40	4	4	6	2	8	45 percent	1260 to 1680	63 to 64 percent
Green C	1200	25	3	3	4	2	8	51 percent	756 to 779	63 to 65 percent
Green D	800	20	3	2,5	2,5	2	8	55 percent	508 to 690	63 to 86 percent

Source: World Bank, 2016, Accommodating the population increase in Jordanian cities

Each of the constraints discussed above limits the amount of land directly available for housing development and the number of units that can be built on a plot; those factors combined result in high land consumption and therefore high land costs per unit. Table 5.3 below shows step-by-step calculation of the land consumption per housing unit in different zoning type. We will use Type A as an example to show current planning regulations and building codes lead to low land use efficiency. Minimum plot size for Type A development is 1,000 m². This plot size

implies two things: (1) because 29% of land needs to be set aside for public use, to develop a plot of 1,000m² in residential area, the total land assumption is 1,290m², including the land reserved for public uses. (2) With a land coverage ratio of 0.39, only 390m² out of 1000m² could be built. Further, on the 390ms of land directly used for housing, only a four-floor building can be built, translating into 1,107.6 m² of floor area. Based on the minimum requirement of floor area for each housing unit, this floor area is at the maximum enough for 10.6 apartments. That means, 10.6 apartments together consume a total land of 1,290m², and each unit 121.7m². The cost of each apartment building has a built-in cost of 121.7m² land consumption. The lower density, the less units of housing can be built on a plot, the more land consumption each unit incurs, and in the end the high land costs for each unit. To reduce housing costs per unit, planning regulations and building codes need to be changed to encourage higher-density development (World Bank 2018a).

Table 5. 3. Land Consumption in Residential Areas

	Plot surface (m ²)	Floors (#)	percent of plot built	max land coverage (m ²)	Total floor area (m ²)	FAR	max # of apartments	Land area, adding m ² for public uses (29 percent of plot size)	Land consumption in residential areas, per apartment, m ²
Type A	1000	4	0,39	390	1560	1,56	10,6	1290,0	121,6
Type B	750	4	0,45	337,5	1350	1,8	9,2	967,5	105,4
Type C	500	4	0,51	255	1020	2,04	6,9	645,0	93,0
Type D	250	4	0,55	137,5	550	2,2	3,7	322,5	86,2
Type E*	175	3	0,6	105	315	1,8	2,1	225,8	105,4
Attached type	500	2	0,4	200	400	0,8	2,7	645,0	237,1
Pop. attached	150	3	0,6	90	270	1,8	1,8	193,5	105,4
Green ²⁰	2000	2	0,15	300	600	0,3	4,1	2580,0	632,4
Resid Rural	2000	2	0,15	300	600	0,3	4,1	2580,0	632,4
Resid High	4000	8	0,3	1200	9600	2,4	65,3	5160,0	79,0

Source: World Bank, 2016, *Accommodating the population increase in Jordanian cities. Kaganova, Ababsa.*

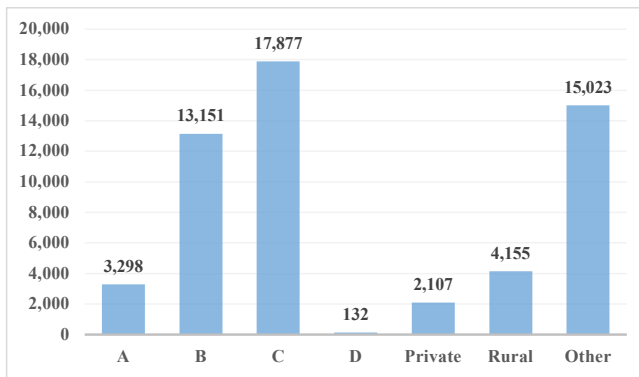
*"Type E" is a category only for HUDC. It has a smaller minimum lot size of 175 m², compared to other types

"On a related note, the requirements on parking in building codes further increase housing costs. The building codes require construction of one parking per each housing unit in Residential Zones A and B, and one parking per two units in Residential Zones C and D. Although the plot in each type comes with wide setbacks, parking is not allowed on land surface. The only way to construct parking is in underground floors. According to local developers, the construction of one parking spot can cost up to JD8,000 in the first basement floor, and JD16,000 in a second basement floor. Although this additional cost due to parking requirement is part of construction costs, not land costs, it is a direct result of land use regulations. Building that cannot add parking lots either for technical reasons or for being built on a small plot of land must pay JD3,000 for each unavailable parking space" (World Bank 2018a).

²⁰ The green category refers to the share of garden. It is due to the inclusion of former residential rural in urban limits

Inappropriate zoning types reduce the land available for affordable housing. Over the past decade, 55.7 km² of new urban area have been zoned, three quarters of which are located within Greater Amman Municipality. This in theory should increase supply of land for housing. However, a closer look reveals that most of the newly added land for housing is zoned for the higher-end of the housing market— Residential Zone A accounts for 5.9 percent of total new land, and Residential Zone B 23.6 percent. Land for middle to low-end of the housing market account for relatively small portion of the new urban land - Residential Zone C accounts for 32.1 percent while Residential Zone D, the one with smallest plot size and therefore the most affordable type, accounts for a negligible 0.2 percent.

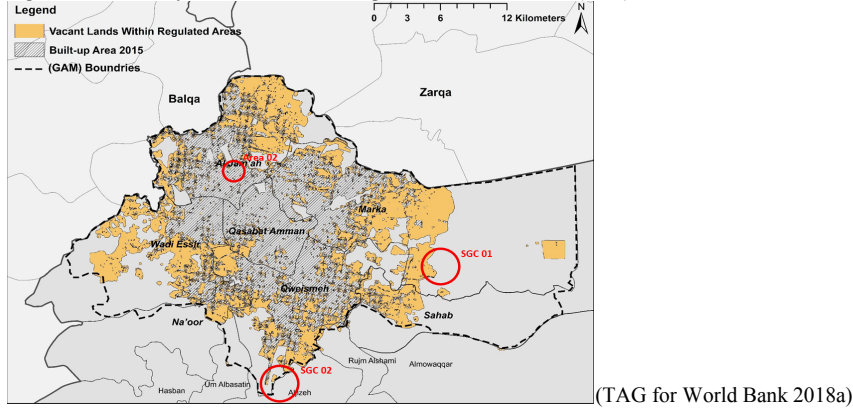
Fig. 5. 3. Newly Zoned Areas in Jordan, 2004-2015 (donums)



Source : HUDC Zoning statistics, 2004-2015.

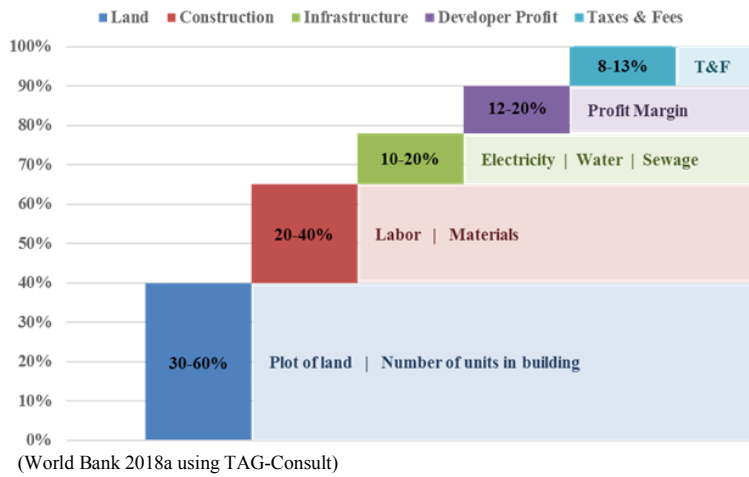
Most of the vacant land within Amman cannot be used for affordable housing. With low demand for higher-end housing, as presented in Figure 23, many plots designated as Residential Zones A and B are over-supplied on the market and thus sit idle. On the contrary, Residential Zone D has a very small supply, despite of the high demand, therefore creating a shortage of affordable housing. If Amman could downgrade Zones A and B to Zones C and D, the land markets for housing would be more efficient and balanced. In this way, vacant land within the municipality would be reduced and at the same time, housing affordability improved (World Bank 2018a).

Fig. 5. 4. Location of Vacant Lands with Regulated Areas in Amman (2015)



As Figure 5.5. shows, the plot of land accounts for 30-60 percent of the unit cost of housing (reportedly up to 60-70 percent in Amman, and 25-40 percent in the rest of the country²¹). Construction cost, or the costs of labor and building materials is the second most important cost factor, accounting for 20-40 percent of housing cost. On-site infrastructure, profit margin, and taxes and fees each account for around 10% of the total costs.

Fig. 5. 5. Cost structure of an average housing unit delivered by the private sector



National Prices Design fees in architecture projects have customarily been based on a per square meter rate of design. The Jordan Engineers Association (JEA) identified the minimum

²¹ Figures produced by TAG-Consult, in the report *Housing Supply Value Chain*, Submitted to the Ministry of Public Work & Housing in 2017.

acceptable rate at 2.75 JD / square meter. An example is that a building with 1,000 square meters planned would be billed at 7-10 JD per square meter depending on the complexity and selected firm and hence would cost between 7,000 and 10,000 JD.

Between 2015 and 2019, the Zoning and Building Regulations in Cities and Villages have been amended four times. These regulations have been the subject of high-level debates between the Developers Association, the MOMA and the HUDC. Members of the Developers Association wanted to allow the construction of a fifth floor, balconies, duplex and the possibility of using front setback to park cars (in order to not have to pay the excavations to built undergrounds carparks). All demands were rejected until 2019, when the construction of a fifth floor, balconies and duplex were allowed.

In 2016, the council of ministers endorsed amendments to the 2016 Building Codes and Cities and Villages Regulation By-law. The by-law treats all building classifications (A, B, C and D) equally in terms of registration fees and the number of parking spots. However, this was contested as the regulations in the 1950's created types C and D to cater for people with low and middle incomes. It was reformed in 2017 under the Jordan Engineers Association, the JHDA.

The building by-law of 2017 was widely contested and has driven housing companies to go on strike. It stipulated that apartments must be at least 110 sq meters in Zoning Categories B, C and D, and 130 sq meters in Zoning Category A. However, 32% of apartments sold in 2017 were smaller than 120sq meters. The Housing Strategy showed that families can only afford to buy apartments at 80-90 m². This law does not allow there to be two apartments per floor. As a consequence, the price of apartment will be even less affordable, as land price can not be compensated by the selling or renting out of a large number of apartments. The value of unsold apartments since 2015 now exceeds JD 1 billion. High prices and taxes in addition to over-complicated regulations have caused the JD 6 billion sector to deteriorate²².

Until 2017, encroachments on setbacks were still possible. However, as penalties have increased, it has become much too expensive to build irregularly as violation fees are so high. Members of the municipal councils who met in February 2019 have complained from the fact that penalties are too high. In 2015-2017, penalties were proportionated to the land value. Hence, they were very high in areas where land was expensive, as in Salt and Fuhays where urban land value can reach 500 JD per sq m)²³. The Municipal Affairs Minister has announced in May 2018 that any construction exceeding the violation limit of 10 percent should be demolished according to the provisions of the Cities and Village Regulation Law of 1966²⁴. Since the implementation of the new Building and Zoning regulation of February 2019, penalties are now between 25 to 150 JD the sq meters (table 5.4). These penalties are thus very

²² <http://www.jordantimes.com/news/local/housing-developers-turning-away-jordanian-market>

²³ Interview with Eng. Helwa Ghazzal, MOMA, March 2019.

²⁴ <http://www.jordantimes.com/news/local/buildings-exceeding-10-cent-violation-limit-will-be-demolished%E2%80%99>

expansive for the southern governorate where urban land is cheap at less than 50 JD per sq m. This new regulation will not encourage owner-builders to register their properties.

Table 5. 4. Penalties per sq meter for illegal construction (insufficient setbacks).

Type of Building by Activity	Residential building (by m ²)	Commercial and offices areas (by m ²)	Light Industry	Heavy Industry and large manufacture	Buildings for agricultural activities	Multi use building and green energy buildings
Penalty per m ²	From 25 to 150 JD	From 40 to 200 JD	From 25 to 150 JD	From 40 to 200 JD	From 4 to 20 JD	From 40 to 200 JD

(Source: Regulation 13, 2019, Amendment to the Zoning and Building Regulations in Cities and Villages)

Since 2015, the government of Jordan has been discussing issues related to the aforementioned building regulations. In its Urban Growth Scenarios, the World Bank suggested densifying the cities by allowing additional floors to be built on pre-existing buildings. However, during the preparation of the Housing Sector Assessment, the GoJ adopted a highly contested by-law which set the minimum apartment size at 110 sq meters. This by-law contradicted current market analysis and the will of the Developers Association, comprising of 3400 housing companies. Adopted in 2017, it was supposed to be applied from May 1st 2018. However, a large strike led by the Developers Association led to the reformulation of the law. The strikers have insisted to have the right to build balconies. They also wanted to use the large front setbacks to park cars, however this has been refused by the HUDC and the government. As a follow-up to the Housing Sector Assessment prepared along with the World Bank in 2017-2018, the HUDC has recently presented suggestions to the government to edit the zoning and building regulations in order to reach higher densities.

After several discussions in the Parliament, the new Building and Zoning law was adopted in February 2019 and subsequently published in the Official Journal. The new regulations allow for a fifth floor, but only in newly zoned areas. This will essentially not allow for much needed vertical expansion and densification. This fifth floor was requested by the Developers Association for better affordability of the units, as the cost of land would be divided by 10 and not 8 apartments. The members of the government, and the HUDC experts have estimated too hasty that the current road, sewage and water infrastructure could not accommodate for additional densification. However, according to the World Bank 'Urban Growth Scenarios' for Jordan's five largest cities, upgrading current infrastructure, allowing more mixed-use development and infill development (with additional floors and green building) could allow for increased densification without further expanding the cities (World Bank 2018a). The design of compact cities can effectively decrease GHG emissions related to transportation, solid waste collection and public lighting.

The new regulations allow the building of duplex by adding rooms onto the last floor (terrace) on the condition that it does not account for more than 20% of the apartment's total size. The regulations also allow balconies to be built in Zone A, on the condition that they do not account for more than 50% of the façade, and is within 1 m of the setback and 1 m of the apartment (to

reach 2 m). This amendment was requested by the Developers Association. On the roof, the room for stairs must now be 25 m² (and not 20 m²).

MOMA did not manage to push out its own suggestions. For example, the number of floorspace allowed is currently estimated by MOMA by calculating the medium measure between the entrance on the highest street and the lowest street. GAM take the highest street level, allow additional floors to be built in the slope under street level. MOMA suggests following GAM methodology in order to enhance opportunities for densification in accordance with the current amendments.

Green Building Code and Incentives

The Jordan Green Buildings Council (JGBC) was established in 2009 to promote and advocate for green building and developed and issued the Jordan Green Building Manual in 2013. This guide sets the technological and technical criteria necessary to meet the requirements of sustainability of buildings and evaluate the same to reduce the amount of water and energy used in constructing these buildings. This also aims to reduce the consumption of materials during and after construction, promote recycling, and mitigate the environmental impact of buildings on the surrounding environment.

GAM has created its own Green Building Unit which manages the program in close coordination with relevant entities including the Construction and Sustainable Building Center (CSBC), the Civil Defense Department, Jordan Engineers Association and others during the process of reviewing drawings, issuance of building permit and issuance of certificate of compliance. It has published incentives online.

The incentive provides a 'Density Bonus' in the form of additional percentage to the original floor area ratio (FAR). This is expected to compensate the owner for the expected extra capital cost incurred from implementation of green building. The main concept of the bonus is to allow larger Land Coverage Ratio within identical setbacks. 25% additional in Residential A, 20% additional in Residential B, 15% additional in Residential C and 10% additional in Residential D. As an incentive, green building applications are free of charge, at the condition that owners or developers have paid their property taxes (*musaqafat*).

Green building has been slow to build market share in Amman. It is considered as too expensive by owner-builders and developers. So far only seven buildings have received the LEED certification in Jordan. Building policies are set at the national level. GAM plans to extend to owner-builders with more incentives and a better marketing campaign to build awareness²⁵. Training should be given to the developers and the small construction companies to apply green building practices, as they are still reluctant to do so due to the additional immediate costs.

²⁵ <http://jordangbc.org/blog/project/your-green-building-guide-in-jordan-booklet/>

6. URBAN PLANNING: IMPLEMENTATION TOOLS AND ENFORCEABILITY

Overview

Jordan currently lacks the comprehensive physical planning at national and regional levels that it used to have in the 1960's, 1970's and 1980's. Country planning is insufficiently coordinated with metropolitan and cities planning. Country economic planning is prepared by MOPIC and is focused on building a suitable economic environment for investment, including good transportation networks and special economic zones. Municipal planning is done by MOMA and some large municipalities, focusing on improving living conditions and access to services. Those two levels are generally not interconnected, with the exception of Greater Amman Municipalities and ASEZA who cooperate on specific development projects (such as the BRT, or Aqaba Terminal). This lack of the interdependency between regional and local planning has resulted in untamed urban sprawl, in addition to an increase in GHG emissions and in energy consumption.

Municipalities are not empowered with the ability to prepare their own Master Plans. They only update their land use plans. They lack staff, equipment and training. The head of the planning department is under the pressure from elected local councils. These councils often only think of providing services to their own areas, without taking wider comprehensive planning into consideration. The head of urban planning is not empowered to make decisions. The Executive director can make suggestions to extend zoned areas in order to please some of its city dwellers. However, on the ground, informal urban sprawl is still occurring. Municipalities lack resources to tackle this issue, for example in Zarqa municipality where the urban control department (*rakaba*) has no car to visit the sites²⁶.

A balance must be found between the planning needs of the municipalities and the guiding role of the MOLA which prefers to prepare all plans itself with minimal coordination with local planning departments. MOLA and municipal urban planning staff need to be trained on basic urban planning principles, such as densification, transit-oriented development, and the preservation of public land. But most of all, they need to be empowered in the preparation of their own Master plans with precise guidelines from the Ministry of Local Administration.

6.1. Fragmented Physical Planning Agencies

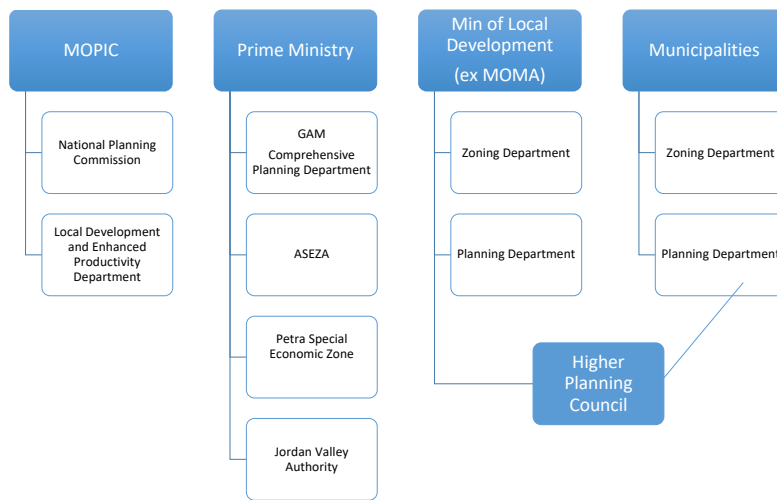
Physical Planning in Jordan defines three levels of planning authorities. At the top is the Higher Planning Council, established following the Municipality Law of 1955. The Law of Planning of Cities, Villages, and Buildings, No. 79 for the year 1966, and its various amendments defined three levels of planning authorities: local, district and regional. The local planning is undertaken by local planning committee at the municipal level. The district planning depends

²⁶ Interview in Zarqa, 28-1-2019.

from the district committee at municipal level. Regional planning is under the Central City and Village planning department (CCVPD) within the Ministry of Municipal Affairs.

Physical planning in Jordan is the domain of several major institutions: for country level and regional development projects, the Ministry of Planning and International Cooperation; and for the city and metropolitan levels, the Greater Amman Municipality, ASEZA for Aqaba, the Petra Special Economic Zone and the Jordan Valley Authority.

Fig. 6. 1. Institutions in charge of physical planning in Jordan (2019)



(Ababsa 2019, JNUP)

National economic planning is under the responsibility of the Ministry of Planning and International Cooperation (former National Planning Council NPC), under Planning law N°68 for the year 1971. According to this Planning law, MOPIC's duty is the "Preparation of national long-term plans for the development and evolution of the Jordanian society, economically, socially, demographically and culturally"²⁷. But in practice, this national planning does not include physical planning. Until the mid 2000, the Ministry of Planning and International Cooperation used to have its own Directorate of Regional Planning, which undertook physical planning among its duties. It has become the Local Development and Enhanced Productivity Department, including a "Governorate Development Section". In March 2018, this department has prepared a Planning Manual adapted to the case of Mafraq governorate. It implements the general planning vision of the government.

The local planning council are in charge of preparing local and master plans within municipal

²⁷ Planning Law N°68 for the Year 1971, article 4-a. In F. Malkawi, N. Abu Dayyeh, 2004, The Condition of Physical Planning in Jordan, 1970-1990, Institut français du Proche-Orient. Document de l'Ifpo. Etudes contemporaines N°14. 66 p.

boundaries. The district planning council also assumes the responsibilities of the local committees outside municipal boundaries. Regional plans and comprehensive plans are prepared by the CCVPD. They are subject to the approval of the Higher Planning Council which approves all master plans and zoning modifications.

Table 6. 1. Definitions of Physical Planning Levels (Law 2011)

The Law	The Cities and Buildings Planning Law in effect
The Council	The National Development Planning Board formed in accordance with the provisions of the Law
The Department	The Planning and Organization Department at the Ministry
National Development Planning Plan	Studies and plans that include the direction of development planning policies for all lands in the Kingdom in accordance with the provisions of this Law and the Regulations issued thereof.
Regional Plan	Studies and plans that include the criteria and standards necessary to identify development planning policies for one or more governorates.
Municipal Plan	Studies and plans that include the principles of sustainable development growth within municipal boundaries, and the integration of economic and social developmental plans, as well as providing public services and infrastructure needs, and identifying land uses in detail.
Detailed plan	A plan that includes the detailed projects listed in the municipal plan for a specific part of municipal areas, including historic sites and areas for urban expansion, and other areas of specific characters.

(Source: Law 2011 Development/Urban Planning Regulation, article 2)

In the 1960's, the Ministry of Interior for Municipal and Rural Affairs used to coordinate its regional plans (as proposed by the Jordan's Development Board) with its local ones. Physical planning was developed in Jordan in the late 1960's, at a time when the country administered both banks of the River Jordan. The Czech urbanist Victor Lorenz was the first to prepare regional plans. He helped the Government of Jordan to conceive economic planning, along with technical planning (regional and master plans) and coordinated technical development at city level. He was responsible for promoting regional planning in the 1960's. Progressively, in the 1980's planning moved to the metropolitan areas with the creation of the Greater Amman Master Plan in 1987. In the 2000's, special economic zones were created to combine economic planning and regional planning, and foster job creation in livable and interconnected cities. However, while the efforts have been focused on Amman, Aqaba, Petra and the Jordan Valley, the other Jordanian cities have seen an increase in untamed urban sprawl growing due to the weakness of proper urban planning and local political pressure on planners.

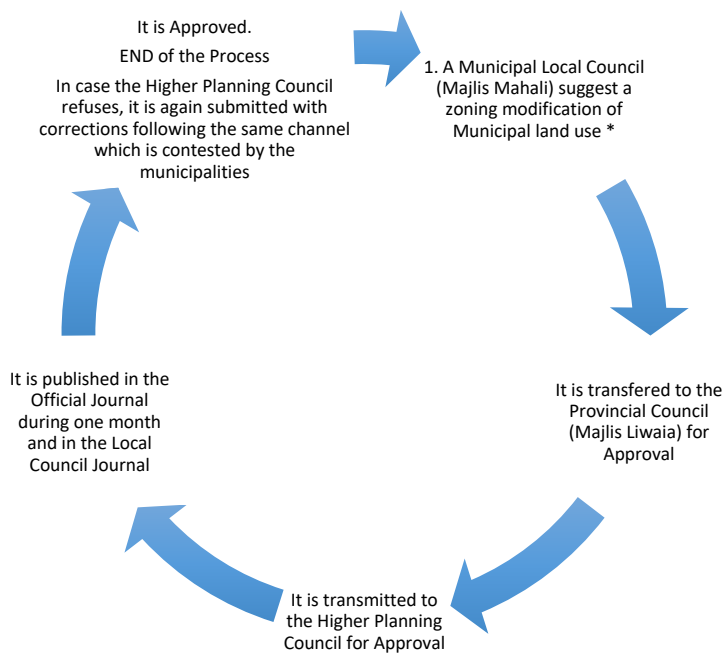
6.2. The Higher Planning Council

The Higher Planning Council is chaired by the Minister of the Interior, and later the Minister of Local Administration, and comprising the Mayor of Amman, the Secretary General of the Ministry of Health, the Secretary General of the Ministry of Public Works and Housing, the Secretary General of the Ministry of Planning, the General Manager of the Housing and Urban Development Corporation, the Director of MoLA Planning Department, and the President of

the Engineering Association. The MoE and the MoWI have observers in the council but are unable to vote. The Department of Land and Survey is not properly represented within the Higher Planning Council, and cannot vote. The Jordan Investment Company is not informed of the Higher Planning Council's decisions. For accountability reasons, all decisions taken by the Higher Planning council are published on the Ministry of Local Administration website²⁸.

Fig. 6. 2. Municipal Urban Planning Flow Chart for Major Municipalities

(Law of Planning of Cities, Villages, and Buildings, No. 79 for the year 1966)



* MOMA prepares the Municipal Land Use Maps for nearly all municipalities (UN Habitat, Jordan National Urban Policy, Diagnosis, March 2019)

If the Provincial council refuses the Local council's decision, the case is presented to the Higher Planning Council for approval. The case can be again refused again by the Higher Planning Council. It is very long process, and sometimes the Higher Planning council does not send a representative to check or inspect the site. Very few engineers are aware of the details of zoning and building regulations for lack of information about the zoning regulation modifications within the Ministry of Local Administration²⁹.

²⁸ <http://www.mma.gov.jo/ViewDecisions.aspx>

²⁹ MOMA Head of Planning, 13-3-2019.

In Jordan, the Higher Planning Council works as a Zoning council, in the absence of integrated urban planning tools. It does not work at several scales. Most of urban planners met at Irbid, Zarqa, Mafraq, Madaba, Jerash and Tafila complain from the lack of reactivity of the Higher Planning Council who would reject zoning modifications without sending any planner to check the reality. They are calling for a real complaint mechanism to overarch the Higher Planning Council.

According to HUDC, the best possible outcome of the JNUP would be the reform of the Higher Planning Council, and the reform of the planning procedures at Municipal level. This necessitates major reforms in order to limit further urban sprawl.

6.3. Land use plans versus Master Plans

Until 2006, land use plans had a very generic design which did not allow them to tackle urban problems on such a scale. Most of them were made with a 1/50000 scale. When the need for a more detailed approach to planning was identified, the master plans were revealed to be far from adequate in meeting the local specific urban development requirements³⁰. While the Jordanian legislation seems to be mostly adequate for the needs of modern development as far as buildings, infrastructure, the environment, etc. are concerned, the urban development remains tied to obsolete town planning instruments (the land use plans) that are too generic and fail to address the real requirements of a modern Jordan that, whilst taking the past into consideration, is also looking for a development that corresponds with its expectations (WB, MoTA, 2005).

In 2006, the Regional and Local Development Plan (RLDP) supported by the World Bank and the AFD included the preparation of regional and local planning. The RLDP included a section on Urban Planning and Regulatory Framework. Its objective was to strengthen MOMA's capacity to fulfill its mandate to oversee and support municipalities in their implementation of local-level responsibilities with specific regard to Urban Planning.

Between 2006-2008, land uses maps for all districts of the Kingdom were prepared. It came along with the preparation of the Greater Amman Master Plan (2006-2008). The project was completed in two phases, the first phase focused on the preparation of a general master development plan for land use in Jordan. They were prepared for all governorates, classifying land within and outside municipal boundaries according to their uses: agricultural, industrial and residential (UNDP, 2014). The maps were completed in a short time, which resulted in some incoherencies in land classification (agricultural A, B or C) at governorate borders, due to lack of verification at the national level. Nevertheless, they are used for issuing building permits.

The second phase (2008-2012), involved the preparation of detailed master development plans for the municipalities of Greater Irbid, Shafa Balqa (Greater Salt areas, Mahes, Fhais, the new Ain Al-Basha, and the new Ardha), Naour, Suweimeh, in addition to parts of the municipalities

³⁰ WB, Ministry of Tourism and Antiquities, 2005, Third Tourism Development Project. Secondary cities Revitalization Study. Annex A. Legal framework, suggested best practices.

of Russeifa and Berrin, and part of Madaba. No master plans were created for the south of Jordan. The preparation of master development plans for certain areas of competitive advantage, such as Azraq, Jabal Ajloun, the Jordan Valley and Ruweished, have also been completed (UNDP, MoE, 2014).

In 2019, MoLA started updating the 2006-2008 land use plans, based on new standards and principles that take climate change mitigation measures into account. Despite the process of decentralization, the preparation of these plans still demonstrates the lack of municipal and public participation. MOMA was given the task of preparing “Special Land-use plans” (tahtit khas). However, MOMA did not prepare master plans, as they lack sufficient staff and means to do so³¹.

The Greater Amman Municipality is particularly autonomous in terms of urban planning. After the presentation of its Master Plan in 2008, it established its own Planning Institute in 2008, which was able to manage the city with very limited interference from the central government. The Amman Planning Institute also helped in the preparation of the Irbid Master Plan in 2010-2011. Smaller municipalities with less organic capacity need more support from MoMA and other national partners such as HUDC.

It is necessary to have a comprehensive urban schematic system at the national level that is, on one hand, able to assume the responsibilities of the present conditions and variables on the one hand, and on the other hand is responsible for the formulation and implementation of an urban strategic vision for the future. Based on these principles, the work on the Amman Master Plan with its various stages had to overcome the traditional thinking with regards comprehensive planning and shift towards spatial strategic planning and build planning cadres as needed. Planning for the city and its future cannot be done through a rigid scheme for the future of the city, but rather through a strategic vision for growth and management, implemented through the modification and development of the plan's components.

With the arrival of hundreds of thousands of Syrian refugees, increased effort has been invested in the support of the northern governorates. The adoption of the Decentralization Law in 2015 emphasized the governorate level, to the detriment of the regional level.

Greater Amman Municipality Urban Planning

Amman's first Development Plan was produced in 1955, along with the adoption of the Municipal Law. After the arrival of Palestinian refugees in 1967, and the expansion of informal areas in the center and to the east of Amman, a “Civic Center Development Plan” was prepared in 1968. The Metropolitan dimension was also taken into consideration in the 1970's. The Amman Urban Region Planning Group (was founded in 1976 with the assistance from USAID, and was tasked with developing an overall development plan for Amman and its surrounding areas. It gave urban guidelines to the urban growth and transportation plan of

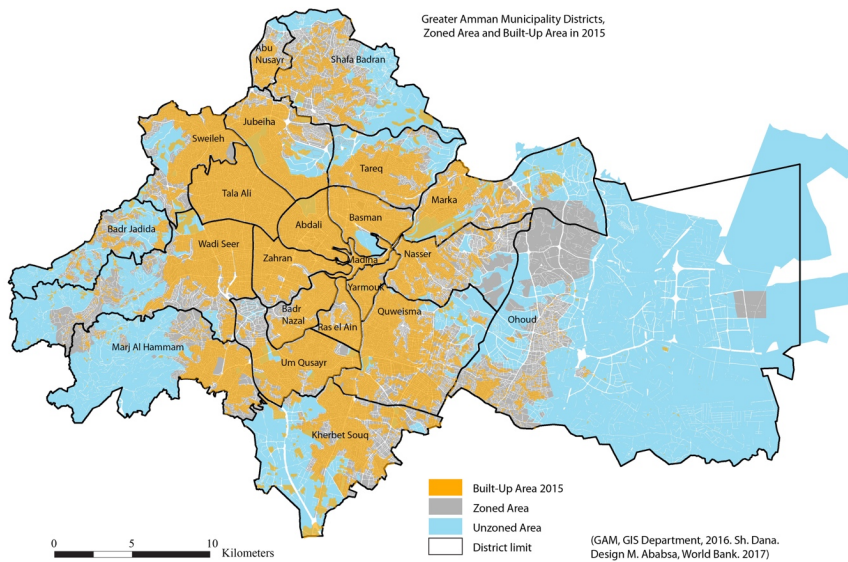
³¹ Interview MOMA, R. Hababbeh, March 2019.

dozens of municipalities. However, each municipality developed its own land use plan, in a race to release land for development. Jordan has no fiscal mechanism to limit speculation on land, nor taxation of vacant land, nor land value capture mechanisms. By the mid 1980's, three times the land sufficient for the development of Amman's metropolitan area had been released for development.

An Urban Planning Department was created in 1980 to direct growth, through development centers and corridors to limit urban sprawl. The provision of infrastructure and public services was phased out in coordination with new development. Capital improvement projects have been prioritized. An integrated transit and transportation strategy set. The UDD aimed to solve the informal settlement issue. The UDD's mandate was to develop infrastructure services and community facilities in informal areas, and to provide low-income housing. It adopted the new World Bank concepts of upgrading by involving the population.

Greater Amman Municipality has been created in 1987 as an outcome of the 1985 Greater Amman Comprehensive Development Plan. Fourteen municipalities, fourteen village councils, and several rural areas previously under the jurisdiction of the Ministry of Municipal and Rural Affairs were amalgamated. The objective of this creation was to rationalize urban planning decision-making, while preserving local representation in the form of districts. The GACDP presented in 1987 to the Parliament had been prepared with technical support of Dar Al Handasa, a Lebanese urban planning company. It has directed the growth of the city until 2005. It proved to be useful to include the wave of 330,000 Jordanian who were expelled from the Gulf countries in March 1991.

Fig. 6. 3. Greater Amman Municipality Built-Up area 2015 compared to its zoned and unzoned areas, by Districts.



(World Bank 2018a, Housing Sector Assessment Report)

The Amman Master Plan (AMP) provides a vision for the growth of the city until 2025, with a clear overarching focus on climate-resilient development, the creation of green jobs, and a strive for resource efficiency in all aspects of municipal planning and investments. The AMP is reflective of a city and a country with limited indigenous energy and water resources and one that is heavily dependent on imports of energy to meet growing demand, expected to double by 2020.

6.4. Legal text to protect the urban heritage

While Jordan is engaged since the 1980's to protect its archaeological heritage (buildings and artefacts dating before 1750 AD) with the adoption of the Law of Antiquities n°21 year 1998, the urban heritage protection law dates back only to 2005. The Ministry of Tourism and Antiquities is empowered to implement Law n°5 for the year 2005 for the Protection of Urban and Architectural Heritage (this law supersedes law n°49 for the year 2003). By law, it is forbidden to destroy any heritage building. But the fine is of only of few thousands dinars and three months of jail, and this does not stop private owner-builders and developers to transform former ottoman and mandate period buildings into taller buildings. Most of Jordan urban heritage is under threat as land has become so valuable, and families are struggling to find proper housing, work opportunities and pay for the schooling, and later marriage, of their children.

Several different ministries are involved in heritage protection and valorisation: the

Department of Antiquities (DOA) the Ministry of Tourism and Antiquities, the Ministry of Local Administration (including its Higher Planning Council) and the Jordan Tourism Board are members of the National Committee for the Protection of Urban and Architectural Heritage. They set protection standards and monitoring, secure funds for heritage protection, and create awareness of heritage significances. But there is no institutionalized relationship between the DoA, MoTA, and the planning authorities (MOLA, municipalities and special authorities) to ensure that development does not encroach upon and detract from the value of archaeological sites. A control of the buffer zones around the archaeological sites should be soundly integrated into conservation plans and general urban planning. The development of public private partnerships could help to leverage under-performing publicly-owned tourism assets.

Planners are faced with the following challenges:

- lack of urban policy at national level (no strategic decision making),
- individual decision making following trial and errors rather than hard evidence,
- limited number of qualified staff in urban planning, and lack of interest of authorities in training them
- weak capacity-building, exchange of experience, knowledge and expertise in the field of urban planning
- lack of interest in tying GIS with planning, and difficulties to access population indicators
- Lack of R&D projects on urban planning and sustainable land-use
- Lack of information and data on urban development and the environment which results in inaccurate programmes and plans

The key urban planning challenges facing planners in the Kingdom may be summarized as follows:

- Failure to prioritize urban planning at the national level as appropriate in terms of development, training, and patronage.
- Individualized decisions, which rely on trial and error and not on a sound utilization of the information to reach the correct results.
- Absence or lack of institutionalization and national strategic plans in many official institutions in its real sense.
- Lack of systematic decision-making, and poor experience in supporting the planning decision.
- Absence of specialized managements or poor performance thereof. Such managements are particularly important as they are responsible and capable of analyzing and monitoring key trends related to urbanization and the environment.
- Lack of specialized cadres in urban planning or shortage thereof, and the lack of interest of the authorities in training and building the capacity of urban planning cadres.
- Poor employment of demographic indicators in the development planning process, and the lack of accurate and aggregate data on migration.
- Lack of interest in the use of geographic information systems, development and linkage of the same to planning.

- The difficulty of systematic and continuous access to information for all and at all levels, and poor capacity building and exchange of experiences, knowledge and expertise in the field of urban planning.
- Lack of or paucity of qualitative research projects related to urban planning and sustainable land use.
- The lack of information and data related to environmental and urban development, which often makes the process of evaluating the programs and plans inaccurate in many cases.

It is vital to immediately start working with the different sectors and stakeholders in the Kingdom to reach sustainable urban planning by directing plans and policies toward adopting the following strategic objectives:

- Restoring the biodiversity and natural diversity towards the planning for green urban environments.
- Reduce energy consumed in transportation within a single urban area.
- Reduce the use of non-renewable energy and resources and replace it with renewable energy sources.

- Flexible planning and design that suits the needs and the changing population growth rates.
- Encourage the multi-use of lands.
- Create healthy, comfortable, and environmentally friendly areas (more green areas and open spaces).

A number of future cases are suggested that can be integrated within the new urban agenda, which must be immediately implemented by the official planning bodies if we are to catch up with urban planning. These include naming a few:

- 1) The institutionalization of the planning process at the local, regional, and national levels. This is what the existing institutions that influence the decision-making process must start on immediately to form a robust foundation for supporting and sustaining the process of planning. This should be done through:
 - Commence and carry on the preparation and updating the GIS and statistical databases and the urban planning information.
 - Study of the status of the Higher Planning council as a mean of constructive self- criticism.
 - Develop and implement a phased and a comprehensive plan for the planning body, as well as preparing and training of promising cadres to work in the field of urban planning.
 - Develop awareness programs on sustainable urban planning and its role in meeting the challenges.
 - It is also necessary to develop guidelines pertaining to planning and urban design standards.
- 2) Establishing the main concepts of urban planning with the decision-makers, and work to integrate the concept of sustainable development and sustainable communities at the heart of the comprehensive urban planning process.
- 3) Promote the need for urban policies and strategies by decentralization, and strengthening the local authorities, as well as enhancing the participation in decision-making.
- 4) Develop and review of institutional structures, legislation and regulations governing the process of sustainable urban planning, and work towards building a general framework for the concepts, system, laws and regulations of planning, along with approval and ratification thereof.
- 5) Establish centers at the local level to work on the basis of the comprehensive planning systems concept as a contemporary and necessary instrument for the development of urban planning at the national level.

(HUDC, UN Habitat, 2014, *Jordan National Report Habitat 3*, 83 p)

6.2. Public participation in urban planning and local initiatives

As early as the 1980s, residents of informal areas of the city were actively involved in the rehabilitation process of their neighbourhoods. The participatory approach was the social counterpart of the ultra-liberal, socially restrictive policies, which at the time were imposed on Third World states by international financial institutions. Emphasis was placed on the idea of a consensual partnership between states and residents – focused on the exploitation of the so far untapped “capital” of the population: human, physical, financial and, above all, social capital.

During the preparation of Amman Master Plan in 2006-2008, forums for debate concerning the preparation of the planning and development programme were held around major themes: social housing, public transport and heritage. The Mayor met with the concerned ministers, the key architects and building contractors, experts in all fields (academics, engineers, consultants and researchers) and representatives of civil society (journalists, activists and students).

Citizenship is more than the right to participate in political life; it includes the right to participate in public, economic and cultural spheres, all of which are performative elements of one’s belonging to a society (Holston, Appadurai 1996).

Neighbourhood committees have thus been formed mid 2000, to unite residents around projects which economically revitalize the old structures of Jabal Amman and Jabal al-Lweibdeh. An example is the Jabal Amman Residents’ Association (JARA), which, in 2005, launched the Souk JARA. The market is open every Friday from spring to autumn, with small stalls selling local handicrafts (sometimes made by the residents themselves: embroidery, mosaics, paintings, flower arrangements etc.). Another example is the Jabal Lweibdeh Association which set up a market on Fridays devoted to antiques and organize talks about heritage preservation issues.

The Jordanian civil society is engaged in local initiatives at neighborhood level. Apart from charity, they range from providing grants to the youth (Ruwwad in Jabal Nadheef, Ta3leeleh NGO, Zikra NGO), cultural activities (Jadal initiative, Gardens of Freedom Initiative, Urban reflection in Jabal Qalaa, Art for all project) for public cleaning campaigns: Ahel Al Balad (UNFPA 2016).

*

The challenge for Jordan now, is to integrate principles of sustainable development into urban management, including adopting comprehensive planning approaches, improving services and resource management. Halting the sprawl of urban areas over agricultural lands is critical to

the sustainability of urban development in Jordan as limited agricultural land (7.8% of the area of the country) is important to food security and local rural economies.

7. HOUSING POLICIES AND REGULATIONS

Overview

Jordan is suffering from a major housing crisis that is revealing planning and economic dysfunctions. In the absence of land value capture mechanisms, such as taxation on vacant land and incentives to developers to build smaller affordable apartments, most apartment are not affordable. As a result, 432,000 housing units or 18.4% of the housing stock is vacant. This reaches 23% in Greater Amman Municipality. The figure was similar in 2004, with 220,000 vacant housing units on one million. But the challenge is much bigger now with all the unhoused and under housed poor Jordanians and refugees.

The Syrian crisis has occurred after a decade of neoliberal policies. In term of physical planning, those policies are characterized by an absence of land value capture mechanisms, the inadequacy of social housing policies, and the inequalities in access to services. Jordan is suffering from a housing crisis affecting one third of the population. As the 2015 census has revealed, 10% of the population is living in overcrowded conditions. Most of refugees are sharing apartments.

Public social housing concerns less than 1% of the total housing produced between 2004 and 2015. The Ministry of Social Development and the Royal Cabinet provided a thousand units a year for the most vulnerable. Jordan was supported by the World Bank to prepare its first Housing Strategy in 1989, opening the sector to private developers, zoning modifications, and innovative finance schemes such as a deposit insurance fund, mortgage default insurance, mortgage-backed bonds and secondary mortgage markets.

The Housing and Urban Development Corporation was created in 1992 to provide suitable housing with related services to low and moderate-income families, and to facilitate the formal private sector in developing affordable housing. Its main policies have been site and services, the construction of Abu Nusayr new city in 1980's and the 2008 Decent Housing for a Decent Living project, that was rather unsuccessful with 8,500 units produced instead of 100,000.

7.1.Housing Tenure: The need to increase the rental stock

As a result of the recent increases in rental rates, housing tenure in Jordan is now relatively well distributed compared to other countries at a regional level and across regions, laying at the average for both ownership and rental tenure rates. In 2015, housing ownership was close to 62 percent while rental housing reached 30 percent, which is similar to that of Latin America and Europe. Although there is no single variable that explains the differences in rates of ownership between countries, home ownership shows a weak tendency to decline as income rises. Across governorates, housing tenure display high variance between the most and least populated Governorates (See Figure 7.1). The Governorate of Aqaba in the south, is the one with the lowest ownership rate (47 percent) and highest rental rate (46 percent) due to touristic activities, while Jerash has close to 77 percent of ownership and only 18 percent of rental. In addition to Aqaba, Amman and Zarqa are the only ones who display rental rates above 30

percent. Close to 49 percent of the rentals are concentrated in Amman, followed by Irbid and Zarqa with 16 percent and 15 percent respectively. Housing tenure is also correlated with level of income. As shown in Figure 7.3, over 30 percent of households in the poorest deciles are renters, whereas close to 80 percent of household in the richest deciles own their dwelling.

A third of Jordan housing stock is rented: 540,000 units out of 2,270, 967. The number of rented apartments has doubled since 2004, when it used to be of 223,000 units (24%). Half of the rented apartments are located in Amman governorate (260,000). Irbid counts 84,000 rented units, Zarqa 81,000 followed by Mafraq with 21,500 of them. The highest growth rate has occurred in Mafraq, from 4600 units rented in 2004 to 21,500 in 2015. Irbid has offered on the market an additional 57,000 units in eleven years.

Fig. 7. 1. Rented Units by sub-districts, 2015

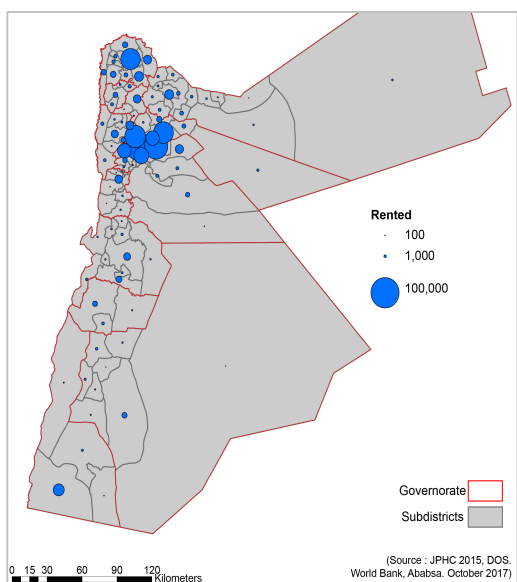


Fig. 7. 2. Amman Rented Units by Neighborhood 2015

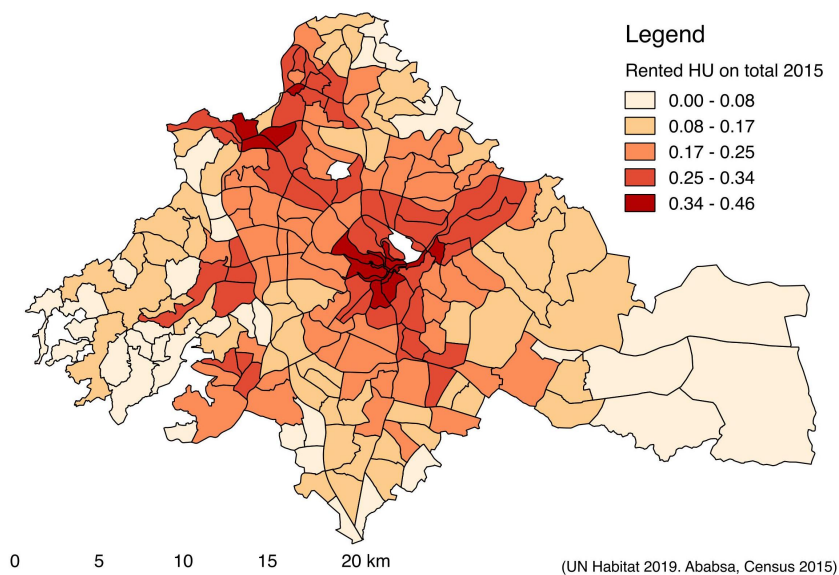


Table 7. 1. Distribution of Occupied Housing Units by Private or Collective Households by Type of Tenure, Type of Housing Unit, Urban/Rural and Governorate

	Unspecif.	Others	Free	In Return for Work	Owned by a Relative	Rented Furnished	Rented Unfurnished	Owned by the Household or HH Member	Total
Amman	16099	1677	6464	21787	16414	22644	242147	432794	760026
Balqa	10	516	1427	3482	2406	488	21061	66325	95715
Zarqa	41	835	7073	2201	7346	1920	79080	155286	253782
Madaba	16	59	316	525	774	383	8634	26616	37323
Irbid	55	1044	3554	1974	11400	4288	80060	219163	321538
Mafraq	6	1611	5737	1466	1697	515	21007	71771	103810
Jerash	4	107	361	580	1160	192	7769	34303	44476
Ajlun	1	33	356	272	1416	185	6453	25835	34551
Kerak	22	418	346	950	1226	368	14912	41719	59961
Tafila	1	75	218	600	584	122	4584	12945	19129
Maan	113	33	82	138	470	218	6230	19954	27238
Aqaba	11	347	301	1409	493	1030	15465	16687	35743
Jordan	16379	6755	26235	35384	45386	32353	507402	1123398	1793292

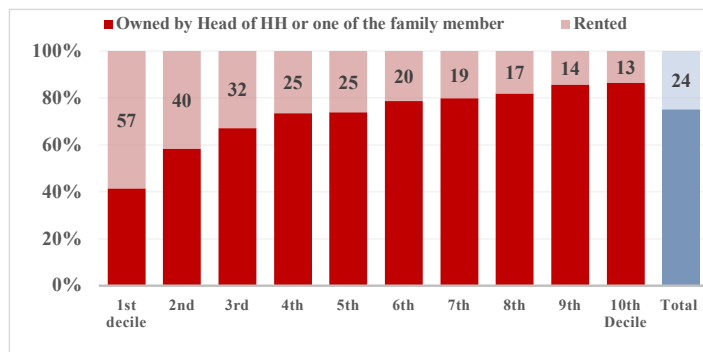
(Source : JPHC 2015 Table 2.2)

Table 7. 2. Distribution of Housing Units by Type of Occupancy and Governorate, 2015

	under construction	closed	vacant	hotel	collective housing unit	occupied by collective household	occupied by a private household or more	Total
Amman	34390	19923	245768	2251	3401	4836	755190	1072559
Balqa	4189	635	20261	12	357	806	94909	121953
Zarqa	9034	1333	47063	12	207	1233	252549	312170
Madaba	1665	246	6835	21	124	196	37127	46273
Irbid	15954	2190	58821	14	567	1786	319752	400103
Mafrq	3657	503	10609	6	148	751	103059	118974
Jerash	2506	55	7034	1	62	248	44228	54413
Ajlun	1622	30	5348	4	13	108	34443	41638
Kerak	1939	595	8827	6	71	308	59653	71595
Tafila	968	57	4321	5	80	72	19057	24637
Maan	1731	438	5547	85	127	225	27013	35328
Aqaba	1868	576	11857	181	280	668	35075	50847
Jordan	79523	26581	432291	2598	5437	11237	1782055	2350490

Source : DOS, Jordan Population and Housing Census 2015, Table 2.1.

Fig. 7. 3. Housing tenure by income deciles, 2013



Source: HEIS 2013, Department of Statistics

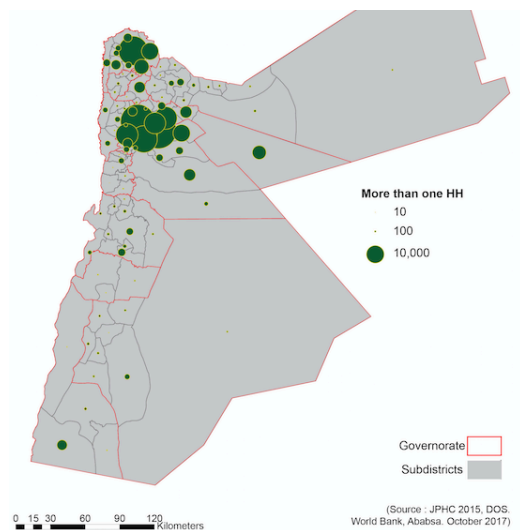
7.2. Housing Deficits

Jordan is suffering from a large quantitative and qualitative housing deficit. Quantitative deficits measure the households living in inadequate housing without possibilities of repair, together with multiple households sharing the same unit. Qualitative deficits measure households in dwellings whose tenure is insecure, impermanent building materials, lack of

service and overcrowding. The World Bank team in charge of the Housing sector assessment³² has decided to consider that in Jordan the quantitative housing deficit was the share of households sharing housing units (difference between number of households sharing and total number of unit shared), plus the households living in housing units without possibilities of repair, which are those built in materials such as muds and stone walls, and non-conventional dwellings (tents, barracks, or work places, excluding the caravans in refugee camps). The qualitative housing deficit was defined as the share of households experimenting overcrowding (at more than 2,9 persons per room, as specified by the Census). The total housing deficit is a simple addition of the quantitative and qualitative deficits (World Bank 2018a).

According to the 2015 Census, a total of 298,890 households (15 percent of total households) were sharing conventional dwellings by two or three families. Close to 27 percent (81,218) were Jordanian families, mainly young married sons, while 73 percent (217,672) were foreign families, mainly Syrians and Egyptians. Out of the 217,672 non-Jordanian households that were sharing dwelling, 114,586 shared apartments by two families, thus half of them (57,293) need a new unit, and 103,086 were sharing housing by three families, thus two thirds of them (68,724) need a new unit. Ten percents of the households suffered from quantitative housing deficit : 167,613 (41,596 Jordanian, 126,017 non-Jordanian) households were in need of a new housing unit (out of a total of 1,953,194 households).

Fig. 7. 4. Distribution of Households sharing units by sub district, 2015



In 2015, 187,338 housing units were overcrowded at more than 2,9 persons per room. This

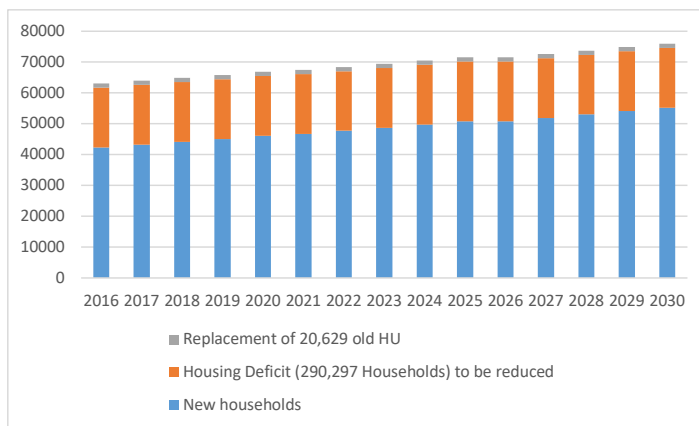
³² The author was part of the World Bank team directed by Dr. Ellen Hamilton.

included housing units shared by multiple households, and 111,681 housing units occupied by single household, or 59,6% of them. Given that families might be in a situation in which they suffer from both quantitative (more than a single family per housing unit) and qualitative (more than 2,9 persons per room) deficits, we shall consider only the housing units that were occupied by single households to avoid double counting the same family (World Bank 2018a).

Jordan total housing deficits reaches 310,926 households. This represents over 15,9 percent of households, not including the refugees in camps.

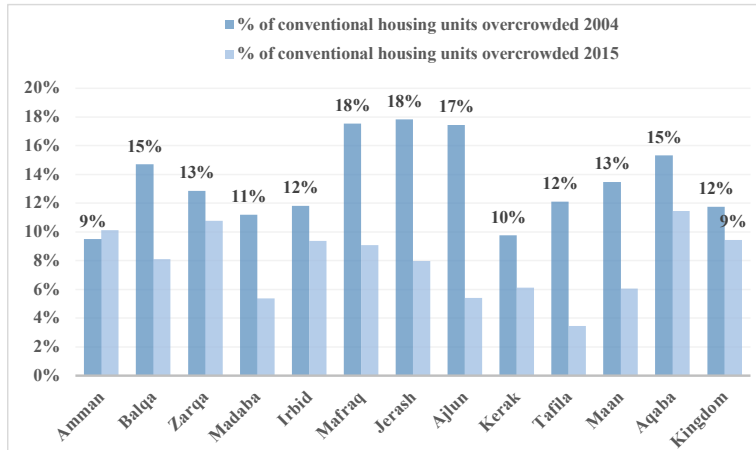
“Over the next decade, Jordan will need to produce between 62,000 to 74,000 housing units annually to reduce the current deficits and keep up with new household formation. Jordan needs to produce housing units for its new households. According the medium growth scenario, an average 35,000 new households will be formed until 2030. This figure goes up to 50,000 in the high growth scenario. To this, one must add the reduction of the backlog of unhoused families (231,919 ones, or 15,461 units per year between 2016 and 2030), and the replacement of old buildings (20,629 housing units built with mud walls or composite materials, or 1,375 units per year) to reduce the total housing deficit. In total, in the high growth scenario, Jordan will need an average of 55,800 housing units per year from 2018 until 2020, then 68,200 housing units per year between 2020 and 2025, and 72,400 housing units per year between 2025 and 2030, in the High Growth Scenario. In the medium growth scenario, these figures are reduced to 48,655 housing units between 2018 and 2020, 56,600 housing units between 2020 and 2025 and 53,300 housing units per year between 2025 and 2030” (see Figure 7.5) (World Bank 2018).

Fig. 7. 5. New housing needs (High Growth Scenarios), 2016-2030



(Adapted from World Bank 2018 using Census 2015 and DOS demographic growth scenarios)

Fig. 7. 6. Reduction of Qualitative Housing Deficit (overcrowding) by governorate (2004-2015)



Source: Authors calculations using Census 2004, 2015.

Reducing the vacancy rate was suggested by the World Bank team as a more rapid and less costly solution to solve the housing deficits. “Some policies could be relatively simple, such as improving the mechanisms available for home repossessions or creating a system of rental guarantees. This would help expand the supply of housing units available for rent, creating incentives to add to the market at least part of the considerable stock of vacant units. If, for example, the government sets a target to reduce the vacancy rate to at least 8 percent of the stock (188,039 instead of the current 432,291 vacant ones), such policies have the potential to incentivize the private sector to release/make available to the market over 240,000 housing units, not only with the potential to reduce the deficit but to generate additional sources of income for property owners” (World Bank 2018a).

7.3. Housing Policies and Informal Areas Upgrading

Jordan is lacking social housing policies, and has no rental solutions for employees or middle class members. Subsidized housing constitutes less than 1% of the total housing stock. The first public policies were developed as early as 1965, when the Housing Corporation was created to build affordable apartments in Amman. But their cost was too high, and they did not solve the problem of informal areas. In parallel, the World Bank supported the creation of the Jordan Housing Bank in 1973 as a limited public shareholding company with primary focus on housing finance. Subsidized by the GoJ, it served as the main source of housing finance during the 1970’s and 1980’s until the opening of the market to other banks in 1997.

The Housing Corporation and the Urban Development Department have successfully built a new city in Abu Nusair in the 1980’s. The new town of Abu Nusair was conceived as a satellite town to direct Amman development to the North West. 6200 housing units were built in ten years on 230 ha of governmental land, along with 2,500 plots of served land. The houses and the plots of land were affordable to middle class civil servants and professionals. It has now

developed into a 50,000 inhabitants city well integrated to Amman.

The Housing and Urban Development Corporation was created in 1992 (law 28) by the merging of the Housing Corporation (1965) and the Urban Development Department (1980). HUDC kept all the privileges of government agencies such as access to government land; a government guarantee against its debts; and authority to issue debentures (capacity to borrow with fixed interest) (World Bank 2018a). HUDC's mandate is to provide suitable housing with related services to low and moderate-income families, and to facilitate the formal private sector in developing affordable housing. The Urban Development Department lead an innovative upgrading and Site-and-Services scheme for low-income groups throughout Jordan³³. Over the past 25 years, HUDC has produced 42,000 housing units in 240 housing projects, benefiting to nearly 210,000 inhabitants. The upgrading of 13 informal settlements benefited 300,000 persons (HUDC 2017)³⁴

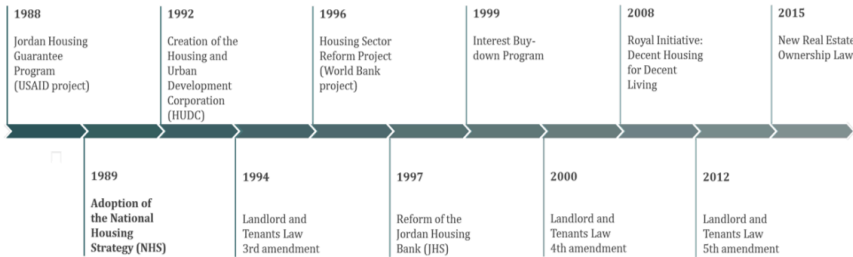
HUDC performance have been good until the 1990's when it had World Bank financial support and training to site and services solutions and informal neighborhoods upgrading. But progressively, its projects have been subject to criticism as they were on remote locations (for affordable housing schemes) or too expensive (as they paid developers too high). But HUDC is not empowered at all. Its ability to enforce and oversee recommendations is limited by the fact that it has no influence over urban planning, nor zoning and building regulations or property taxations. "Therefore, little improvement on regulatory reform was achieved, including land-use, re/downzoning, and building standards (e.g., smaller plot sizes, reduced set-back requirements, or fewer off-street parking facilities). Although HUDC has a seat on the table in the Higher Planning Council, which is the higher entity in the process of the approval of master plans of cities and town, HUDC contribution, similar to other members, is usually limited to approving (or not) already developed master plans. Therefore, HUDC has no role in providing guidance on the development of these master plans to integrate affordable housing strategies" (World Bank 2018a).

During the preparation of the Housing Strategy, recommendations were done to increase their competences in housing production. But they do not seem to have been adopted yet. In 2019, some of its main officers have been forced to retire and the future of the agency is bleak.

³³ Housing and Urban Development Corporation website.

³⁴ https://www.metropolis.org/sites/default/files/2019-01/0612%20City%20Paper%20Amman_I.pdf

Fig. 7. 7. Most Relevant Interventions in the Housing Sector in Jordan in the past decades



(World Bank 2018a)

The World Bank also supported the adoption of Jordan’s first National Housing Strategy adopted in 1989. It called for the participation of the private sector through PPPs. It provided incentives to private developers to produce low-income housing (e.g. tax exemptions, lower standards, smaller plot sizes, mix-use zoning). It also had a positive action on land markets, with the reform of zoning rules (e.g. more flexibility in plot development); the application of a property tax based on market value (rather than rental value) and reduce land and property sale tax. It enabled the market with innovative schemes such as a deposit insurance fund, mortgage default insurance, mortgage-backed bonds/secondary mortgage markets. And it permitted the creation of the HUDC as the main institution to provide housing for the most vulnerables, with housing subsidies and direct fixed loans.

In 1996, the World Bank supported the reform of the housing sector to improve the efficiency of the housing finance sector and promote private-sector development in land and housing production. It aimed at deepening the housing finance by supporting the establishment of a liquidity facility (the Jordan Mortgage Refinance Company-JMRC); and promoted policy and institutional changes to increase private-sector participation and competition in land and housing development. The housing finance component meet expectations as the JMRC has steadily lent to commercial banks long-term funds against pledged mortgage loans, reducing interest-rate and asset-liability matching risks (World Bank 2018a).

Starting from 2000, the King Cabinet (Diwan) developed policies for the most vulnerable citizens (around 1000 units per year). The flagship housing project was implemented between 2008 and 2011 upon Royal Initiative: the “Decent Housing for Decent Living” aimed at building 100,000 units in five years on public land, with heavy subsidies (up to 17% of the total costs). By 2011, only 8,500 housing units were built, in rather remote locations. Buyers did not meet the requirements needed to obtain a bank loan, as unit prices were relatively high at from JD19,000 to JD29,000 for a 118m². By 2014, only half of the units had been sold, when the government decided to transfer the remaining units to the Ministry of Education, with down payment of its employees.

From 1980 to 1997, Jordan became the first Arab country to implement the World Bank innovative policy of informal areas upgrading with public participation. Initiated in Peru by the urban planner John F.C. Turner in the 1960s, this policy aimed to involve the inhabitants

of informal areas during every stage of the renovation of their homes and to allow them access to homeownership through long-term loans guaranteed by the state. It was experimented from 1981 to 1986 in four informal sites in Amman (East Wahdat, Jabal Jofeh, Rimam, and Nozeh).

The basic idea behind this new developmentalist ideology was to renovate informal areas while involving their occupants in all stages of the process: from design to construction, including funding. The idea was to make them pay a nominal fee to access homeownership through long-term loans, while training them in construction trades to help bring them out of unemployment and make them independent. The use of long-term and therefore affordable loans was a condition for the replicability of urban upgrading programs, because the reimbursement of the loans could be used to fund other, similar projects. The aim of the program was to improve the living conditions of residents of informal settlements by enabling them to secure land tenure and by providing them with basic infrastructure, shelter, and community facilities. The land was bought from the original owners and mortgaged to the householders with monthly installments based on 33 percent of the income of each beneficiary. Beneficiaries had to pay the full cost of onsite infrastructure services as well as the cost of the land, through a long-term mortgage loan from the Jordan Housing Bank. Palestinian refugees with Jordanian citizenship gained access to legal property titles (Ababsa 2012).

By making serviced land available at affordable prices, the project has shown that, when given legal access to land, households are motivated to invest time, effort, and financial resources in solving their own housing problems. This was amply demonstrated in the speed with which houses of good quality were constructed in slum areas, once land tenure had been granted to the residents. The overwhelming response to advertisements for the small serviced plots offered by the project also demonstrated high excess demand at the lower end of the housing market, due to the unavailability of affordable plots for low-cost housing. The project received the award of the Agha Khan Architecture Prize in 1992.

7.4. HUDC policies

As the Ministry of Public Works and Housing focuses essentially on the massive public works programs underway in Jordan, HUDC is in charge of all national housing policy functions. HUDC is in principle financially autonomous but is not authorized to sell on plans, prior to construction, to individual households. Therefore, it faces recurrent cash-flow problems and needs financial advances from public sources. The reform of 1996, while associated with the structural adjustment doctrine of the World Bank at that time, introduced new and important thinking regarding the housing delivery system in Jordan. Some ideas have been implemented (secondary mortgage facility based on the American and Malaysian models), others have been partly applied, some remained on the shelves. One fundamental aspect of the reform was to gradually reduce public sector activities to “policy, planning, research and upgrading works”. Other aspects were to reduce regulatory barriers to encourage the private sector’s involvement in land and housing development, and to reform subsidy mechanisms to better target disadvantaged groups. These issues are still on the agenda. (Jordan Poverty Reduction Strategy 2013, p. 226).

HUDC projects for 2019-2021 are currently developed in Mafraq, Maan and Husban-Naour. They include affordable housing schemes on Treasury located just outside urban zoned areas. Plots of 300 m² are sold at a symbolic price of 600 to 900 JD to build a 63 m² house of two bedrooms at 18 000 JD. HUDC specific building norms are applied. They globally follow the adjacent zone type. On a 300 m², the front setback is of 3 m, and 2,5 m on each side. The 63 m² house can be extended both horizontally up to 120 m² and vertically. This concept builds on the UN Habitat Affordable housing project conceived and tested in 2016-2017 in several locations in Irbid and Amman. The main constraints in providing affordable housing schemes lie in the cost of land and in the access to housing loans.

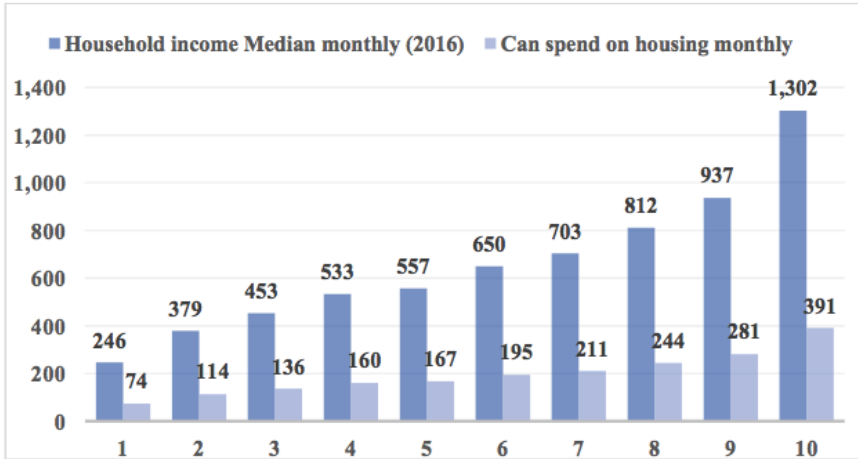
HUDC zoning and building norms should be properly regulated. HUDC projects include three floors in most of the cases as beneficiaries do not want to climb the stairs to reach a 4th floor in the absence of elevator (too costly). Semi-attached models are proposed, but if the building are not built at the same time, windows are opened on the wall that should be blind.

7.5. Housing Finance

Most of Jordanians are paying for the construction of their homes on their own incomes, or by borrowing from relatives, without taking loans from banks. Mortgage represent about 5% of the GDP, with very low. It stands at 20% in Lebanon, Tunisia, Kuwait, and in developed countries at more than 70%. However, the mortgage market is developing and the volume of housing loans is growing.

In 2016, the household's average annual income varied from JD2,951 (1st decile) to JD15,619 (10th decile). Figure 12 presents the average household monthly income by deciles and, assuming a cap of 30 percent, the maximum amount these households should spend on housing related costs (either repaying housing loans or paying monthly rent) (World Bank 2018a).

Fig. 7. 8. Income and maximum affordable spending on housing by deciles



Source: World Bank (<https://data.worldbank.org/country/jordan>)

(World Bank 2018a)

Housing institutions in Jordan are currently providing loans (on average) for 25 years at 8,5 percent variable interest rate and 80 percent loan-to-value, and limits their loans to families earning more than JD400 a month. This market characteristics limits access to formal housing finance to families that are at the bottom of the pyramid (the bottom 2 deciles). Households at the 3rd to 5th deciles can afford to take loans below JD20,000 and only the 8th, 9th and 10th deciles could access loans of more than JD30,000 (World Bank 2018a).

“According to Doing Business (2018), Jordan ranked 72nd out of 190 countries in registering a property and 110th out of 190 countries in issuing construction permits. On average, at a national level building permits require 62 days to be issued (in GAM, it can take up to four months, as the auditing bureau (*diwan muhasiba*) only has 7 representatives for the entire city). Typically, the process for housing development is as follows: In areas zoned for urban use, land is subdivided and sold. The owner (developer or individual) then consults with the Municipality on the land use options and may have to pay “improvement taxes” if the use has been changed from residential to commercial.

Land use changes as well as amendments on the building terms for each land plot are frequent, and as a result, consultations with the authorities prior to any development are necessary. Subsequently, the owner seeks approvals from several referral agencies such as the Jordanian Engineers’ Association, the Civil Defense Department (CDD) and Ministry of Tourism and Antiquities, as well as utility providers, before applying for a building permit at GAM. Additional clearances may be required by other referral agencies (Public Security Department) and GAM units (e.g. Traffic Control Department or Special Projects Department) depending on project type and complexity.

Once the structure is complete, and third-party inspectors from GAM and CDD have cleared the project, a Completion or Occupancy Permit (*idhan ashghal*) is issued from the municipality to occupy the building; this is necessary to get utility connections (e.g., electricity, water).

The owner bears the cost of bringing the trunk infrastructure from the nearest available network to the site, which can be very high (JD300 per electricity pole at 30-meter intervals). The land owner must pay a building tax of 0,75 JD per m2 to the municipality (*rusm al inchaa*) and build an underground safe space or “refuge area” (*majla*) not smaller than 10 percent of the surface. The new Municipal Law adopted in 2015 includes a JD150 fine per m2 built in contravention in order to push citizens and builders to follow zoning and building norms, including parking lots” (World Bank 2018a).

*

The main short term recommendations to reform the housing sector are to empower the HUDC with a clear mandate to formulate long term policy; the need to update the Planning Law n°79 of 1966 to permit internationally recognized good practices; the modification of the current building codes to allow for densification; the downzoning of to smaller plots and the modification of the leasing companies rights to reassign lessee rights for real-estate related transaction. It is also suggested to consider initiating REIT (Real Estate Investment Trusts) to enable small size individual investors efficiently invest in rental projects (World Bank 2018a).

Longer recommendations within the coming five years deals with an incremental approach to support the demand side (up-front matching grants, rental vouchers), but also to the supply-side with incentives such as insurances or guarantees for owners that release vacant units for renting to low-income families. A comprehensive rental policy should be formulated in order to encourage financial sector to develop targeted products for small landlords to develop rental units, and that considers low- income rental voucher-type subsidy both for Jordanians and non-Jordanian when financial situation allows. Release the vacant land for construction by increasing their taxation, and moving to a cadastral system of annual revaluation or indexing. Increase the taxation of vacant apartment by leveling all taxations (on vacant unit, rented unit and owner-occupied units). Other recommendations concern the housing finance: introduce taxation discouraging developers’ up-front financing, create a separate JMRC branch that will use the same mechanism issuing debt to investors in the form of sukuk (Islamic loan), finally consider stimulating the introduction of fixed rates for the period equal to term of the JMRC loan provided to the bank. Such measure will reduce the risk of payment shock for a loan during the time this loan uses funding provided by JMRC (World Bank 2018a).

The Jordan Housing Sector Review, published by the World Bank in 2018 suggests the following recommendations to reform the housing sector.

Short term recommendations (within the following 2 years):

- An institutional reform within HUDC should be pursued, providing it with a clear mandate to formulate long term housing policy, tools to regulate and enforce policy recommendations, and contribute to drafting housing-related laws.
- Updating Planning Law No. 79 of 1966 to permit internationally recognized good planning practices, and apply it across the entire country.
- Modification of the current building codes to allow for densification; to address the challenge of rapid urbanization and shortage of affordable housing. Higher land coverage ratio, narrower setbacks, and an increased height limit could all allow for more housing units to be built on a plot of land, therefore spreading the land costs across more units, and reducing per unit land cost.
- Downzone Residential Zone A and B to Residential Zone C and D, especially in areas close to the city center.
- Explore legal/regulatory changes to ensure a level playing field between banks and leasing companies, including considering limiting the possibility to reassign lessee rights for real-estate related transaction.
- Initiating Real Estate Investment Trusts (REIT) to enable small size individual investors efficiently invest in rental projects

Long-Term Actions (within the following 5 years):

- Consider an incremental approach to support the demand side, including the possibility for HUDC to manage/guide demand-side subsidies (e.g. up-front matching grants, rental vouchers).
- Consider creating supply-side incentives such as insurances or guarantees for owners that release vacant units for renting to low-income families.
- Formulate a comprehensive rental policy, that i) improves enabling environment (regulation and taxes), includes ii) landlord insurance for damages, iii) encourages financial sector to develop targeted products for small landlords to develop rental units, and that considers low income rental voucher-type subsidies (both for Jordanians and for non-Jordanian) when the financial situation allows.
- Consider simplifying property valuation, linking it directly to the market value of the property (phasing out conditionality on municipal category, zoning and building type), and unifying the property valuation for owner-occupied, rented and vacant units
- Consider removing the preferential treatment of vacant land in the built-up zone of urban areas, and moving to a cadastral system of annual revaluation or indexing.
- Consider levelling the taxation rates of vacant units, owner-occupied and rented units.
- Consider moving to market-based assessments for the basic property value.
- Introducing taxation to discourage developers' up-front financing.
- For the loans of Islamic Banks, consider creating a separate JMRC branch that will use the same mechanism issuing debt to investors in the form of (*sukuk*).
- Consider incentives to encourage the formation of other entities similar to JMRC both for traditional and Islamic loans.

- Consider stimulating the introduction of fixed rate mortgages for the period equal to term of the JMRC loan provided to the bank. Such a measure will reduce the risk of payment shock for a loan during the time this loan uses funding provided by JMRC.

8. INFRASTRUCTURE AND BASIC SERVICES

Overview

The growth of cities in Jordan has been accompanied by deficiencies in the provision of infrastructure and services. The cost of infrastructure delivery has become a burden on municipal budgets as cities are expanding. This situation has generated a high deficit in public transportation, but also the loss of water in the extended badly maintained networks. In addition, it deepened territorial inequalities within the cities.

Current total water use in the country exceeds the renewable supply. If supply remains constant, per capita domestic consumption is projected to fall to 90 cubic metres per person per year by 2025, putting Jordan in the category of having an absolute water shortage that could constrain economic growth and potentially endanger public health (National Climate Change Strategy of Jordan, 2013).

The proportion of population with access to improved water supply (through network) exceeds 94%. Untamed urban growth has led to the extension of the networks to peri urban human settlements. This has contributed to the fact that half of the water supplied to cities is lost every year. In 2014, 229,3 Million Cubic Meters (MCM) were lost, out of the 428.1 MCM delivered for municipal needs. Half of the losses are occurring in Amman Governorate. The Ministry of Water and Irrigation Strategy includes the reduction of non-revenue water from 52% to 25% only by 2025.

Concerning the water sector, the Jordan 2025 National Vision and Strategy focus on water economics and financing, sustainability of overexploited groundwater resources and the adoption of the new technologies and techniques available including Decentralized Wastewater management, increased needs for utilization of surface water in municipal supply, reuse of treated wastewater. It incorporates more decentralization, commercialization and consolidation of water and wastewater services as well as increasing private sector participation. The Ministry of Environment, strategy documents for health, education and municipal affairs also reflect synergies and partnership with the water sector and the new updates of water wastewater management master plans, solid waste management and the newly approved reform legislation including the decentralization law (MWI 2016). But those strategies do not address the control over urban sprawl to rationalize the service delivery.

8.1. Water and Sanitation

Jordan suffers from major water scarcity with 92% of its territory in semi-arid and arid regions (less than 250 mm of yearly precipitation), large commercial losses and the overexploitation of the groundwater resources. With the demographic increase due to forced migrations flows from Syria and high fertility, the sector needs to be transformed in order to find alternative water sources, preserve current ones, develop awareness among Jordanians and rehabilitate the networks to fight against water losses. Jordan faces a dire need to increase its water availability.

Jordan is now working on the augmentation of its freshwater resources with a desalination plant in Aqaba. In its national water strategy, the government has stated that as the population is expected to almost double by 2050, the proportion of water used for domestic purposes may also increase by 50-60% in the same time period. The agriculture sector is the largest consumer of water with 700 MCM (4% of GDP), the municipal use is of 717 MCM, the industry consumes 39MCM and the tourism industry uses about 4 MCM annually in 2018.

Jordan's annual renewable resources of less than 100 m³/capita are far below the global threshold of severe water scarcity of 500 m³/capita. The current level of water supply delivered to the population, on average, is about 61 litres/capita/day, which excludes 65 litres/capita/day of Non Revenue Water. In informal settlements, per capita consumption is estimated at 25-50 liters per day. In some areas of the North, per capita consumption has dropped from over 88 to below 66 liters since Syrian refugees began to arrive in 2011. Subsidies flow to the sector continues, and cost recovery is limited. This is compounded by high NRW figures of about 52%. The strategy is to reduce this NRW to 25% only by 2025.

National water resources and water balance are facing negative impacts due to higher demand, over abstraction and the effects of climate change. There is severe competition among socio-economic sectors due to the exponential rise in water demand. The need for water for domestic, irrigation, industrial and environmental protection, coupled with the deterioration of water quality and control of water-borne diseases, pose serious water sustainability challenges³⁵.

The proportion of population with access to improved water supply (through network) exceeds 94%. The water quality compliance to microbiological parameters exceeds 99.3% in the whole Kingdom. The proportion of the population with safe sanitation exceeds 93% (63% coverage by sewer system and 30% by other safe sanitation methods).

Although the service levels in the water sector in Jordan are fairly high, reaching over 94% of the population, the distribution system is still far from optimal and efficiencies. Although, the overall supplied water for municipal uses through the networks was 429 MCM in 2014, households received water at an average of 61litres/person/day (against a worked supply of 126 liters/capita/day) once or twice a week for a limited number of hours and use roof tanks for their weekly storage (table 9.1). Nearly 65 liters/capita/day is lost due to physical and administrative gaps (NRW). The intermittent supply regime creates additional risks that may compromise water quality due to intrusion of pollutant to the supply network and during storage for long time.

³⁵ MWI, 2016, *National Water Strategy (2016-2025)*, p. 14.

Table 8. 1. Water Use for the Various Sectors (2014)

Water Source	Sector			Total Figures in MCM
	Municipal	Industrial	Agriculture	
Ground Water	325	32.2	231.3	589
Surface Water	103.8	4.8	150	259
Treated Wastewater	0	1.7	123.3	125
TOTAL	429	39	505	972
Percentage of total	44.1%	4%	51.9%	100%
Rain-fed agriculture consumes around 100 MCM per year				

Source: Ministry of Water and Irrigation (MWI) 2014

Water distribution follows the purchasing capacities of the households within city neighborhoods. The richest ones receive water twice a week, while it is once a week during 24 to 36 h in low income areas. Households have to store water in water tanks, on roofs and in basements. In the informal overcrowded areas, households can only afford to have one water tank of 2 m³ on the roof, as there is not sufficient room.

In Amman, the number of water meters is 20% smaller than of occupied housing units because informal housing dwellers are sharing water meters (World Bank 2018a).

The available renewable freshwater resources in Jordan were 533MCM in 2014, depending on annual rainfall. The available Renewable freshwater amount in 2014 was less than 60 m³ per person. The country requires about 1,400 MCM annually (2014) but has, on average, only 848 MCM of freshwater supply available for various uses. Of the total requirement, 381 MCM freshwater is allocated to agriculture and pastoral uses, 429 MCM for municipal supply and about 37 MCM for industrial activities.

Annually available treated wastewater (125 MCM) is used to supplement the available freshwater uses. Water from all sources is approx. 972 MCM that leaves a shortfall of about 160 MCM being met by over-pumping from groundwater resources.

Only 51% of 2014 water was utilized for irrigation including the treated wastewater. Irrigation by fresh water only used 381 MCM forming only 45% of freshwater. The percentage of water used in irrigation is around 61% even with amounts estimated from remote sensing techniques (225MCM) and assuming all non-metered water was used in irrigation. This puts Jordan among the countries with least percentage of its resources given to agriculture. Jordan allocated 50% of its fresh resources for Municipal supply (429 MCM).

Groundwater contributes to about 61% to the total water supply, but of the 12 major groundwater basins, six are over-extracted, four are at capacity and two are underexploited. Increasing overall water extraction to meet national needs carries a high cost; Jordan is now accessing non-renewable water resources from fossilized deep-water aquifers. Underground water from the non-renewable Disi aquifer (about 100 MCM) and treated wastewater (125 MCM) also contribute to Jordan's water supply for domestic and agricultural needs respectively.

Surface water supplies contribute approximately to 27% of Jordan's total water supply. Developed surface water resources in Jordan were about 259 MCM in 2014 and are projected to be about 329 MCM by 2025; Table 8.2 shows the amounts of water supplied nationally in 2014.

Table 8. 2. National Water Supply (MCM), by Sector, 2014

Source	Domestic	Industrial	Irrigation	Total	Share
Surface	103.8	4.8	150	259	26.6%
Ground	325	32.2	231.3	589	60.6%
Treated wastewater	0	1.7	123.3	125	12.8%
Total Used	429	39	505	972	100%
Sector Share	44.1%	4%	51.9%	With treated wastewater	
Less Treated wastewater	0.0	1.7	123.3	125	
Total Freshwater used	429	37.3	381.7	848	
Share	50.6%	4.4%	45 %	W/out treated wastewater	

Source: Ministry of Water and Irrigation, Water Budget 2014

As of 2014, the supply was averaged of 126 liters/capita/day including NRW. It is estimated that 65 liters/capita/day remains unaccounted for each day (52%) due to physical and administrative losses. Further, water from unauthorized groundwater abstraction or service connections is used for irrigation or sold through water tankers, which reduces the amount available for supply to customers and increases the revenue losses to government.

Historically, NRW reduction efforts are showing results. NRW dropped from 52% in 2000 to 44% in 2011 then increased to 52% in 2014, which represents substantial losses. Table 3 shows that Amman, Zarqa and Balqa have the largest total (%) losses while Ma'an and Karak show the highest NRW % along with Zarqa and Balqa. Aqaba, on the other hand has performed very well with provision of continuous supply and an NRW of 28.2% (2014).

As a national strategy, the Government proposes to target reduction of NRW by 3-6% per year with a targeted reduction to 25% nationally by 2025 and technical losses reduced to below 15%. The strategy thus also includes strengthening the criminalization of water theft and

unauthorized wells.

The ministry is engaged in two complementary policies: expanding the services to cover upcoming forecaster demand due to demographic growth rate and the rehabilitation (or replacement) or existing infrastructure. This includes the development of new water resources, rain water harvesting technics and the expansion of sanitation. In order to be economically feasible, citizen awareness is needed to develop rainwater harvesting technique and local greywater reuse and the reduction of non-revenue water.

Table 8. 3. Non Revenue Water Quantities by Governorate and Ranking – 2014

Gov.	Net supply (MCM)	NRW%	UFW%	Losses (MCM)	% of total losses	Share of losses
Amman	179.2	38.5	<i>48.4</i>	86.7	37.8	75 % of losses
Zarqa	66.6	64.4	<i>65.2</i>	43.4	18.9	
Balqa	35.7	68.2	<i>68.3</i>	24.3	10.6	
Irbid	45.2	36.1	<i>38.6</i>	17.4	7.6	
Mafraq	24.7	53	<i>69.5</i>	17.1	7.5	25 % of losses
Karak	20.5	69.2	<i>69.2</i>	14.2	6.2	
Ma'an	14.2	73.2	<i>73.2</i>	10.4	4.5	
Aqaba	16	28.2	<i>28.2</i>	4.5	2.0	
Madaba	8.9	35	<i>36.2</i>	3.2	1.4	
Tafilah	5.5	57.2	<i>57.2</i>	3.1	1.4	
Jarash	6.7	45.1	<i>45.1</i>	3	1.3	
Ajloun	4.9	42.2	<i>42.2</i>	2	0.9	
Total	428.1		229.3			

(Source: Ministry of Water and Irrigation, Water Budget 2014)

The proportion of the population with safe sanitation exceeds 93% (63% coverage by sewer system and 30% by other safe sanitation methods). Yet on more detailed inspection, some of the septic tanks are leaking and are contaminating the ground water resources. Originally, septic tanks were not impermeable, and the waste could work as a natural filter. Now, they must be impermeable. However, the issue is that residents are planting trees such as fig or mulberry trees (tut in arabic) - whose roots are breaking the tanks, creating the leakages. These tanks should be emptied at least every year at least (or monthly if located in a building), but this costs more than 50 JD. Leakages from septic tanks bring in E. Coli bacteria into the ground waters and contaminate it. Consequently, some wells and springs have been polluted. Water and sewage networks date back to 1965 in some part of the Kingdom and need

rehabilitation³⁶.

Many new policies and efficiency improvements have been undertaken to augment, conserve, reuse and recycle all available freshwater. The Government has constructed dams and the Disi-Amman conveyance system to mobilize new water sources. It is exploring additional sources of supply such as deep aquifers and brackish and large-scale seawater desalination. Efforts are being made to optimize the use of existing resources by reducing physical and commercial losses. Energy efficiency improvements are part of the strategy as currently 14% of the country's energy resources are consumed by water delivery. Despite these improvements, there remains a critical imbalance between supply and demand, especially in a context of regional insecurity and the social, economic and environmental impacts of climate change (MWI 2016). Jordan's biggest wastewater treatment plant, Khirbet Samra, is being expanded. Abu Nussayr will be connected to it. A new WWTP is under construction in Wadi Rimam to replace Al Baqaa WWTP. South Amman WWTP (Janub Amman) is also under construction. However, it's important to note that the connection rate is still low.

Municipalities are responsible for building and cleaning storm water drains. The Greater Amman Municipality has an efficient storm water drainage system, but this is not the case for the other municipalities, and capacities differ from one municipality to another. One of the major problems municipalities are facing is the connection of rainwater drainage system to the sewage networks. This creates an overload in the system. This is the case for the cities of Salt and of Jerash, due to their hilly topography. This is one of the reason for the flooding which occurred in February 2019 in Amman city center.

Due to a lack of coordination with municipalities with regards urban planning, no land is set aside for waste water treatment plants. Informal settlements can not claim for water connection as they have the right to for electrical connection through the "Fils al Rif" program. They have to built cesspits, or to connect to existing sewage networks at their own costs (one dinar per meter).

The Ministry of Water and Irrigation has started a project of building decentralized wastewater treatment plants for small villages or settlements of less than 5000 inhabitants. They are supported by the German University UFZ (Helmholtz-Centre for Environmental Research GmbH, Leipzig-Halle). However, the project is facing difficulties as in most of the cases, the residents complain about the smells which delays the construction of the small wastewater treatment plant.

Since 2013, the UFZ has been supporting the Ministry in the development an Integrated Wastewater Management System (IWRM) since 2013 (the NICE project: inter-ministerial National Implementation Committee for Effective Integrated Wastewater Management). The project is designed to help mitigate extreme water scarcity and protect groundwater resources in Jordan. The national target for wastewater services as stated in the Water Sector Strategy

³⁶ Interview at the Ministry of Water and Irrigation, Director of Drought Management Unit, 17-2-2019.

(2016-2025) is to increase the number of people connected to sewer networks to 80% by the year 2025. In 2016, the Jordanian Cabinet adopted the “National Framework for Decentralized Wastewater Management in Jordan” and the “Decentralized Waste Water Management Policy”, which is the first policy for decentralized wastewater management in the Arab world.

The development of greywater facilities at household level is debated in Jordan. The installation is expensive (800 to 1500 JD), bad odors are preventing the residents to use the water for the garden, plus they are fearing that the water will alterate fruit trees. Only projects supported by international donors are successful³⁷. The level of BOD (biochemical oxygen demand) is high in Jordan greywater as residents use less water per capita than in average worldwide. So greywater systems have a negative impact on the wastewater treatment plant. Some projects, in Zaatari camp for instance, are supporting the creation of greywater networks. Aqaba (ASEZA) is promoting those solutions and the violet pipes (for greywater use) are seen to irrigate the palm trees and gardens.

Combined water and sewer bills amount to, less than 0.92% of the total household annual expenditures in 2011³⁸. The International Monetary Fund is supporting the MWI to think about subsidies reductions and tariff increases.

Rainwater harvesting

The MWI is supporting roof top rainwater harvesting system at the level of households to provide an inexpensive source of water, preserve a rare and vital resource and reduce flooding. Unfortunatly, most of Jordanian buildings’ rainwater gutters are connected to the sewage networks, and not to plastic tank nor to concrete cisterns. This creates overload in winter time, increase in waste water treatment volume and costs, and even flooding as last February 2019 in Amman.

Rainwater gutters should be connected to a plastic tank. The new building code make it mandatory to have concrete cisterns built during the excavation of the foundations for new building. But users prefer to pay a fine to avoid building them. It should not be allowed to pay a fine to avoid the construction of those facilities. USAID (Mercy Corp) is supporting loans up to 5000 JD to build cisterns, with no interest. The Ministry of Water and Irrigation is conducting an information policy to convince owners to connect rainwater gutters to plastic tanks and cisterns.

Only 3.4% of the households harvest water in cisterns: 58,383. This figure is in progression from 33,229 in 2004 (DOS Census 2015, table 2.5).

³⁷ <https://wle.cgiar.org/how-scale-greywater-reuse-jordan-and-egypt>

³⁸ Idem p. 15.

Table 8. 4. Distribution of housing units by main source of drinking water (DOS, 2015) (conventional housing units)

Source of drinking water	No. of housing units	% of housing units
Public network*	1,002,703	57.7
Filter at home (public network)	238,328	13.7
Tanker	42,376	2.4
Roof rainwater harvesting	58,383	3.4
Bottled water	385,701	22.2
Artesian well	4,585	0.3
Spring	1,683	0.1
Other	3,772	0.2
Total	1,737,531	100.0

(DOS, Census 2015, table 2.5)

Institutional framework

In terms of water governance, the Constitution of Jordan provides for equality before the law and equality of rights for all citizens. MWI is responsible for overall strategic direction and planning, in coordination with the Water Authority of Jordan (WAJ) and the Jordan Valley Authority (JVA). The MWI is not in direct relation with the municipalities, nor with MOMA. No integrated urban planning is done for water and sewage networks. Only the water companies are in direct contact with them. The MWI is not represented at the High Planning Council.

There is a need for improved coordination between agencies. MWI for instance faced difficulties to obtain loans from the Green Climate Fund. It needs to have “accredited entities” (international donors, such as AFD, or international agencies such as GIZ) to be able to apply. The coordination is very good with the Ministry of Environment for several projects related to climate change mitigation and adaptation.

The MWI has developed several actions to adapt to climate change. It is protecting its resources. Note that the Red Dead conveyance project is suspended. In that context a large desalination plant will be open in Aqaba. Jordan is now working on the augmentation of its fresh water resources with a desalination plant in Aqaba of 100 MCM capacity (30 MCM for Aqaba and 70 MCM for the other Jordanian cities³⁹).

In term of mitigation, the MWI is looking for alternative energy sources as 20% of Jordan energy is consumed in water pumping (embedded energy). It includes the search for alternative energy source (solar, hydro, wind) and the resizing of water pumps to increase the pumping efficiency.

The MWI has created a Drought unit. Due to the climate change, drought events are more frequent. They used to be once every ten years, they are now 3 to 4 times every decade. The temperature is also higher which increase plant evapotranspiration. The rain season has also

³⁹ *Al Ghad*, 28-2-2019, p.5.

shifted, instead of being in November December, it is in January, February which is a bad moment for the plants.

Water resources development in the future would need to focus on new water source options including harvesting rainwater, brackish and seawater desalination, increased storage of surface water runoff, artificial recharge, where feasible, more treated wastewater and more importantly, sustaining existing levels of supply. Another major challenge is to achieve a balance between supply and demand without hindering development needs, at the same time ensuring feasibility and affordability of supply, for both water users and the Government. Some of the strategic issues that need to be addressed are: a. Prevent over-exploitation of aquifers based on assessment of groundwater potential; b. Reliable estimates on trans-boundary water share; c. Maximize and sustain reuse of wastewater in agriculture; d. Reallocation based on the national priorities and e. develop sustainable and affordable treatment and desalination options⁴⁰.

Urban Planning

The lack of holistic schemes for urban planning has led to an imbalance in distributing the country's development gains. There is an urgent need to adopt flexible urban planning to improve land management thus tackling many problems of Jordan among others the increased pressure on infrastructure and resources due to the progressive increase in population. One major aspect at that is to link urban and land use planning with infrastructure planning.

Wastewater infrastructure and urban planning need to be integrated across responsible authorities in order to manage housing development and the development of wastewater infrastructure more efficiently and sustainably. Implementation of wastewater projects are likely to face land acquisition problems as they are not included in current planning procedures for residential areas as alternative systems for often insufficient septic tank treatment (MWI 2016).

There is an urgent need to move away from centralized planning and for planning tools appropriate for the individual needs and resources of Jordan's municipalities. Among other matters it envisages to link physical planning with infrastructure planning, and to develop a timetable for implementation involving an infrastructure planning system and committees at the municipal level with representatives of the relevant authorities for planning (MWI 2016).

⁴⁰ MWI, 2016, *National Water Strategy (2016-2025)*, p. 31.

Bottlenecks of Wastewater Infrastructure Planning from an Urban Planning Perspective

The bottlenecks of infrastructure planning and sustainable infrastructure operation from an urban planning perspective are manifold and diverse and can be clustered by four groups:

- *Institutional framework*
 - Absence of a modern and holistic master plan and law for urban planning in Jordan
 - Lack of clear allocation of responsibilities and funds for urban planning at responsible administrative levels and among concerned authorities (municipalities, governorates, ministries)
- *Uncontrolled expansion and migration*
 - Uncontrolled and unplanned horizontal and vertical expansion of residential areas often distant to public infrastructure due to lack of control
 - External population growth (displaced persons) which results in new residential areas beyond the national planning frame (refugee camps)
- *Coordination*
 - Inefficient or lack of coordination among public authorities in the area of land use
 - Land acquisition problems for establishing new wastewater treatment infrastructure as they are currently not included in residential planning schemes
- *Technical obstacles due to existing inappropriate wastewater infrastructure*
 - Inappropriate wastewater infrastructure already in place in many rural and suburban residential areas (infiltrating cesspools) that make arguing for investment in more appropriate wastewater systems difficult.
- *Recommendations for Urban Planning*
 - To stipulate and enforce a national planning law that covers all land uses and is based on state-of-the-art urban planning methods and tools.
 - To establish one planning umbrella for land use and urban planning in Jordan or one existing regulatory body or the Higher Council alone to be solely responsible for urban planning.
 - To entrust the planning process to planning specialists in order to consider all dimensions and state-of-the-art planning standards including the integration of all vital infrastructures, i.e. water supply and wastewater disposal, transportation, electricity, etc. To reduce indiscriminate expansion of cities through comprehensive development schemes and respective urban plans as well as the control and enforcement of implementation of these schemes.

MWI, 2016, *Decentralized Wastewater Management Policy*.

8.2. Solid Waste Management

Jordan generates about 2 million tons of municipal waste (MSW) per year, 45000 tons of industrial waste and 4000 tons of medical waste. MSW collection is estimated at about 90% in urban areas and 70% for rural areas. The final destination of MSW is divided between recovered and landfill waste, 7% is informally recovered, 48% is engineered landfill, in the only landfill of the country, and 45% is taken to one of the existing 20 dumpsites in Jordan. The total cost of the solid waste management in the country is 55 million JD per year (World Bank 2017).

The Government of Jordan adopted its National Municipal Solid Waste Management Strategy (NMSWMS) in September 2015, in order to tackle the lack of proper transfer and final disposal facilities and shift, over 20 years, from an old, inefficient, costly and environmentally unstable municipal solid waste management (MSWM) system towards a modern and integrated one. The objective is to improve the overall health, environmental conditions and quality of life of population and refugees in Jordanian cities and villages, by developing environmentally and financial sustainable systems for MSWM in coming years. All specific objectives of the strategy are in line with the “Jordan 2025” national vision, which seeks to achieve improvements in the welfare of citizens and the basic services provided to them, to create a balanced society where opportunities are available to all and the gap between governorates is bridged (AFD 2017).

The pressure on service delivery due to the arrival of Syrian refugees

“Delivery frequency is insufficient and has worsened as a result of the increased demand and households have to supplement their supply by purchasing water. The influx of Syrian refugees has also increased pressure on already limited sewage and communal waste systems, which only cover 62% of the Jordanian population” (JRP 2014). The sudden Syrian population influx has created the following notable impacts:

- Heightened pressure on municipalities to deliver more and better municipal and social services, address housing deficiencies, induce local economic development, and support social cohesion of communities.
- Increased local tensions particularly from Jordanian citizens in host communities that are starting to demand a more effective response to their own needs from state institutions and local authorities, particularly in smaller communities.
- Temporary reprioritization of electoral and planned development programmes and investment frameworks in affected areas, with the longer-term potential to derail efforts to introduce and sustain a new system of horizontal sub-national planning.
- Critical decisions on the future shape of sub-national governance threaten to be delayed further as a consequence of the urgent need to respond to the pressing needs of host communities. The number of Syrian refugees residing outside the refugee camps in Jordanian communities adds additional pressure on municipalities already struggling to provide essential services. Solid Waste Management (SWM) is a particular concern; the influx of refugees means in principle an increase of an estimated 340 tons of waste to dispose of daily. Prior to the crisis, SWM capacity was in many respects already exceeded, logistical means were outdated and insufficient financial means overwhelmed by increasing fuel cost, and technical and institutional processes inefficient – and environmentally not sustainable. There are other major resilience (sustainability) challenges related to the full optimization of provisions of the Law of Municipalities (eg. the role of Joint Service Councils in the latter stages of the SWM cycle - handling, volume reduction and treatment and land filling).

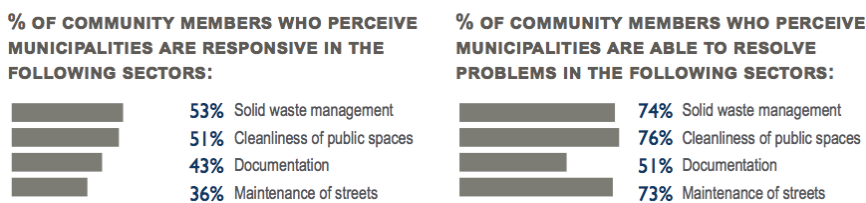
- A number of other municipal services and planning functions are impacted directly by the crisis: (i) urban management capacity and development control (related to urban growth and new constructions); (ii) lack of roads, storm water drainage and street lighting in new settlement expansion areas; (iii) road degradation as a result of heavy transport loads; (iv) overutilization of public spaces and parks as transit areas for refugees; (v) inadequate capacity of municipal cemeteries; (vi) inadequate housing solutions; (vii) poor water and sanitation conditions as a result of inadequate infra-structure (provided by central government agencies); (viii) lack of prioritization of earlier LED gains/initiatives as urgent service delivery, humanitarian assistance and social cohesion efforts take priority, etc.

- According to a recent report released by MOPIC, the presence of Syrians outside the refugee camps in the northern Governorates will have incurred an additional cost for municipal finances of approximately USD 40.5 million annually by the end of 2013 (MOPIC, 2013). A limited analysis of municipal budget estimates and property tax collection for Irbid and Mafraq Governorates for 2012, 2013 and 2014 indicates that municipal income in most-at-risk areas has decreased for the majority of Municipalities at a time when there is a soaring demand for services. Data for estimated municipal expenditures carried out as part of the same review indicated that current expenditures increased in the majority (67 per cent) of 21 municipalities reviewed between 2012 and 2014. Furthermore, there are large disparities between municipalities (from +22 per cent increase to -10 per cent decrease), with a total volume increase of 6 per cent (Hallaj, Ababsa 2015).

In 2018, USAID mandated Reach to built Municipality Profiles concerning service delivery. In the city of Greater Zarqa, only half of the community members perceived municipal governments to be effective. Only a third considered that the municipality is responsive for the maintenance of streets. The same goes for the municipality of Greater Mafraq, where only half of the community members perceived municipal governments to be effective. As in Zarqa, only a third considered that the municipality is responsive for the maintenance of streets.

Fig. 8. 1. Greater Mafraq Municipal Services Efficiency Survey (Reach Cities 2018)

MUNICIPAL RESPONSIVENESS AND ABILITY TO RESPOND TO COMMUNITY NEEDS



(Reach, 2018, *Municipality Profiles, Cities Baseline Study*, 66 p.)

USAID is supporting during five years the Jordan Cities project (Cities Implementing Transparent, Innovative and Effective Solutions) (September 2016-September 2021). The aim is to improve the way municipalities deliver services and develop closer relationships between citizens and the government. Citizens are invited to articulate their needs and municipalities receive management capacity to address those needs effectively.

8.3. The lack of public transportation

Transport is a vital component of Jordan economy, as a sector contributing to 10% of the GDP (World Bank 2014). It is also a prerequisite for sound economic development. It provides access and mobility; it allows import and export of goods and transporting goods domestically. The transport industry represents one of the more significant competitive factors of a country; the level of the transport services influences the performances of the economic system within a defined area or country. At the national dimension, transport is dominated by the car for passenger transport and by trucks (heavy and light good vehicles) for freight. At domestic level, air and maritime transport only have a marginal role: there are only a limited number of domestic flights between Amman (Queen Alia International Airport) and Aqaba (King Hussein International Airport) (MoT, 2012).

The transportation sector is under a complex institutional structure with multiple public entities: the Ministry of Transport, the Ministry of Public Works and Housing, the Land Transport Regulatory Commission (LTRC), GAM and the Central Traffic Department. The Ministry of Transport is responsible for all modes other than road (ie railway, aviation, maritime), for transport policies, pricing, regulations etc.

The Land Transport Regulatory Commission LTRC, established in 2010, is responsible for Public Transport on Roads and for Freight Transport on Roads. Its most important responsibility is licensing bus and taxi operators and setting fares, except within Greater Amman. The government has created the LTRC to monitor internal bus roads, bus terminals and inter cities, and fixes the transportation fares. The LTRC determines fares according to a formula that addresses factors such as the price of gas, general operating costs and the operator's profit margin according to a certain occupancy rate. But this pricing does not take into consideration that some routes are less profitable. As a result, many operators are only able to make profit by lowering the frequency of bus trips, and wait that their buses are full before initiating the trips. This results in a poor quality of service and low reliability (CSBE 2017).

The Ministry of Public Works and Housing looks after the development and maintenance of the road networks, caters for their construction and maintenance, with the exception of Greater Amman and the Aqaba Special Economic Zone which are responsible for managing the road network within their respective boundaries. Municipalities are in charge of the maintenance of streets but not of large roads and highways (except GAM and ASEZA). The MPWH has 12 regional offices, in each governorate. The Ministry has a Roads Executive Affairs Department and a Roads Maintenance Department for road construction and maintenance, respectively. This is in addition to a Roads Technical Affairs Department for technical work such as road

studies, land acquisition for road works, and defining specifications and price adjustment rules for roads projects. Jordan's main transport infrastructure consists of a 7,900 km-long road network, with some 3,400 km classified as main roads.

Hence, the responsibility for the infrastructure development of the most important mode, road transportation, lies with the MoPWH.

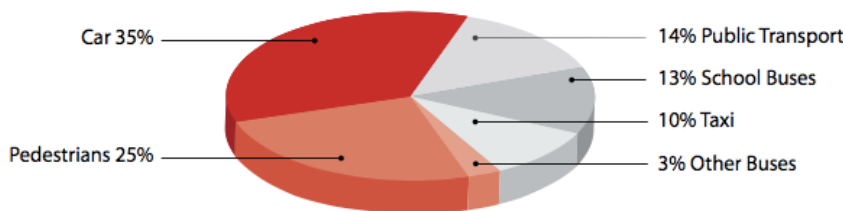
The MoT focusses on the other modes, aviation, maritime, rail and public transport, but is still responsible to design an overall policy for the transport sector, including road infrastructure development.

Coordination among them is very weak and numerous grey zones exists between the competence of each of those entities. For instance, a private company operating the route between Zarqa and Amman is not allowed to take passengers within GAM boundaries. It is under the LTRC outside of GAM borders, and under GAM authority within them.

Jordan is lacking proper public transportation and users are complaining from the quality of the services provided, the low frequency of bus and the lack of information on the routes. As a result, public transportation represents only 14% of the transportation mode, whereas private car reaches 35%, pedestrian mode 25%, school bus 13% and taxi 10% (figure 8.1).

Jordan counts 1.58 m cars in 2018, an increase from 1.43 in 2016 and 1.28 in 2014⁴¹. The number of private cars has doubled between 2004 and 2014, from 0,61 m to 1.28 m, at a growth rate of 8.4 percent per year, according to the Central Traffic Department⁴².

Fig. 8. 2. Transport Modal Split (2010)



(Ministry of Transport, 2012, Jordan Long Term National Transport Strategy and Action Plan, 223 p.)

⁴¹ <http://www.jordantimes.com/news/local/143m-vehicles-registered-jordan>
<https://www.ceicdata.com/en/jordan/number-of-vehicles/number-of-registered-vehicles>

⁴² <http://www.jordantimes.com/news/local/one-every-five-jordanians-owns-car-%E2%80%94-study>

The Greater Amman Municipality (GAM) handles public transport functions in the capital since November 2007 (they were handled by the Public Transport Regulatory Commission (Ministry of Transportation) before. Thanks to a new law “Regulation of the Transportation of Passengers” (2017), GAM’s mandate was broadened since the municipal authority can now organize all transport operators within its area around the BRT routes. GAM fully regulates public transport within its boundaries. This regulatory activity includes public transport planning, contracting bus operators, setting fares, setting parking policy, licensing taxis and delivering parking permits. It also develops and finance mass transit infrastructure within its boundaries, with the ongoing Amman Bus Rapid Transit Project supported by the French Development Agency.

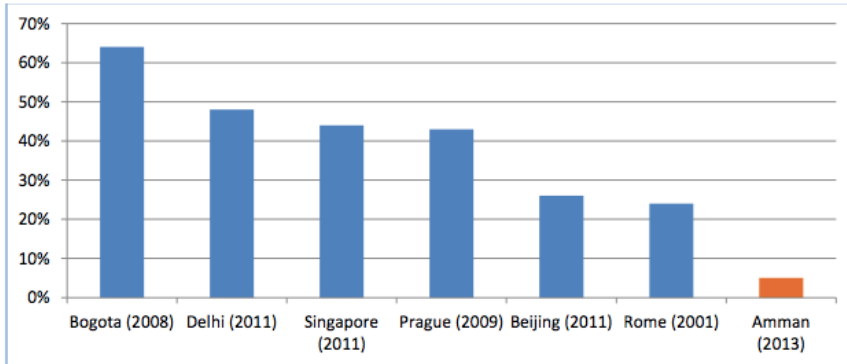
The modal share for trips in Amman is dominated by cars (34%) and Taxis (17%), while walking and school buses had also important shares (26% and 13% respectively). Buses represent about 5% of trips while the remaining 5% is by forms of shared transport. The modal share for vehicles is presented in table 8.2, wich shows a steady increase of the share of cars on the roads reaching around 64 percent in 2008, while the share of taxis, buses and minibuses has been dropping (WB 2014). This is very low compared to other cities worldwide (fig 8.2).

Table 8.2. The Evolution of Vehicular Modal Share in GAM (1985-2008).

Study	Private Vehicles (%)	Taxis/Services (%)	Buses and Minibuses (%)	Pickups/Vans (%)	Trucks (%)	Total (%)
1985	53	25	5	10	7	100
1988	53	28	5	10	3	100
1999	47	22	5	18	8	100
2005	52.6	19.2	5.5	15.8	6.9	100
2008	63.9	14.8	3.2	13.0	5.1	

(GAM Master Plan 2008)

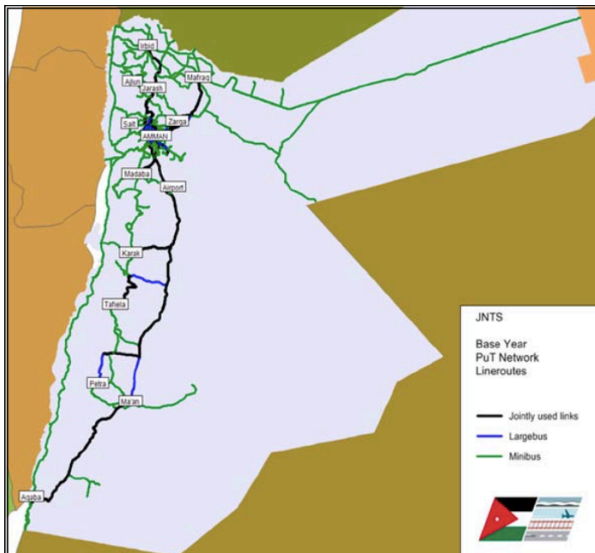
Fig. 8. 3. Share of Public Transport in Modal Split in Amman compared to other cities



Source: World Bank Urban Transport Diagnostic Tool, 2013

Only large cities such as Irbid and Zarqa have internal bus transportation. Most of cities are connected to Amman by bus lines. Over the past ten years, with the doubling of the population, and of the number of cars, most of Jordanians are suffering from traffic congestion. This ever-increasing traffic congestion is reducing the public transport operators productivity and revenues, as the vehicles are spending an increasing time to complete their routes, which reduce the number of passengers they carry. It has been suggested to limit or ban private vehicles from congested street along which public transportation routes run during peak hours. This is one of the reason why the BRT is much needed with its 32 km of dedicated lanes.

Fig. 8. 4. Jordan bus network, base year 2010



(Ministry of Transport, 2012, Jordan Long Term National Transport Strategy and Action Plan, 223 p.)

The GoJ has prepared a Transportation Strategy in 2012, and is currently updating it. A new Transportation Law has been adopted in 2015. Mid 2010, a shift occurred in the debate concerning public transportation modes, with the creation of an user association, Ma'an Nasel, which created the first transportation map for Amman in 2014. When subsidies on fuel were removed, Ma'an Nasel called for the creation of a Passenger Transport support Fund. But as the fare is paid by cash, it is difficult for the government to subsidize the public transport sector. In 2007, GAM initiated a PPP with the establishment of al-Mutakamilah Company. It emerged as Jordan's largest public transportation operator with 409 large bus. In June 2019, a bus service card was created for GAM, at 2JD a month (a very low rate, equivalent to 5 trips), to promote the use of public transport.

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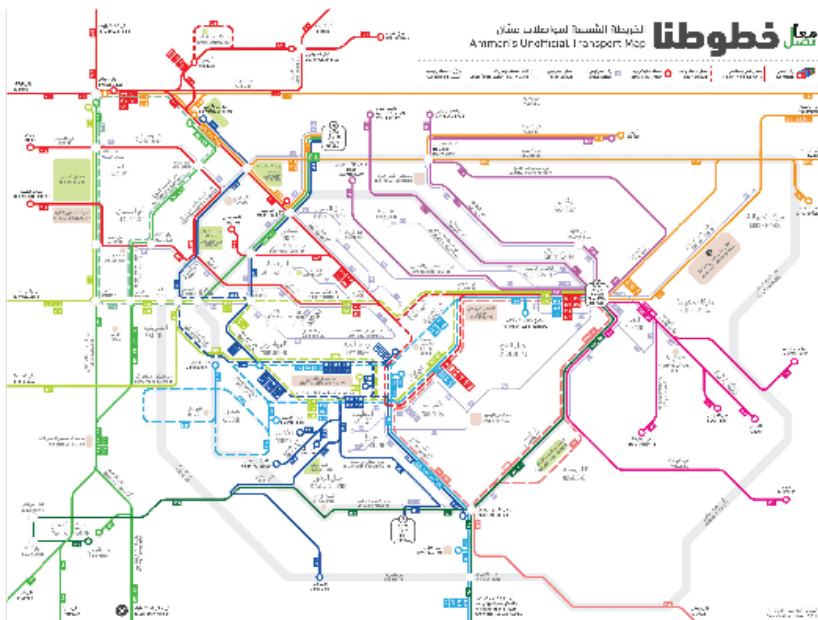


Figure 1 Ma'an Nasel: Amman's Unofficial Transport Map
Source: <http://maannasel.net/maps/>

LTRC collects registration and licensing fees (72,000 JD in 2013), and an additional budget allocation for the transport fund that subsidizes bus transportation for students (2,9 m in 2013) and for bus terminal project (3,9 m). Public transportation subsidies are only concentrated on accessing remote universities and concern only their students (Al Hussein University, the Jordan University of Science and Technology, Al Bayt University and the Hashemite University).

“The removal of transport fuel subsidy and the lack of adequate public transport is primarily hurting vulnerable groups such as the poor, the youth, and women. Poor households’ expenditures on transport were about 15 percent in 2010, and this has certainly increased after the removal of fuel subsidies. A recently completed USAID study highlighted that the cost of transportation is a major impediment for access to jobs. On average, about 23% of employed youth salary is allocated to transportation costs and could reach up to 46% of salary in Southern Shouneh area for example, which are very high figures. Meanwhile the average door-to door daily round-trip was estimated at about two and half hours. Most women avoid public transportation due to safety concerns, and about 40% of public transport users have reported being subjected to harassment” (WB 2014).

The sector need to be restructured as it counts a too large number of routes (1600) and thousands of individual operators. The number of routes could be reduced to 400 routes to increase the efficiency of service (CSBE 2017). This high number of routes is explained by the pressure landowners have exerted on the Ministry of Interior’s Traffic committees in the 1990’s to serve their neighbourhood, even with low population density, as they would benefit from an increase of property values if those properties are served by public transportation. This favour granting allocation of routes was much reduced by the creation of the LTRC in 2000.

The same route can be operated by several operators. And the most profitable routes are inherited by operators sons. The only way to rationalize the sector is to structure it around large companies.

Amman BRT project 2020

Amman BRT and Amman-Zarqa BRT are the backbones of Amman-Ruseifa-Zarqa agglomeration integrated public transport network. The project started in 2008, was suspended in 2011 during the Arab Spring. It has resumed in September 2015 with financial support from the French Development Agency (AFD). Its main target is to increase public transport mode share to 25% by year 2025. It is highly needed as Greater Amman population has doubled in eleven years (2004-2015). GAM is suffering from traffic congestion and lack of women economic participation (partly due to the absence of public transportation). GAM BRT vision is to Provide a premium quality, economic, car-competitive mass transit system that will attract the entire spectrum of Amman citizens including car owners, will significantly contribute to Amman’s aspirations of efficiency, inclusivity and sustainability.

Amman BRT will be the city’s first bus rapid transit system, in which premium; high-capacity buses run on exclusive and completely 32 km of segregated lanes. The system will include development and design of stops, stations, and passenger information, vehicle specifications. Interchanges and terminals, buses running on a frequency possibly as low as 3 minutes along Amman’s busiest corridors. An extensive network of feeder services is being designed along with the BRT (buses and smaller vehicles to reach densely inhabited areas of East Amman with narrow streets).

Amman BRT is expected to reduce the distance traveled using private vehicles by 85 million kilometers per year and the distance traveled using taxi by 12 million kilometers per year. Each BRT bus will accommodate up to 150 passengers or equivalent to about 110 private vehicles considering an average 1.4 people per car currently in Amman. By 2020, the 150 rapid buses in Amman will be carrying 315,000 passengers a day. 4,000 native trees (requiring less water and care) will be planted on median islands separating BRT lanes from traffic lanes along corridor 1 (Sweileh – Mahatta)⁴³.

The Amman-Zarqa BRT projects constitutes of 22 km of segregated lanes built in the center of the current Amman-Zarqa highway from Al Mahatta to Zarqa bus terminal. It will transport 120,000 passengers daily. The project has resumed in 2018 with AFD support. Light rail solutions between Amman and Zarqa have also been discussed in 2015-2016.

Because of the heavy subsidizing of water and sanitation, planners and municipal councillors push for more compact cities. Planning for more compact cities would be crucial to reduce both the installation costs and the loss in the networks. Delivering water and electricity to remote settlements from the city center is very expensive. It is crucial to plan for more compact cities in order to reduce those costs, and as it was proven by the Urban Growth Scenarios prepared by the World Bank for the five largest cities of Jordan (Amman, Russeifa, Zarqa, Irbid and Mafraq) (World Bank 2018b).

⁴³ <http://ammanbrt.jo/en/default.asp>;

<https://ijce.iust.edu.jo/issues/paper.php?p=2372.pdf>

9. URBAN ECONOMY: MUNICIPAL FINANCE, JOB CREATION, LAND VALUES

Overview

Jordan is a highly urbanized country with 90 percent of its population residing in urban and small town settings, in addition to 16 refugee camps. Municipalities perform a critical administrative function as they are the front line agencies in providing local services, along with line ministries. Municipalities are where all economic tensions appear, including unemployment, housing crises, and the existence of the informal sector.

Jordanian municipalities have suffered from structural financial issues since the 1990's. Most of them are underfunded and chronically indebted, as their revenue collection does not cover the necessary expenses for service delivery. Municipalities are facing structural financial constraints, which are the local manifestations of broader economic issues. They suffer from insufficient local revenues due to a lack of property tax payment, an absence of taxation on vacant land, and insufficient licenses fees in an economy where the informal sector accounts for 26% of GDP but 40% of the employment (UNDP 2013, UNHCR 2012).

Municipalities are facing constraints to finance service delivery with low own income revenues, and municipal staff salaries accounting for half the budgets. More than half of their budget depends from a governmental transfer. Even after the decentralization law was adopted in 2015, municipalities are submitted to a heavy central control over their budgets and the loan process through CVDB. Municipalities are not notified in advance about the size of the governmental transfer amount, this blocking their budget preparation. The grant transfer is sometimes delayed until May and municipalities need to borrow from the CVDB.

Municipal self-revenues collection is rather low as it is tight to under declared professional licenses and property taxes. Self-revenue collection is increasing, but remains rather low as professional licenses are not all paid, in part due to a large proportion of the economy being informal. Property tax is only paid when a transaction has occurred. Only high-ranking municipalities manage to increase their self-revenues collection.

Direct investment by municipalities is limited. Most of the investments come from the line ministries through their deconcentrated units at governorate-level. However, they are not coordinated in an integrated urban approach and are not managed according to area-based needs.

Untamed urban sprawl is sharply increasing the demand for services in additional informal neighborhoods.

As a result of these structural constraints, most municipalities are suffering from a lack of accountability. As they provide insufficient roads maintenance, irregular solid waste collection, and lack public spaces and cultural activities, residents are not willing to pay their taxes. In the

context of rising unemployment, Jordanian municipalities have been hiring too many municipal staff on a patronage-based trend. Salaries account for half of their expenditures.

Greater Amman Municipality's budget is equivalent to all the other municipalities combined (JD 320 million compared to JD380 million in 2016). Amman attracts 80% of the foreign direct investments.

Municipalities have a general local development mandate. The Ministry of Interior and the Ministry of Municipal Affairs exhibit major tutelage roles over the sector and only 3 per cent of total government expenditures occur in Municipalities. In order to foster job creation at municipal level, Local Development Units have been created in the 1990's. Some received support from the EU but in most of the case, they consist of one person. They have been reactivated in the framework of the World Bank-AFD RLDP 1 and the MOMA PLEDJ project (2011-2015).

9.1. Municipal Finance

Urban public finance is possible only where real economic value is generated in cities.

The level of municipal expenditures in Jordan is small. Including GAM and joint councils; the level of municipal expenditures relative to GDP is 6.2 percent. This is low by international standards; the OECD (2016) reports that subnational government expenditures average 7.2 percent of GDP across a large sample of countries. 6.2 percent is low, also, in terms of expanding the role of municipal governments in Jordan's system of decentralization (Timofeev A., Wallace S., 2017).

The total size of Jordan public sector stood at 36% of GDP in 2016. All municipal government combined expenditures, including GAM, ASEZA, Petra Economic Zone and all municipalities, account for less than 7 percent of the general government expenditure in 2015, with JD 580 million in 2015. Half of these municipal expenditures are accounted for by the Greater Amman Municipality, covering 42% of the national population.

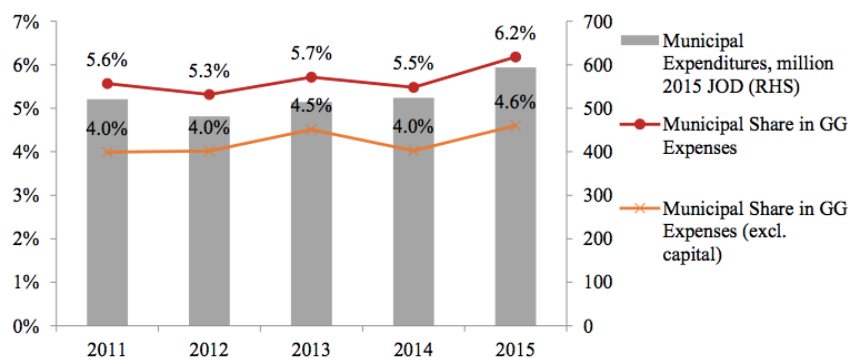
Table 9. 1. Selected Economic Indicators for Jordan

	FY 2014	FY 2015	FY 2016
GDP (US\$ billions)	25,437	26,637	26,970
GDP per capita (US\$)	2,890	2,795	2,894
Population (millions)	8.80	9.53	9.55
Real GDP growth (%)	3.1	2.4	2.8
CPI (average annual change) (%)	1.7	- 1.6	1.25

Source: PEFA Assessment, Jordan, 2016. Central Bank Reports.

Note: CPI= consumer price index; FY= fiscal year; GDP= gross domestic product.

Fig. 9. 1. Total Municipal Expenditure (including GAM) 2011-2015



(Timofeev A., Wallace S., 2017, *An Assessment of the Subnational Fiscal Framework in Jordan*. International Center for Public Policy, Andrew Young School of Policy Studies, Georgia State University, November 2017, 32 p. Prepared for the World Bank.)

In 2016, total municipal revenues (with the exception GAM and ASEZA) reached 359,8 million JD. Of this, 110 million were from the governmental transfers, 9 million from the governmental grants, and 240,5 m in self revenues. 58% of self revenues (138 million JD) were generated by building and land taxes. Waste collection fees reached 16,5 million JD (7% of self-revenues). Betterment levies charged by the municipalities to support the extension of infrastructure to new areas totalled 13,2 million (6% of self-revenues) (table 8.2).

Table 9. 2. Municipal revenues by categories and types.

Municipality Category	First Category	Second Category	Third Category	Grand total
Governmental transfer	39,606,678	55,420,339	14,972,983	110,000,000
Governmental grants	1687,230	5,197,724	2,391,200	9,276,154
Building and land taxes	53,238,153	63,090,117	21,992,750	138,321,020
Professional Licenses	2,694,153	3,000,808	174,721	5,869,681
Buildings Permits and Professions	11,394,192	3,020,069	378,704	14,792,965
Betterment levies	5,850,069	6,790,966	631,651	13,272,687
Charges	7,038,118	1,528,368	101,181	8,667,667
Waste collection	12,358,265	3,687,354	507,195	16,552,814
Rents	6,228,697	1,682,788	168,441	8,079,927
Diverse revenues	21,091,560	8,641,735	2,668,685	32,401,980
Capital Investment Revenues	556,451	1,923,442	102,308	2,582,201
TOTAL	161,743,566	153,983,710	44,089,820	359,817,096

(UN Habitat 2019, JNUP. Source : MOMA Municipal budgets 2016)

Category 1 municipalities include all the Governorate centers (including Amman and Aqaba). Their population is more than 100,000 inhabitants. Category 2 municipalities includes 56 municipalities, each of whose population numbers between 15,000 and 100,000 inhabitants.

Category 3 municipalities includes 32 small municipalities under 15,000 inhabitants, including rural localities. Under the previous version of the Municipalities Law, there was a fourth category for municipalities with a population of less than five thousand residents. As there were only seven such small municipalities, that group was merged with the third category in the 2015 Law.

Municipal budgets are heavily dependent on a transfer allocation system that dates back to 2002 and take into consideration a number of socio-economic factors, including population, percentage of poor, distance to Amman. More than half of the municipal budget comes from government transfer (8% tax on fuel derivatives and 40% on car sales). The transfer formula started a readjustment process in 2012, but this is yet to be finalized and mayors have expressed concerns about the lack of predictability in the system, with the central government repeatedly renegeing on its full commitments as foreseen by the share of fuel derivatives and car sales.

The 2015 Municipalities Law (Art. 16) allows for four categories of revenues for municipalities: 1) Taxes and charges; 2) returns on investment projects; 3) self-generated revenues; and 4) grants and donations (table 8.3).

Table 9. 3. List of Municipal Revenue source (taxes and fees)

Municipal Revenue source	Legal basis	Base and rate
Land and buildings tax*	Law No. 11 of 1954	Nationwide rate of 10% of the annual rental value less 20% depreciation; 2% rate for vacant land.
Business license fees	Law No. 28 of 1999 on business licenses	For each line of business, license fees are set in fixed annual amounts uniformly for all municipalities in the same category (in 1 st category municipalities, fees are almost double than those in other municipalities). For some sectors, the amount of the fee is also linked to the scale of operation (e.g., per seat in a theater).
Construction permit fees	Regulations No. 136 of 2016	For each type of structure (e.g., residential, commercial, etc.), permit fees are set in fixed amounts per sq. m. uniformly for all municipalities in the same category; fees per sq. Feet are set higher for larger municipalities.
Betterment levies	Law No. 79 of 1966, (articles 52-54) Law No 41 of 2015 (Art 5(G))	Up to 50% of improvement costs apportioned according to frontage affected.
Fruit and vegetable market fees	Regulation No. 129 of 2016 on wholesale markets for fruits and vegetables	Nationwide rate of 4% sales.
Advertisement fees	Regulations No. 76 of 2016 on advertisements	Annual fees are set in fixed amounts per sq. m. of advertisement surface uniformly for all municipalities in the same category; in larger

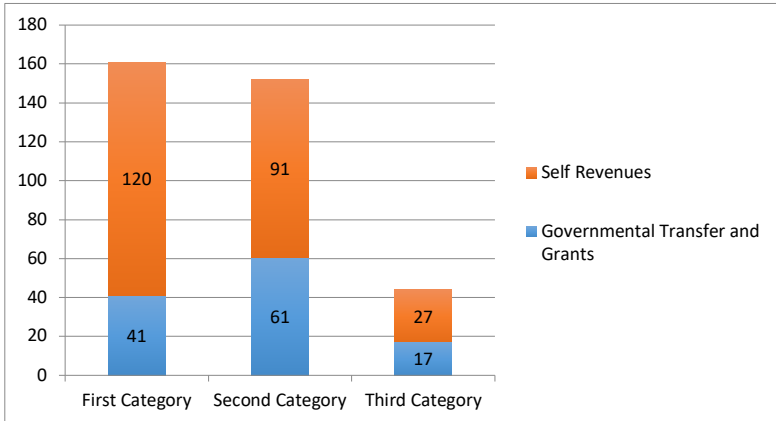
		municipalities, fees are almost double of those in smaller municipalities.
Parking fees and fines	Regulation No. 123 of 2016 on parking fees	For each type of vehicle (cars, trucks, buses, etc.), fees are set uniformly for all municipalities.
Slaughtering fees	Regulation No. 139 of 2016 on slaughterhouses	For each kind of livestock, fees are set uniformly for all municipalities.
Garbage fees	Regulation No. 68 of 2016 on garbage collection	Fees are set in fixed amounts per household uniformly for all municipalities in the same category; for category 1 municipalities the fees are set almost three times higher than for category 3.
Fines	Law No. 35 of 2006 on municipal courts	Many types of fines (traffic violations, unlicensed businesses, unauthorized construction, public health violation, etc.) can only be received if there is a municipal court in the jurisdiction.

Notes: *In addition to the land and building tax, properties are also subject to the sewerage tax (3 percent earmarked for the water authority) and the education tax (2 percent earmarked for the Ministry of Education), which are collected jointly with the land and building tax. (Timofeev A., Wallace S., 2017)

In Jordan, own sources of municipal revenues are primarily user fees and benefit taxes. There are, however, a number of issues with the design and implementation of these revenue instruments that limit the realization of expected outcomes, such as enhanced accountability and fiscal responsibility. Most fees are set by the national government in fixed amounts (e.g., business licenses), which have not been regularly adjusted for inflation. Thus Business license fees have not been revised since 1999. To the extent that the business license fees act a tax on imputed business income, without being tailored to local conditions, they might place a heavy burden on some small businesses. Furthermore, without local rate-setting, these might not capture differences in local costs of municipal services to the extent that business license fees are supposed to capture certain municipal services benefiting those businesses (e.g., sanitation).

Because of the lack of rate-setting discretion, currently municipal governments have very limited revenue autonomy in Jordan. The only revenue sources that can be affected at the margin by local authorities are nontax revenues, in particular the leases of municipal assets. These non-tax sources of revenue (e.g. rent, project revenue, interest on deposits) cover less than five percent of municipal budgets (Hallaj Ababsa 2015).

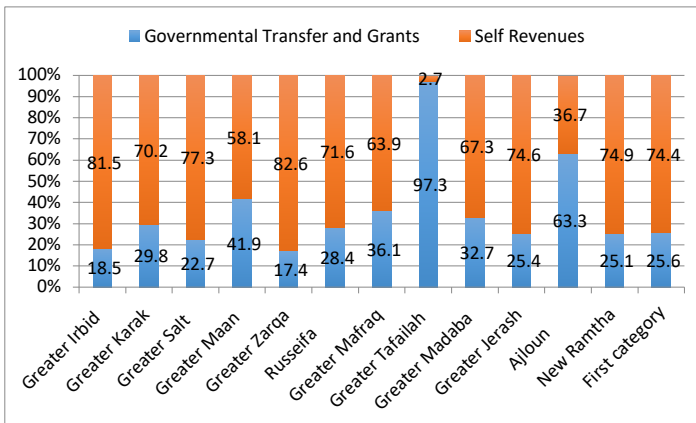
Fig. 9. 2. Municipal revenues by categories of municipalities, 2016 (except GAM) in Million JD



(UN Habitat 2019, JNUP. Source : MOMA Municipal budgets 2016)

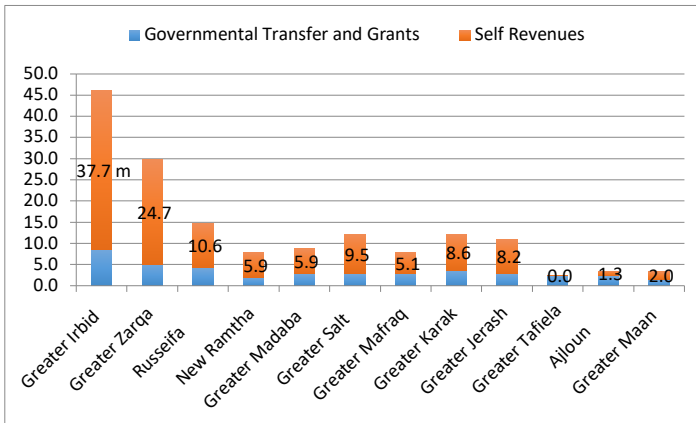
In first category municipalities - the 11 governorate centers plus Ramtha - self revenues are three times higher than the government transfer in 2016 (120 million compared to 41, excluding GAM). But in general, the smaller the municipality is, the more it depends on the governmental transfer. This is due not only to a reduction in self revenues in the smaller municipalities, but also to the social pressures put on the councillors by the residents not to collect the taxes.

Fig. 9. 3. Municipal Revenues of First Category Municipalities in 2016



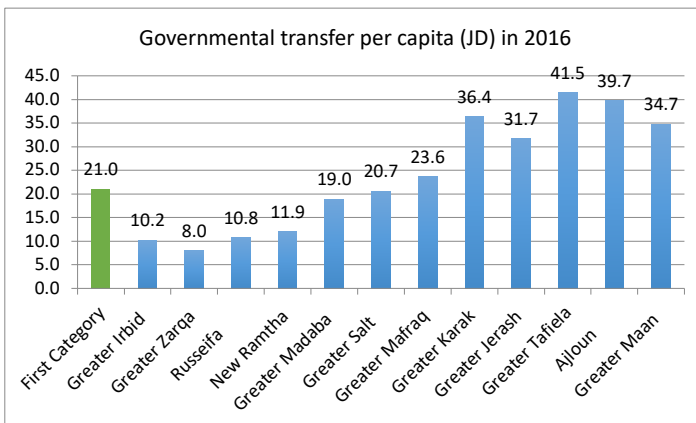
(UN Habitat 2019, JNUP. Source: MOMA Municipal budgets 2016)

Fig. 9. 4. Municipal Revenues of First Category Municipalities in 2016 in million JD



(UN Habitat 2019, JNUP. Source: MOMA Municipal budgets 2016)

Fig. 9. 5. Governmental Transfer per capita for the First Category Municipalities in 2016 in m JD



(UN Habitat 2019, JNUP. Source: MOMA Municipal budgets 2016)

Self-revenue collection has increased in the large municipalities since 2014. In 2014, total municipal revenues reached 243,5 million JD. 147,2 were governmental transfers and grants.

Fig. 9. 6. Revenues by Type for Municipalities (except GAM and Aqaba) in 2016

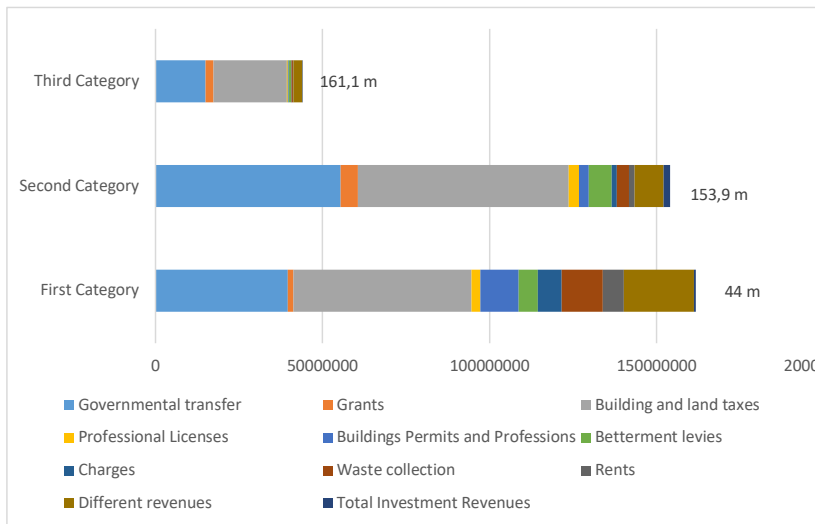
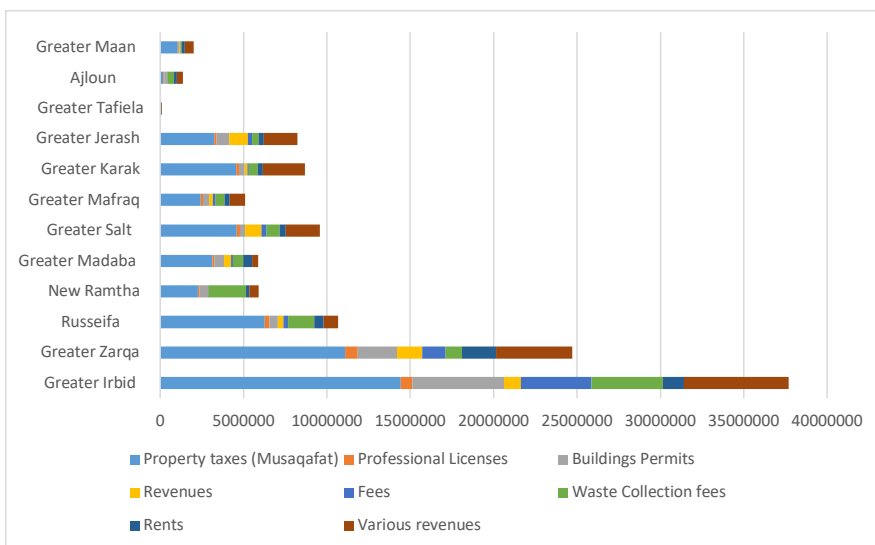
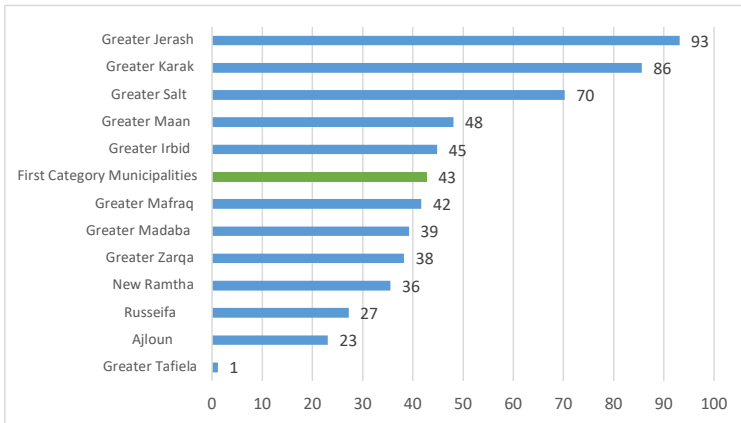


Fig. 9. 7. First Category Municipality Self-Revenues by Type in 2016



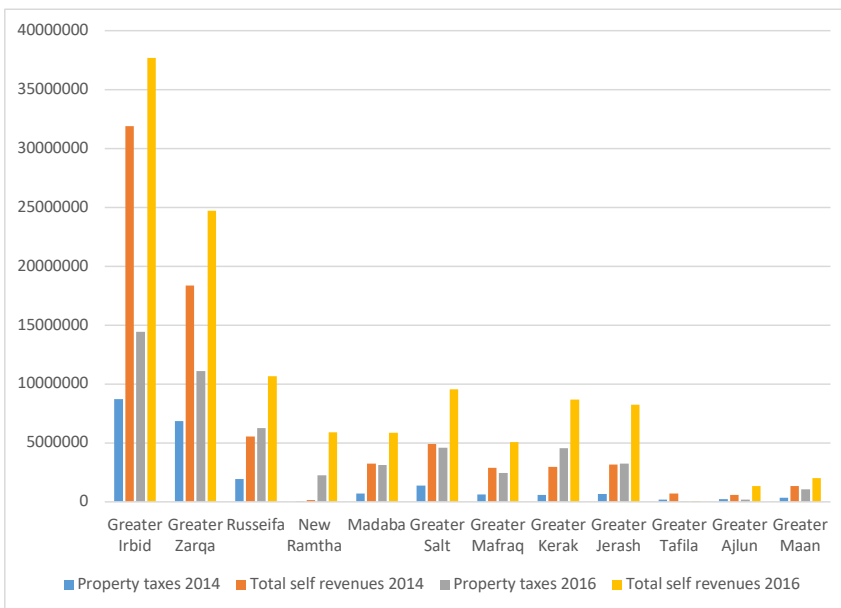
(UN Habitat 2019, JNUP. Source : MOMA Municipal budgets 2016)

Fig. 9. 8. First Category Municipalities Revenues per capita in JD (2016)



(UN Habitat 2019, JNUP. Source: MOMA Municipal budgets 2016)

Fig. 9. 9. First Category Municipalities Self Revenues increase 2014-2016.



(UN Habitat 2019, JNUP. Source: MOMA Municipal budgets 2016)

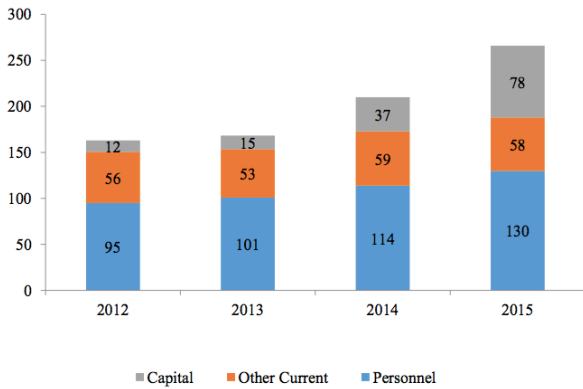
Table 9. 4. First Category Municipalities Income per type (JD) in 2016

2016	Property taxes (Musaqafat)	Professional Licenses	Buildings Permits	Revenues	Fees	Waste Collection fees	Rents	Various revenues	Total self revenues
Greater Irbid	14434616	699863	5480056	1027805	4228224	4286195	1260733	6281122	37698615
Greater Kerak	4549362	187128	326257	156629	109761	516492	310616	2525082	8681327
Greater Salt	4593062	187142	309287	979707	318681	764735	374346	2044313	9571275
Greater Maan	1044344	64088	53357	25055	40265	67957	189995	517869	2002929
Greater Zarqa	11101120	752272	2335403	1525016	1389618	1008602	2037269	4568302	24717602
Russeifa	6269131	267285	530570	325812	291321	1567032	542071	883131	10676353
Greater Mafraq	2432656	131197	363157	218672	191087	513745	308211	930705	5089430
Greater Tafilal	12340	11494	2287	1678	6399	3772	6555	26310	70833
Madaba	3119596	116432	590028	428430	118627	618417	533448	342350	5867327
Greater Jerash	3243930	128858	764738	1128224	253152	377520	314332	2031566	8242321
Greater Ajlun	180000	72000	100000	30500	53700	390000	175000	356000	1357200
New Ramtha	2257997	76393	539052	2541	37283	2243797	176122	584810	5917995
	53238153	2694152	11394191	5850069	7038118	12358264	6228697	21091560	119893207

The municipal capital expenditure includes the cost of equipment, and current infrastructure maintenance (including roads, public spaces, storm water facilities). Its increase is a good sign, as it reflects increased investments. However, as increased infrastructure implies higher operational and maintenance costs, it remains an area of concern.

Municipalities are facing constraints to finance service delivery with low self-income revenues, and municipal staff salaries accounting for half their budgets. This is a heritage from the amalgamation process, when municipal employees were merged into the newly created municipalities, resulting in duplication of functions. But Municipal employment has accelerated precipitously over the past ten years, more than doubling from 10,000 in the mid-1990s to some 22,000 employees in 2015. Despite an announced municipal hiring freeze, the amount spent by municipalities on salaries and wages increased from JD36.9 million in 2002 to JD44.1 million in 2004, 95 million in 2012 and 130 million in 2015 (World Bank 2015, MOMA budgets 2016).

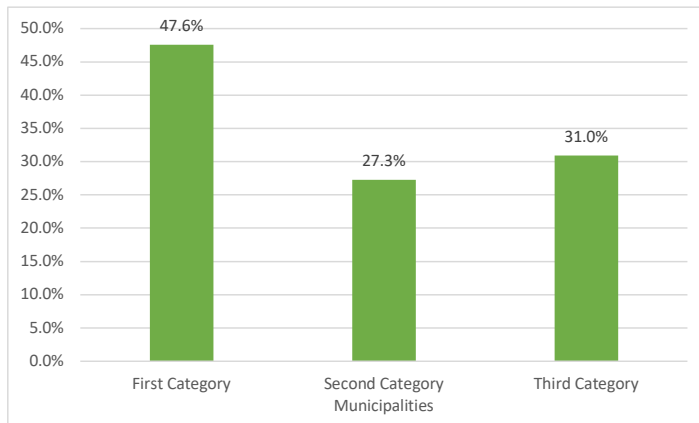
Fig. 9. 10. Composition of Municipal Expenditures, real 2015 JD (excluding GAM)



(Timofeev A., Wallace S., 2017).

Salaries accounts for half of the largest municipalities' budgets (47,6%), but only a third of second and third categories municipalities' budgets.

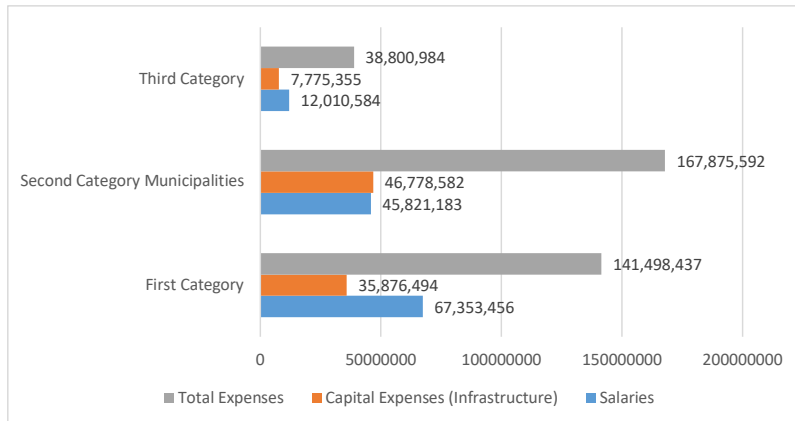
Fig. 9. 11. Share of Salaries in Municipal Expenditures by Categories in 2016



(UN Habitat 2019, JNUP. Source: MOMA Municipal budgets 2016)

According to the Municipal Law 2015 (article 26), the salaries cannot reach more than 50% of the planned budgets.

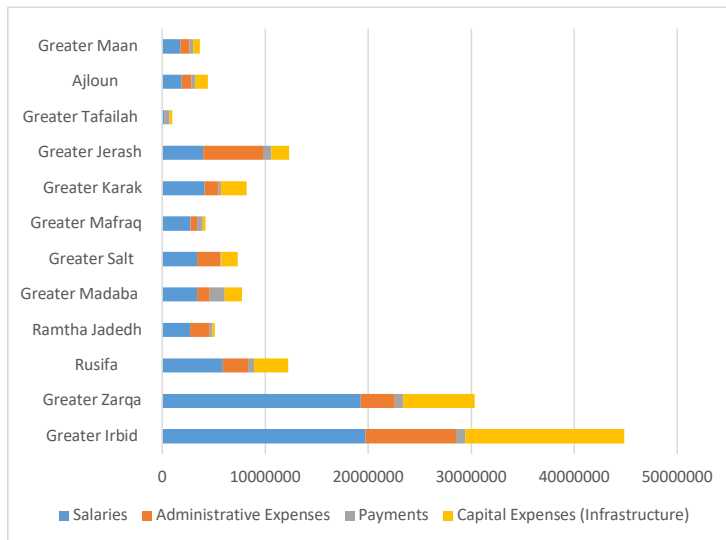
Fig. 9. 12. Total Municipal Expenditures, Salaries and Capital Investments by Municipal Category in JD (2016)



(UN Habitat 2019, JNUP. Source: MOMA Municipal budgets 2016)

Until 2011, only the three biggest Municipalities (Amman, Zarqa and Irbid) actually managed to collect a substantial part of these resources (JD 55.1 million for GAM and JD 19.1 million for the other 93 municipalities). The other Municipalities were dependent on the Ministry of Finance collecting on their behalf. However, in order to start progressive fiscal decentralization, municipalities have been collecting property taxes since 2011.

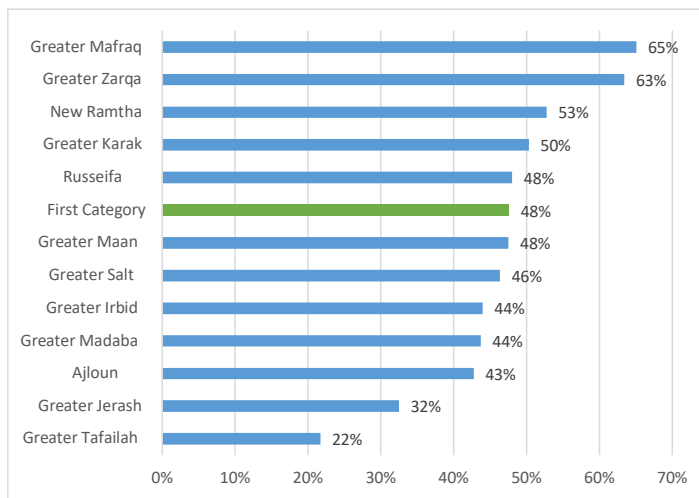
Fig. 9. 13. First Category Municipalities Expenses by Type in JD (2016)



(UN Habitat 2019, JNUP. Source: MOMA Municipal budgets 2016)

In absolute figures, the municipalities of Irbid, Zarqa and Russeifa, respectively the second, third and fourth largest municipalities in the country after Amman, have the largest numbers of municipal personnel, with salary payments accounting for 19 million per year for Irbid and Zarqa, and 6 millions for Russeifa. However, in percentages, Mafraq, Zarqa, Ramtha, Kerak and have more than half of their budgets allocated to personnel.

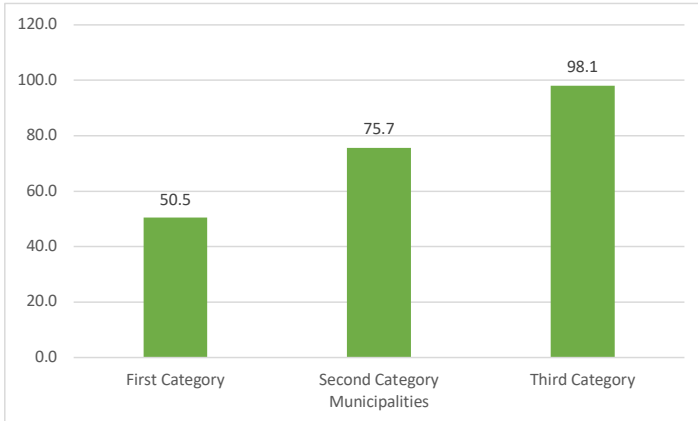
Fig. 9. 14. First Category Municipalities Share of Salaries in Expenditures. 2016.



(UN Habitat 2019, JNUP. Source: MOMA Municipal budgets 2016)

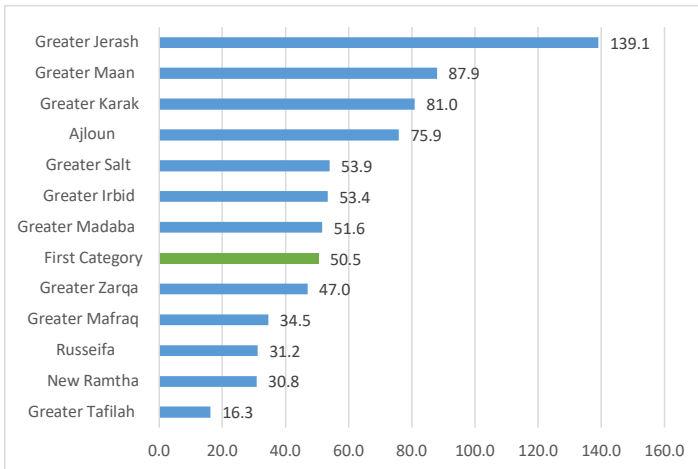
Municipal expenditures per capita are higher in smaller municipalities, as they benefit from governmental transfers. An average of JD 50 per capita and per year in first category municipalities increases to JD 75 in second rank municipalities, and JD 98 in third category ones.

Fig. 9. 15. Municipal Expenditure per Capita in 2016 (JD)



(UN Habitat 2019, JNUP. Source: MOMA Municipal budgets 2016)

Fig. 9. 16. First Category Municipalities Expenditures per capita in 2016 (JD)



(UN Habitat 2019, JNUP. Source: MOMA Municipal budgets 2016)

Table 9. 5. First Category Municipalities Expenditures Details in 2016 in JD.

	Salaries	Administrative Expenditures	Payments	Capital Expenditure - Infrastructure	Total Expenditures	Population 2015	Expenditures per capita
Greater Irbid	19,733,327	8,780,083	902331	15437912	44853653	840512	53
Greater Karak	4,129,056	1,351,540	214670	2511845	8207110	101377	81
Greater Salt	3,404,655	2,255,873	73432	1608986	7342946	136190	54
Greater Maan	1,739,957	918,593	346824	655571	3660945	41632	88
Greater Zarqa	19,246,994	3,349,923	820317	6928154	30345389	645954	47
Russeifa	5,886,317	2,443,463	601942	3320657	12252379	392646	31
Greater Mafraq	2742090	635253	567597	268669	4213609	122028	35
Greater Tafilah	215102	61753	437804	276117	990776	60803	16
Greater Madaba	3377768	1241969	1432108	1673752	7725598	149648	52
Greater Jerash	3999016	5774730	830670	1702682	12307099	88497	139
Ajloun	1908508	912801	375039	1251356	4465204	58803	76
New Ramtha	2708881	1896599	287457	240792	5133729	166508	31
First Category Municipalities	67353456	29622580	6890190	35876494	141498437	2804598	50

(UN Habitat 2019, JNUP. Source: MOMA Municipal budgets 2016. DOS Census 2015)

Municipal debt has been declining over the period 2012-2014, thanks to the growth of intergovernmental transfers. In 2019, the Ministry of Municipal Affairs has settled all municipal debts (JD 100 million), thus not encouraging structural reform.

Municipal budgets are under the strict control of the central government by means of intergovernmental transfers and the loan process through the CVDB. Two thirds of loans taken by municipalities in 2017 were for service delivery. Only one third (6,9 m JD) were productive loans.

Table 9. 6. Types of loans taken by Municipalities from CVDB in 2016-2017 (thousands JD)

	2016		2017	
	Nb	Amount	Nb	Amount
SERVICES LOANS	32	17,183	17	13,207
PRODUCTIVE LOANS	6	8,973	5	6,900
TOTAL	38	26,156	22	20,107

(CVDB Yearbook 2017)

Table 9. 7. Number of loans and amounts taken by Municipalities from CVDB in 2016-2017 (thousands JD)

	2016		2017	
	NB	Amounts	NB	Amounts
IRBID	9	1810	1	5150
KERAK	1	500	3	1500
BALQA	0	0	1	500
MAAN	4	5200	1	900
ZARQA	3	3200	1	1250
MAFRAQ	2	450	0	0
TAFILA	3	540	0	0
MADABA	0	0	1	250
JERASH	1	500	0	0
AJLOUN	1	550	0	0
AQABA	0	0	0	0

(CVDB Yearbook 2017)

With a rapid population increase and the increase of municipal staff, Jordanian municipalities have suffering from tight budgets, debts to the CVDB. While own-source revenues increased slightly relative to GDP since 2012, this growth has been outpaced by even larger increases in intergovernmental revenues, at least until 2015. As a result, in most municipalities own sources of revenues account for less than half of their total revenues (Timofeev A., Wallace S., 2017).

Municipalities have significantly increased their current expenditures plan, while others have contracted expenditures. A feasible explanation stems both from the variance in municipal capacities and challenges associated with current municipal income sources, namely: municipalities do not have the capacity to meaningfully increase their own revenues; (ii) central government allocations are not strongly correlated to population figures; and (iii) most Municipalities are already too indebted to borrow more.

Greater Amman Municipality

The metropolitan area of Amman, Jordan's capital, accounts for approximately 40 percent of the country's population; 80 percent of its industry; and 55 percent of total employment. In recognition of the expansion of the city and the integration of nearby villages and suburban developments, the perimeter of the GAM was extended in 2007 to include seven additional districts. It was then decreased in 2013.

The increasing level of urbanization, as well as the burgeoning demands on civic services by the rapidly growing population, has created tremendous pressure on the GAM to put into place efficient and accountable systems for delivering municipal services. To address this need, the GAM has embarked on a Capital Investment Plan (CIP). The goal of the plan is to upgrade existing systems for delivering urban services, and to put in place new infrastructure, such as

a Bus Rapid Transit System, which is expected to enhance the quality of traffic management in the city. The GAM is currently financing most of its CIP from donor support (for example, the Bus Rapid Transit System [BRTS] is financed through a loan from AFD) (PEFA 2017)

The GAM is by far the largest local government in Jordan, with more than 22,000 staff organized into seven administrative units (table 8.8). The GAM's efforts to improve the quality of its financial management and enhance its financial sustainability will also serve as a model for other local governments in Jordan.

Table 9. 8. GAM Aggregate Fiscal Data

GAM actuals (2017 Estimated) (Jordanian Dinars, millions)				
	2014	2015	2016	2017 Est
Revenues	238	258	280	296
Own Revenues	218	243	264	276
Grants	20	15	16	20
Expenditures	288	315	348	496
Payroll and related	119	126	133	144
Operating expenses	22	22	23	19
Other expenses	22	27	22	27
Capital expenditures	84	107	129	224
Funded projects	3	2	11	52
Expropriation of land	38	31	29	30
Deficit, financed by:	50	57	68	201
Borrowing for capital expenditures	50	3	19	118
Own capital revenues	0	54	49	74
Capital Grants	0	0	0	8

Source: GAM "Financial History" Budget Directorate. PEFA 2017

Table 9. 9. GAM Budget Allocations by Function (in Jordanian Dinars, millions)

Actual budgetary allocations by sector		
	FY 2015	FY 2016
Mayor of Amman	1,600,000	2,105,000
City Manager	130,863,015	143,513,143
Environment & Regions	54,017	2,285,609
Public Works	117,559,335	188,267,705
Agriculture Affairs	764,369	684,947
Finance and Administration	35,202,303	70,973,932
Social Development	595,000	935,000
Economic Development and Planning	30,200,000	22,097,089
Total	335,838,039	430,862,515

Source: GAM Finance Department.

Note: GAM started to prepare sectoral budgets during FY 2015. Therefore, only the sectoral budgets for FYs 2015 and 2016 are included in this table.

Table 9. 10. GAM Budget Allocations by Economic Classification (as % of expenditures)

Actual budgetary allocations by economic classification (as a % of total exp)		
	FY 2015	FY 2016
Salaries and wages	40	42
Operational expenditures	7	7
Other (including interest on debt)	9	7
Developmental projects	31	31
Land acquisition	10	9
Project financing	4	3
Total expenditures	100%	100%

Source: GAM Finance Department.

9.2. Municipal Finance Reforms

Since the mid 1990's, the World Bank has been supporting Jordanian Municipalities in rationalizing their finances. The 2001 Amalgamation Law aimed at reducing the municipal debts. Between 1994 and 2000, municipal hiring increased by 70 percent – and salaries accounted for 45 percent of municipal expenditures. By 2000, around half of the 328 municipalities that existed at the time were declared insolvent. Annual budgetary transfers of about JD 12 million, and off-budget transfers (fuel and property tax) of about JD 30 million failed to close the gap. The Amalgamation Law 2001 was intended to solve these financial issues in the municipalities. The number of municipalities was reduced from 328 to 99, following the model of the Greater Amman Municipality in 1987. For three years, the hiring of employees was frozen and the municipal debts to CVDB were rescheduled (World Bank 2015).

“In 2001, the central government’s financial transfers were increased by raising the local share of the fuel tax from 3 to 6 percent. This response was only partially successful in addressing the problem of municipal finances. Administrative and jurisdictional restructuring and re-engineering a bottom-up approach to municipal development became necessary. The thrust of the Project was the reform of the intergovernmental fiscal transfer system through the adoption of reform by local and national level institutions involved. Improved fiscal transfers and reform of municipal policies were expected to improve resource allocation to achieve a more balanced growth in areas outside the capital Amman” (World Bank, 2015, RLDP 1)

Jordanian municipalities have a weak capacity for financial planning and management – a constraint that existed before 2011 but that was exacerbated by the refugee crisis. Their financial resources are inefficiently managed: they suffer from weak capacity for budget planning; weak controls on budget execution to ensure that actual expenditures mirror planned expenditures; and a lack of transparency and accountability in the planning and execution of actual projects (WB, IGF 2018).

Since 2011, municipal services have been adversely affected by the Syrian refugee crisis, and delivery performance is for the most part declining rapidly. The refugee crisis has exasperated a range of systemic and capacity issues that prevent Governorates and elected Municipal

Councils from meeting demands for services, and exceeding pre-crisis service delivery and local development requirements. During the period 2011-2015, several Refugee Response Plans have supported the most affected municipalities with grants for infrastructure improvement, especially in Mafraq, Irbid and Zarqa governorates.

The intergovernmental transfers have grown between 2012 and 2014. But the municipalities are not familiar with the intergovernmental grant formula. They are not notified about the size of their grant in advance of budget preparation. The intergovernmental transfers form half of municipal budgets. They are calculated through an equalization formula based on an estimation of expenditure needs (using population, land area and distance to Amman). The transfer formula has been revised with support from the World Bank. This new formula reflects municipal circumstances, while introducing a transparent equalization mechanism. 60% of the funds are based on needs (population, area), 20% is based on performance and 20% is gap filling. In 2014, the transfers were increased considerably, so the 20% filling gap was not used (World Bank, 2015, RLDP 1).

Those grants are paid late, between June and December each year. This delay in payment does not allow the municipalities to engage major infrastructural works⁴⁴. Even after the Decentralization Law was adopted in 2015, municipalities are still subject to strict centralized control over their budgets. Municipalities are not notified in advance about the size or amount of governmental transfers, which hinders their budget preparation. Grant transfers are sometimes delayed until May which necessitates municipalities having to borrow from the CVDB.

A main issue is that the intergovernmental fiscal system is derived from an ad valorem tax on oil derivatives. It fluctuates according to the world price of oil. This does not allow the municipalities to predict the sustainability of their governmental income.

The Government was concerned with the instability of the intergovernmental fiscal system, and the failure of previous bailouts. MOMA issued the 2008-2011 Municipal Development Strategy which identified the Regional and Local Development Project (RLDP) as a key element for the implementation of the reform agenda of the Municipal Sector, and is a first step towards developing the *Local Development White Paper* which is an outcome of the Project.

In 2017-2018, the World Bank has offered Technical Assistance (TA) on "Strengthening Municipal Financial Management Systems to Sustain Service Delivery in Municipalities Affected by the Refugee Crisis." The aim is to strengthen the current fiscal framework to provide sustainable financing options to municipalities, to reduce fiscal risks and to optimize allocative efficiency given the current situation in Jordan.

⁴⁴ Mafraq Municipality, Interview February 2019. Madaba Municipality, Interview March 2019.

9.3. Land Value Capture Mechanisms in order to link Finance to Urbanization

In the context of growing neoliberal policies, it is crucial that local governments manage to link the economic benefits of urbanization with public revenue generation by using upgraded land value capture mechanisms. This will allow the municipalities to finance infrastructure delivery and services needed to meet the needs of a growing urban population.

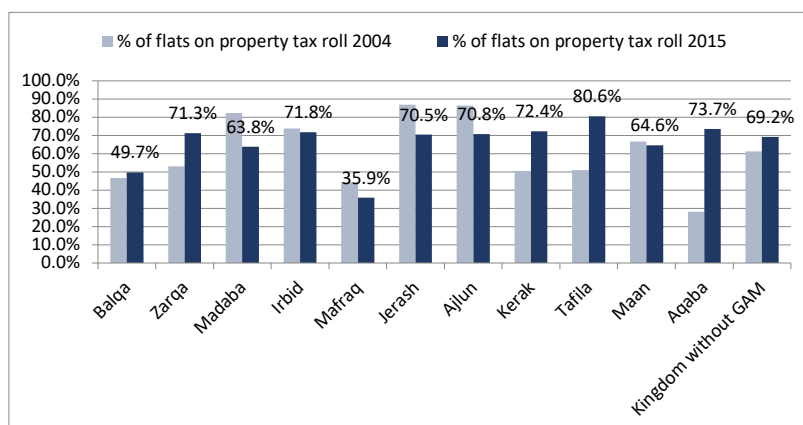
Land value capture mechanisms are used to bring territorial justice. They link economic growth with increased public revenues, allowing for continued urban economic success. They are generating a virtuous cycle of investment and growth. This cycle hinges on the ability of the government to capture some of the value created by urbanization.

Several tools can be used: the fixed asset tax (property tax), the betterment levies and the capital gains taxes. Capital gain taxes are charged at the time of property sales. However, in Jordan, they are under-valuated. Additionally, many non registered properties are sold on alternative circuits (*al hujja* contracts). “Conceptually, the property transfer tax can be distortionary, discouraging real estate transactions and providing strong incentives for misreporting of transactions and sale prices, especially between related parties, such as family members. Furthermore, unlike other countries applying a lower tax rate to owner-occupied properties that otherwise are valued just like similar rental properties, the preferential treatment of owner-occupied properties in Jordan occurs at the valuation stage; preferential treatment of vacant land; discontinuous depreciation allowance for properties built before and after 1974” (Timofeev A., Wallace S., 2017). Property taxes are considered benefit taxes as the amount of the tax directly related to the quality of local services and infrastructure captured in the value of properties.

Property taxes should provide an even greater contribution to government revenues but collection is low compared to developing countries. In 2010, the annual property tax accounted for about 2.6 percent of total governments taxes, however, by 2015 this decreased to 1,3 percent (JD87 million on 6,796 million). As a share of GDP, the level is 0.46 percent, only three-fourth of the international average for developing countries. Currently, the Ministry of Finance, GAM and the municipalities are in the process of expanding the property tax by interconnecting databases. For example, in Irbid and Zarqa, property tax database is linked with the car and professional licenses, as a result, no one can obtain a professional license without first paying all property tax outstanding (World Bank 2018a).

Property tax revenue collections are heavily concentrated in GAM. Non-GAM municipalities account for less than a quarter of property tax revenues while housing more than half of the national population. Furthermore, just two non-GAM municipalities (Irbid and Zarqa, housing only a quarter of non-GAM population) account for more than half of property tax revenues collected outside GAM.

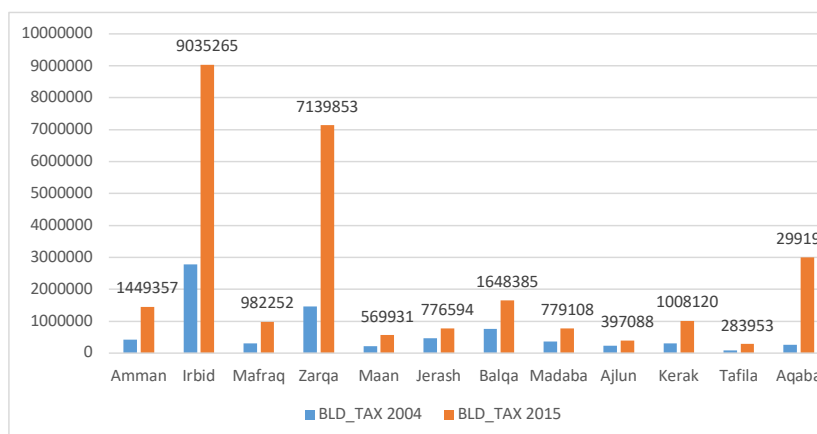
Fig. 9. 17. Expansion of the Property Tax Roll (outside GAM), 2004-2015



(Ministry of Finance, Property Tax Database, November 2017 for the World Bank)

Property tax collection for the municipalities (except GAM) increased by a factor of three between 2004 to 2015, from JD8,4 million to JD29,1 million. This was done with the expansion of the property tax roll, from 230,103 apartments plots in 2004 to 464,392 in 2015, and from 246,929 plots of land to 452,528 in 2015. However, due to the fact that registration is required at a building level and not for each apartment, not all the properties are included yet in the tax roll. The average property tax per housing unit is twice smaller in municipalities compared to GAM. Amman governorates counts 1,057,939 conventional housing units, for JD58,2 million of property taxes, or an average JD55 per housing unit, whereas Irbid governorate, with 395,505 housing units, collects only JD9,5 million, or an average JD24 of property tax per housing unit. The same goes for Zarqa governorate, with 294,818 housing units, for JD7,6 million, or an average JD26,45 per housing unit (Fig 9.19x).

Fig. 9. 18. Building Tax Amounts Paid by Governorates 2004-2015 (except GAM)



(UN Habitat 2019. Ministry of Finance, Property Tax Database by Municipality, November 2017)

On average, the property tax on rented apartments is three times higher than on owner-occupied apartments, and the tax on vacant units is two times higher. Property tax bases are different according to the tenure in Jordan, as a consequence, the property tax collected is much lower on owner-occupied units than on rented or vacant units. For example, as presented in Table 9.11 collected taxes varied from JD101 for an occupied 120m² apartment in Amman Residential A, to JD345 when the apartment is rented, and JD230 when it is kept vacant. In Irbid and Zarqa, those prices goes from JD58 for an occupied 120m² apartment, versus JD173 for the rented apartment, and JD115 when vacant. Preferential treatment to owners also includes vacant land, as it is only taxed at 0,04 percent of its rental value, even when located in areas provided with infrastructure. The estimation of the rental value is based on the agricultural production the land could give. As a consequence, a 10,000m² of vacant land is taxed in Amman only with JD40 per year, which may turn into an incentive to keep the land out of the market (World Bank 2018a).

Table 9. 11. Taxes on Occupied, Rented, Vacant Apartment in Amman and other major cities, 2017

	Amman			Major cities				
	120m ²	Occupied	Rented	Vacant	120m ²	Occupied	Rented	Vacant
Market Value		72,000	72,000	72,000	Market Value	37,000	37,000	37,000
Basic Value		840	2880	2880	Basic Value	480	1440	1440
Exemption 20%		168	576	576	Exemption 20%	96	288	288
15% tax		101	345	-	15% tax	58	173	-
(10 % tax)		-	-	230	(10 % tax)	-	-	115

(World Bank 2018. Housing Sector Assessment. World Bank calculation, interview with the head of property tax at the Ministry of Finance, November 2017).

A new property tax law was in preparation in 2010, but was suspended by the political context of the Arab spring. Its main components were the reduction of the property tax, the augmentation of the tax on vacant land, and the creation of a tax on property gain. In 2010, it was calculated that if all vacant land (serviced and un-serviced) were taxed at the full property tax rate, an additional JD 34 million (over 40 percent of 2009 collections) could be raised. In 2015, if all vacant land would have been taxed at 15 percent, an additional 53,7 million JD could be raised (452,528 plots at an average 119 JD per plot) (World Bank 2018a).

As of 2015, rented properties accounted for 8 percent of parcels on tax rolls but 36 percent of tax collections outside GAM. At the same time, vacant land plots accounted for 48 percent of parcels on tax rolls but 26 percent of tax collections outside GAM. The international best practice is to use the valuation basis according to data availability: if most of properties are rented, countries use the rental value; but if most of properties are owner occupied, countries use the market sale (capital) value. There is no threshold exemption for low valued properties

Municipal discretion over tax administration allows some control over the level of revenues raised and over the distribution of tax burdens among those who pay. These observations suggest that the current property tax system is not achieving its potential for municipal governments in Jordan. In particular, the following deficiencies identified in the previous reports remain to this day: difference in the tax treatment of “similar” owner-occupied vs. rented properties, even for non-residential properties.

Betterment levies

Betterment levies are a tool to recover some costs of specific infrastructure projects from the beneficiaries. Law No. 79 of 1966 on Zoning of Cities and Villages and Buildings (articles 52) allows for recovery of both direct and indirect costs of land use management and development from property owners in a given jurisdiction or any part thereof. Indirect costs include the administration, control and implementation of the provisions of this law in a given jurisdiction and for any related technical or administrative expenses (articles 52 (2)). Regional and local authorities in charge of land use planning can also impose special assessments to recover direct costs, including preparation, implementation and monitoring of projects on (articles 52 (4)):

- Construction or improvement of roads, including expansion of roads and sidewalks and improvements and the subsequent re-establishment of sidewalks and tree planting and street lighting and roadside benches and any other things to improve and beautify the cities;
- Acquisition of land and real estate and acquisition of usufruct rights for land and real estate;
- Planning and setting up beaches for swimming, planning and setting up hiking places,

sports fields, fields and playgrounds for children;

- Design, construction, planting and maintenance of public parks;
- Taking measures to prevent soil erosion in the vicinity of construction areas;
- Planting, maintenance and conservation of natural areas;
- Demolition, re-construction and re-planning of construction areas designated as unfit for residential or any other use;
- Demolition and reconstruction of any building or structure, including fences, sewers, water networks, railways, electricity and telephone lines;
- Creation of sewage, waste disposal, hygiene and other public health systems;
- Any other matter that may be stipulated in land use plan or any other matter improving the neighborhood and the general living conditions of the jurisdiction or its citizens.
(Law No. 79 of 1966 on Zoning of Cities and Villages and Buildings (articles 52)).

Both direct and indirect costs can be apportioned among properties based on their value or other characteristics. Among other characteristics, articles 52 (4) specifically mentions the area of a land plot and the length of its front façade. In the case of a leased property, responsibility for paying betterment levies is placed on the party collecting the rent regardless of who holds the title (articles 52 (7)). Full payment is due in one or more installments by December 1 of the year of the assessment while late payments are subject to a 10% fine if paid same year or 20% otherwise (articles 52 (8)).

Law No. 79 of 1966 on Zoning of Cities and Villages and Buildings (articles 54) also allows special assessments on value increments of vacant land plots adjacent to improved public facilities (articles 54): 20 percent of the land-value gains for land plots located within 500 meters of improvements, and 10 percent of the land-value gains for loans plots located between 500-1000 meters from improvements

Law No. 41 of 2015 (articles 5(G)(i)) states that “The Council of Ministers may issue the necessary by-laws in accordance with which the Municipal Council may charge fees for opening roads or paving them for the first time, to be paid by the owners of properties on both sides of the road, to cover part of the costs of opening and paving the road. The amount to be paid shall be determined by the Municipal Council based on the length of the property aligning the road. The fees charged shall not exceed 50% of the total cost.”

Based on this review, the legislation and regulations governing betterment levies are well defined. From a policy perspective, the taxes fit the norms of a municipal revenue source. In practice, as with many municipal sources, there is inconsistent application of the taxes. In particular, the law does not appear to provide municipalities with legal grounds to impose a fee when a land parcel is rezoned for a different use.

A total of 13.2 million JD was paid as betterment levies in 2016. The meters in Amman typically charge 3 JD, but can be reduced to 1 JD if they are paid throughout three months. In the other municipalities, the standard betterment levy is of 1JD, but often reduced to less than 0.5 JD.

9. 4. Local Economic Development

In order to foster job creation at the municipal level, Local Development Units have been created since the 1990's. Some received support from the EU but in most cases, they consist of only one person. In 1995, the German Development Cooperation helped three municipalities and provided training. However, their staff was either under or misqualified. Some mayors did not see the benefit of the LDU and shut them down.

In 2003, Local Development Units were created within each Governorate, with the aim of developing participatory mechanisms to engage local stakeholders in local development processes. LDU were reactivated in 2006 during the preparation of the decentralization process. The World Bank and the AFD launched the Regional and Local Development Plan 1.

The RLDP 1 implemented by the World Bank included four components: Strengthening National Level Institutions Involved in the Municipal Sector and Project Management Support (US\$3.75 million). Municipal Infrastructure and Services; Actual Costs US\$46.6 million (of which US\$15.8 million from IBRD funds; US\$19.0 million from AFD funds; and US\$ 11.8 million from municipalities). Municipal Capacity Building, Actual Costs US\$2.0 million. Regional Economic Development Strategy & Investment Planning, US\$1.15 million. The name of Component 4 was changed from Regional and Economic Development Strategy and Investment Planning to Local Economic Development and Investment Planning. It included City Development Strategies for four municipalities: Kerak, Mafraq, Tafila, Zarqa.

The aim of those City Development Strategies CDS was to create local economic development plans focused on bringing relevant community stakeholders and investors to the planning table. It was based on participatory planning in which public and private sector actors and civil society organization (CSO) jointly created the best conditions to support economic growth and job creation. A steering committee was created, data collection and analysis were performed, and strategic planning workshops were set up to discuss the economic reality in the

municipality. This included the identification of strengths, weaknesses, opportunities and threats (SWOT). Subsequently, potential projects based on leveraging local strengths and opportunities were identified. During this stage, steering Committee meetings were held to vet the outcomes of each phase, and advisory meetings were held with the private sector. Institutional needs and investment opportunities were formulated. The second phase of local economic development will consist of an in-depth economic sector, sub-sector and value chain analysis that will lay the groundwork for practical actions and activities to increase private sector partnership and investment, and in turn lead to an increase in jobs and competitiveness of the municipality.

The Decentralization Law and the Identification of Municipal Needs

According to the 2015 Decentralization law, local councils are in charge of identifying local investment needs through a participatory process. USAID has prepared a guide to assist the municipalities to do so, along with MOMA. In reality, the Local Development units are playing this role, at least in Irbid and Zarqa. They are supported by USAID LENS project.

According to an IMF 2017 report, public investment volume is correlated in Jordan to the GDP growth, contracting in economic downturns and expanding during economic recovery. While public investment in Jordan was comparable to emerging economies and peer countries until 2000, it increased significantly in the next four years, and has lagged behind since then. To counter balance this reduction, a large number of PPP have been signed to meet increasing infrastructure needs since 2005. “By 2015, 30 percent of the total public sector’s investment portfolio was procured through PPP, compared to 6 percent in emerging economies” (IMF 2017).

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 (*lajna istithmar*) comprising the Mayor, the Executive Director, members of the Local Development Unit and a representative of the Finance Department. In most of the time, free land is given as an incentive to the private developer, which is not a good use of public good.

Fig. 9. 19. List of Development Zones in Jordan

Title	Governorate	Year of est.	Economic Activity	Status
Ajlun Development Zone (Tourist Corridor)	Ajloun	2015	Tourism	In Development
King Hussain Business Park Development Zone	Amman	2010	Information Technology	Operational
King Abdallah II Development Area / Sahab	Amman	1980	Manufacturing	Operational
Al-Mwqar Development Zone	Amman	2010	Manufacturing	Operational
Dead sea Development Zone	Balaqa + Madaba	2009	Manufacturing	Operational
Al-Hasan Industrial Area	Irbid	1991	Manufacturing	Operational
Irbid Development Zone	Irbid \ Ramtha	2009	Smart city (service + scientific research + information technology + medical industries)	In development
Jerash Development Area	Jerash	2014	Manufacturing	In development
Al-Hussien Bin Abdallah II Development Zone	Karak	2003	Manufacturing	Operational
Ma'an Development Zone	Ma'an	2007	Industrial Park + Residential Community + Solar Park + Hajj Oasis	Operational
Solar Park Development Zone	Ma'an	2016	Solar Energy	In development
Mahmedieh Development Zone	Ma'an	2016	Matura Reserve Area for Livestock	In development
Madaba Development Zone	Madaba	2014	Manufacturing	In development
King Hussien Bin Tala Development Zone	Ma'raq	2006	Manufacturing Solar Energy Residential community	First and second phase of the infrastructure is ready and the zone is operational The entire area of renewable energy is leased
Salt Development Zone	Salt	2014	Manufacturing	In development
Tafeleh Development Zone	Tafeleh	2014	Manufacturing	In development

Source JIC, 2016

In parallel, USAID launched a project to improve local economic development (LED) in underserved areas across the kingdom to achieve economic growth. USAID works with municipalities in order to train them to foster business creation and economic growth in their communities. USAID LENS works with the Governorate Local Development Units (GLDUs) and the Municipal Local Development Units (MLDUs) in Amman, Zarqa and Irbid which gather most of Jordan's enterprises.

Nine municipalities from the governorates of Amman, Zarqa and Irbid were selected in June 2014 to partner with USAID LENS to promote economic growth in their communities through their MLDUs. The municipalities are: Azraq, Hashmeyeh and Greater Zarqa in Zarqa Governorate; Tabaqet Fabel, Muath Bin Jabal, Shou'la and Mazar in Irbid Governorate; and Na'ur and Amreyya in Amman Governorate.

The main activities that USAID LENS carries out to encourage local economic development include:

Municipal Resource Mapping: support to the municipalities to develop systems to collect and use data so that they will have a regular and up-to-date source of useful information.

Local Economic Development Plans: help to each partner municipality to develop a comprehensive LED plan. This involves training them to think strategically, create an economic development vision for their city and build the capacity of local staff to implement this vision. The LED plans for partner municipalities will be completed by first quarter of 2016.

MLDUs Support Package: training sessions, basic equipment, modest office renovations, communications support and facilitating public-private dialogues.

Thematic Workshops: Workshops for the project's partners (GLDUs, MLDUs, MSEs, BSPs, key ministries, etc.) that focus on different themes such as PPP, gender mainstreaming, outcomes of value chain analysis, investment promotion.

Value Chain Strengthening: engaging municipalities and LDUs as relevant stakeholders to find out more about business environments, investment, and other issues in local communities.

Local Economic Development Initiatives: USAID LENS will support LED initiatives that address a particular problem or opportunity associated with economic growth. They will be designed based on the LED plans of the partner municipalities.

Public Private Dialogues (PPDs): USAID LENS is facilitating PPDs in partner municipalities to be oriented around very specific goals and issues. We are also guiding municipalities in how to sustain and create linkages beyond the life of the project.

Grants: Over the course of the project, USAID LENS will offer different types of grants designed to support and promote economic growth and job creation among MSEs within targeted sectors and geographic areas, including within our partner municipalities.

LDU Assessment Tool: For monitoring and evaluation purposes, USAID LENS designed a tool to measure the capacity of municipalities and MLDUs to lead and implement local economic development (LED).

(USAID LENS Local Enterprise Support Project <https://jordanlens.org/>)

Half million USD was used in technical assistance in economic development planning and equipment/office upgrades in 12 MLDUs and GLDUs. LED planning workshop were

conducted in each of the nine municipalities in autumn 2015. Those workshops involved private and public stakeholders to plan a long-term strategy for each municipality's local economic development. LED plans were ready in 2016.

Public private partnership training was provided. And Medium and Small Enterprises festivals set, with the participation of NGOs and CBOs to promote the services they can provide to MSEs.

Example of USAID LED plan: Zarqa Municipality 2016.

Currently, Zarqa has an elected Council and a municipal budget that reflected 2,282,432 JD in revenue in 2014. A total of 74.5% of the budget was spent on employee salaries and benefits. The municipality has 4,325 employees, of which 85.4% hold Tawjihi certificates, 7.8% hold diplomas, 6.4% hold college bachelor's degrees, and 2% hold master's degrees.

The Investments Department brought in 2,282,432 JD in revenue and created 4,020 jobs. Those projects included a recycling plant, commercial warehouses, malls, auto-parks, kiosks, billboards, and amusement/recreational facilities. The municipality owns land which could host investments, and it hopes to expand the city limits, annexing another 100 km² to build projects with the private sector.

Land Use

The municipality has an updated general plan, regulations and zoning map, but lacks a master plan and zoning map (land use blueprint) and comprehensive data base to direct investors to specific appropriate parcels and investment opportunities, both on public or private lands.

Commercial and Industrial Areas

Zarqa is a major industrial area with a vibrant commercial sector. There are 408 large installations, including leather tanning factories and therapeutic and medical, engineering/ IT, plastics, rubber, and paper/ cardboard companies. There are major commercial, retail and office areas including 11,000 commercial businesses.

The Zarqa community articulated the following vision and mission:

Vision: A vibrant, safe and sustainable city that welcomes environmentally-friendly industry and other investments in partnership with the community and the private sector.

Mission: Engage citizens through participatory planning and provide them with better services while creating a transparent, investment friendly climate in partnership with the private sector.

Zarqa is situated in the country's major industrial region with 52% of Jordan's industries including 408 large installations. Also, there is a Zarqa Free Trade Zone, where healthcare and other products are stored both for distribution in Jordan and export. Currently, the industries are scattered throughout the city, creating air and ground water pollution as well as transportation problems.

Facilitate industrial clusters A cluster represents the entire value chain of an industry from suppliers to end products, including support services and specialized infrastructure. Clusters have the potential to increase productivity and speed up innovation. Currently, industries are scattered in Zarqa as a result of poor land planning. Improved zoning and reallocating industries into one area will allow the municipality to:

Plan for industries based on the industrial cluster approach; and Mitigate the social and economic

challenges associated with industries which are currently found in commercial and residential areas.

The stakeholder engagement process identified the development of an integrated industry zone as an investment project. The zone will integrate environmentally sustainable principles and practices, and potentially provide a foundation for clustering industries. Similarly, Zarqa has a significant number of light industrial producers, which are important drivers of the local economy. However, they are based downtown and lack access to infrastructure and skilled labor. The municipality has prioritized its reallocation from downtown, which will also improve congestion and reduce environmental degradation. To further understand the potential opportunities for clustering industries the municipality will have to conduct further analysis into the value chains of each industrial sector.

Expand renewable and recyclable markets these are growing markets that can create jobs and economic opportunities and support sustainable growth. The municipality identified the development of a solar energy photovoltaic system and a waste to energy project. The photovoltaic system will reduce the municipality's energy costs, and potentially increasing the municipality's income by selling back to the grid. The waste to energy project focuses on developing the existing waste transfer station to increase its capacity and building waste sorting units as well as recycling plants and incinerator plants.

Invest in the transportation system to support an efficient and effective economy. The highway network connects Zarqa to all governorates, but the lack of available public transportation restricts the mobility of the workforce in the municipality. The municipality prioritized investment into a taxi and bus station with supporting services including commercial shops and services to provide better and more comfortable access to mass transit. The municipality also prioritized the creation of a multi-story parking garage to support traffic management (which is negatively affected by street parking).

Workforce development Workforce development better prepares labor for market needs in the municipality. To support women in the workplace, the municipality will look into providing women with training and mentoring opportunities. To draw youth into the workforce, in partnership with the private sector, the municipality can develop on-the-job training internships. This improves the availability of a skilled work force for investors and provides youth with employment opportunities and income. There are some vocational schools located in Zarqa, but, the municipality prioritized establishing an innovative vocational academy for the youth focused solely on industries located in Zarqa

Home-based businesses Supporting home-based businesses and economic participation by women young entrepreneurs in their endeavors to establish start-ups and benefit from growth opportunities is key. The municipality hopes to create an exhibition space for women that own home-based businesses by repurposing a historic building to become a micro business incubator. The municipality will need to conduct a feasibility study to determine the viability of this investment and the opportunity loss

Prepare the LDU to better plan, prepare and administer PPPs. To support the establishment of the investment projects identified in this strategy, the LDUs will need to be prepared to plan, administer, manage, and monitor PPPs. This activity will include establishing a PPP guidance booklet and training relevant staff within the municipality and the LGU. In particular the municipality and relevant stakeholders identified other investment opportunities, but the investment cards will need to be further defined and updated by the stakeholders and municipalities to demonstrate all opportunities available in Zarqa

Zarqa Strengths

1 Strategic Location: Zarqa's proximity to Amman as well as the Saudi and Syrian borders was seen as a comparative advantage that boosts investment opportunities. The fact that the municipality owns land lots and wants to expand its limits by 100 km² provides further support for this comparative advantage and facilitates the go-ahead for investment plans. The governmental body's successful projects with the private sector, which have generated over two million JOD per year, constitute one of its most important strengths. At the same time, the move toward expansion requires a Master plan and solid infrastructure

in order to help attract investors

2 Comparative Industrial-Commercial Advantage: Zarqa is Jordan's industrial center and a very commercially active city with purchasing power. It has free and industrial zones which attract investment, a diverse and largely young population, high educational attainment, universities, and an overall safe and investment-friendly climate. The city can also use donor grants to take advantage of the decentralization and investment promotion laws. But issues like weak relations with the private sector due to distrust of municipality staff, pollution, and the challenges posed by the decentralization and investment promotion laws which do not grant municipalities the liberty to invest and partner with the private sector, should be tackled. Is the municipality equipped to handle investments, conduct feasibility studies, draft partnership contracts, and face other challenges?

3 Institutional Capacity: the municipality's institutional capacities are very poor, while the absence of an organizational structure impedes investment efforts. An official website, electronic network, procedure manuals/brochures on services offered, a database to facilitate work flow and investment procedures, and staff training are all missing. Workshop participants believed that competent employees exist within the municipality, constituting a strength. Other challenges include a lack of coordination between institutions in Zarqa, which affects the municipality's work and could negatively impact the way it deals with the new municipalities and decentralization laws, both of which are considered steps in the right direction for local development. Also, the dues collection process is inadequate, while waste management problems cost the municipality approximately 1 million JOD annually.

(USAID, 2016, *Zarqa Municipality. Phase 1 of Planning for Local Economic Development*. 58 p.)

ILO Employment Intensive Investments Programmes in municipalities

ILO has developed since July 2016 a two years and half project to support the Government of Jordan in creating immediate jobs through Employment Intensive Investment Programmes (EIIP) in Irbid and Mafraq, for both Syrian women and men refugees and their host communities, while also improving local infrastructures. It is part of the ILO's wider response to ease some of the labour market pressures caused by the influx of Syrian refugees, through facilitating access to employment and livelihood opportunities.

A 2015 ILO labour market study showed that 50 per cent of Jordanians and 99 per cent of Syrians are working in the informal economy. This means that these jobs are completely outside the scope of any form of governance. This has a negative impact on the quality of jobs provided such as sub-standard wages, poor working conditions and exploitative practices, including child labour. This is of particular concern in the northern governorates of Irbid and Mafraq, and in Amman where the share of Syrian refugees is greatest. This project aims to support the Government of Jordan in creating immediate jobs through Employment Intensive Investment Programmes (EIIP) in Irbid and Mafraq, for both Syrian women and men refugees and their host communities, while also improving local infrastructures. It is part of the ILO's wider response to ease some of the labour market pressures caused by the influx of Syrian refugees -- through facilitating access to employment and livelihood opportunities.

- Improve rural infrastructure through the use of labour intensive methods; and
- Improve employability and access to the labour market for Syrian refugees and their Jordanian host communities.

The objective is not only to improve infrastructure such as roads, water cisterns, or clean the streets and some mosques, but to employ a large number of workers. In order to increase the social inclusion of the refugees, one job out of two must be given to a Syrian. A gender quota of 10% has been adopted. It has reached 20%. One of the key success of those projects derives from the high wages paid : 15 JD daily. This rate is higher than the 10 JD paid according to the minimum wage (220 JD on 22 days).

10. CLIMATE CHANGE AND GHG EMISSIONS REDUCTION

Jordan is engaged in climate change mitigation and adaptation policies since the launching of the National Agenda in 2004. The first National Policy on Climate Change was adopted in January 2013. Its long term objective is “to achieve a pro-active, climate risk-resilient Jordan, to remain with a low carbon but growing economy, with healthy, sustainable, resilient communities, sustainable water and agricultural resources, and thriving and productive ecosystems in the path towards sustainable development” (UNDP 2013). It is part of a broader strategy for green growth and sustainable development.

As Jordan is one of the most energy and water deficient countries, the NUP will focus on directing development toward sustainable energy efficient cities, following a cross sectorial methodology, such as the one adopted by the Amman Climate Plan presented in 2019.

The Amman Climate Plan relies on eight pillars: carbon free electricity source; green building guidelines for newly constructed building along with renovations to improve energy efficiency; citizen engagement with awareness program and information campaign; renewable energy for GAM building and photovoltaics solutions for residential and commercial buildings; sustainable mobility with clean public transport, electric powered private vehicles and walking promoted by the pedestrianization of the center and main avenues; waste will be reduced, sorted, composted and recycled and the remaining will be processed to produce energy; rainwater will be harvested, water efficiently used and waste water treated; concerning urban planning and land use, new development areas will be focused on public transit-oriented corridors, and green open spaces increased (World Bank, GAM, 2019).

10.1. Environment and GHG emissions

Although Jordan total greenhouse gas (GHG) emissions constitutes less than 0,1% of global emissions with 28.7Mt CO₂e in 2006, Jordan is a regional pioneer in its Climate Change efforts. The Government of Jordan has made significant contribution to the global climate change mitigation agenda and regional adaptation priorities. Jordan created the National Climate Change Committee (NCCC) as early as 2001, and in 2013 launched its National Climate Change Policy, a road map for the 2013-2020 period. In addition, Jordan has recently launched a new national vision and strategy (Jordan 2025) which sets out long term policy goals for economic and social development. It is committed to making a contribution to global efforts to combat climate change and reduce GHG emissions and has recently submitted its Intended Nationally Determined Contribution (INDC) which sets an ambitious target of reducing its GHG emissions by 14% in 2030 compared to its baseline scenario, although this is conditional on international support.

70% of Jordan GHG emissions arise from the energy sector, including transport. In order to improve energy resilience and combat climate change Jordan is aiming to increase its use of renewable energy and target improvements in energy efficiency in both the supply and demand

side. Furthermore, development of renewable energy and energy efficiency actions are priority areas which support Jordan's development, economic and climate change strategies.

The "Amman Green Growth and Climate Action Plan" has been developed in 2018-2019. It is an umbrella document that pull together existing Amman sustainable development initiatives and present a vision for Amman, explicit mitigation and adaptation targets, a pipeline of actions and an implementation plan for achieving the vision. It provides a structured approach for CC mitigation, adaptation and resilience related interventions (policies, projects and urban planning efforts) and potential financing sources. In addition, the Ministry of Environment, with the support of Partnership for Market Readiness, also developing an integrated monitoring, reporting and verification system for capturing the greenhouse gas emissions at different levels.

Air pollution

"Air pollution is a major issue in Amman. The human costs of air pollution are considerable in Jordan. According to a report published in 2000 by the World Bank under the Mediterranean Environmental Technical Assistance Program (METAP), approximately 600 people die prematurely each year in Jordan because of urban pollution. 50-90% of air pollution in Jordanian towns is caused by road traffic. Levels of black carbon particles in the air are higher in urban areas (caused by vehicles and heating) than in industrial areas (Hamashaa, Almomanib, et al 2010)" (Ababsa 2013).

In 2006 new policies limited industrial emissions into the air and soil and controlled greenhouse gas emissions. The government set acceptable levels of pollutant gas emissions from industry and vehicles, and two types of unleaded petrol (90 and 95 octane) were introduced, significantly limiting lead pollution. But the upper limit set by Jordan for Particulate Matter of less than 10 micrometers of diameter (PM10) is 120 µg/m³ per day (Jordan Standard 2006/1140). This is 2.4 times the recommended level by WHO of 50 µg/m³ (24 hour mean) and 6 times the average yearly accepted level of 20 µg/m³. Pollution caused by heavy metals and fine particulate matter (PM10) produced by industry has been reduced in Jordan over the past ten years but remains higher in industrial towns (Sahab to the south of Amman, Zarqa and Irbid). PM 10 reaches 69 µg/m³ per day in Amman which is very high and call for better building insulation and cleaner modes of transportation.

Cities need to introduce new transportation modes in order to counterbalance the use of private cars. Insulation solutions would reduce the need for fuel or gas heating. GAM and UNDP have launched an innovative project in 2018, the "Systemic approach to sustainable urbanization and resource efficiency in Greater Amman Municipality (GAM)". It is designed to promote low-carbon buildings in GAM through the application of Building Energy Codes, in particular insulation, and to produce retrofit guidelines for existing buildings. "The main internal drivers of the project are: (1) the successful enforcement of existing Building Energy Codes (in particular the Thermal Insulation Code) in new buildings supported by incentives and awareness- raising. Accompanying this will be the incentives provided to building owners for retrofitting existing buildings with thermal insulation. This is the most critical element of the

project since no global environmental (and other socio-economic) benefits can accrue without enforcement of Codes; (2) a performance-based system is established that will ensure the tracking of energy use and GHG emission reductions that will provide tangible evidence for investing in EE buildings; and (3) strengthened local administration, namely GAM, with institutional and technical capacity for ensuring that Building and Occupancy Permits are only delivered to new buildings that abide by the Building Energy Codes.” (UNDP 2017)

At present, the Jordan legal framework in environmental matters is fragmented, so the instruments of environmental planning and management existing do not allow a comprehensive approach to environmental problems. To achieve sustainable urban development, environmental management should be incorporated, resilience and climate change to state policies -national, provincial and municipal-. In this sense, given the need to reduce the ecological footprint of cities and make them resilient.

1) Addressing the climate change:

Despite the achievements made in terms of dealing with the negative effects of climate changes, climate change is still a major issue hindering the achievement of sustainable development in Jordan (especially in the water and agriculture sectors). The most prominent achievements are:

- Jordan has signed the United Nations Framework Convention on Climate Change (UNFCCC) in June 1992 and ratified it in November 1993.
- Jordan has submitted the first report of national communications to the UNFCCC in January 1998.
- The cabinet approved the formation of the national committee on climate change in 2001.
- Jordan has approved the Kyoto Protocol in 2003.
- The formation of a designated national authority (DNA) for the development of project proposals in addition to initiatives for Clean Development Mechanism (CDM) of the Kyoto Protocol.
- Four projects of good development mechanism were registered so far with the Executive council which qualified to be benefited from the sale of low quantity emission.
- A self-assessment study (NCSA) was prepared, which relates to environmental management in the field of climate change.
- A comprehensive program was launched to enhance Jordan adaptability to climate change.
- Jordan has developed the first and the second national communications report for the United Nations Framework Convention on climate change.
- Jordan has prepared a study titled "National environment and economic development of climate change (NEEDS).
- Jordan has joined the partnership initiative for market preparation (PMR).
- The Jordanian climate change policy 2013-2020 has been developed and launched as the first policy of its kind in the Arab region.
- The completion of the scoping study on the status of the green economy in Jordan and commencing on the development of a national strategy for the green economy.
- The establishment of the Jordanian Green Building Council in 2009.

• **2) Disaster Risk Reduction (DRR):** One of the most important challenges facing the efforts to reduce disaster risk lies in the limited financial resources, lack of qualified human resources, and the lack of coordination between the agencies involved. The most prominent achievements are:

The formation of the Supreme Council of Civil Defense to be qualified to deal with any disaster that may occur in the Hashemite Kingdom of Jordan starting from the readiness stage with the response and finally how to deal with such incidents.

The creation of (3) emergency warehouses spread over the three regions, which are fully equipped, and also identifying shelter locations for those affected by natural disasters.

Issuing the instructions for the civil defense volunteers for the year 2012, which aim to increase the effectiveness of rescue operation of human lives and properties, and help the entities involved in disaster management.

Issuing the instructions on organizing, import, export, transportation, storage, sale, and safe guarding of explosives for the year 2014.

- 4) **Air pollution:** The main challenges in this regard manifest in the increased concentrations of sulfur in diesel, due to unsustainable patterns of production in the industrial sector, the increased numbers of private cars as people avoid the use of public transportation, poor funding for the expansion of networks for monitoring the quality of air in order to cover all regions of the Kingdom. The most prominent achievements are:

Jordan is the first country in the region to develop a national strategy for the protection of the environment, in 1991, which included action plans to combat air pollution.

Completely phased out the use of gasoline in 2008.

Monitoring the concentration levels of gaseous air pollutants and micro airborne dust in the most polluted areas, where a monitoring network has been established to cover (75%) of the population of Jordan.

Calculating of pollutants levels resulting from the different sectors (transportation, industrial sector, and the agricultural sector) in Jordan, as well as the establishment of an action plan to reduce their emissions.

Setting the necessary specifications for vehicles imported for the purposes of public and environmental safety.

Upgrading the public transportation buses, where the average operational life of medium size buses has reached (20) years; and (25) years for large buses; providing all necessary facilities and customs exemptions.

Delisting small public car of which the operating life exceeds ten years and provide customs exemptions in return for importing hybrid cars, and prohibits the import of vehicles older than five years.

Upgrading the truck fleet.

Providing government incentives for the students of public universities to encourage the use of public buses.

Amending the specifications of diesel and gasoline for the purposes of reducing the emissions resulting from their use.

UN Habitat, HUDC, 2014, Jordan National Report Habitat 3.

10.2. Urban Growth Scenarios for more compact cities

In 2017, the World Bank has offered technical assistance to the five major municipalities in the Kingdom. The Mexican company CAPSUS has applied to Jordan the urban growth scenario modeling first developed in the State of California by Carlthorp in the 2000's. This methodology calculates land consumption, the cost of infrastructure and the greenhouse gases

emissions of several urban growth scenarios, from worst to vision. It also offers a visualization of service accessibility (schools, parks and green areas, clinics, etc.) according to each solution.

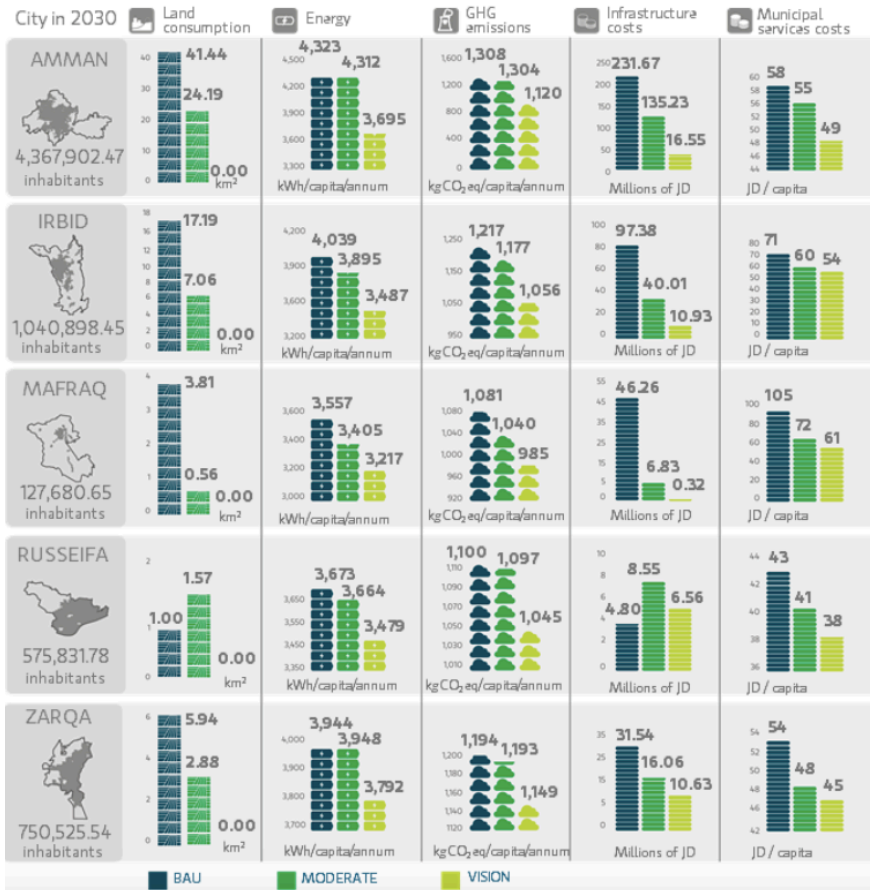
In 2015, Greater Amman Municipality GHG emission, without industrial activities, were calculated at 4,6 million tons, and the total energy consumption at 15,15 MW. The urban density was rather low at 16,111 persons per km². This low density is due to the fact that nearly 25% of the zoned and served land is vacant, as a result of the absence of taxation on idle land. Russeifa had a population density at 21,627 persons per km² and Zarqa of 19,897. Those three cities are suffering from a housing crisis with 10% of the apartment overcrowded. Greater Amman municipality is characterized by a hyper vacancy rate at 23%. Investors have tried to gain profits in luxurious building construction, but most of them are too large to be easily sold. Russeifa and Zarqa have only respectively 10% and 14% vacancy rates⁴⁵.

Five urban growth scenarios were modelled for each city of the Amman-Ruseifa-Zarqa conurbation to accommodate the expected 1,231,325 new residents by 2030. Transit Oriented development and green house code were the policies tested, along with the multiplication of small parks or community gardens in each neighbourhood. The business as usual scenario consumes most land, cost the most in term of service delivery and produces much more pollution. If now policy is conducted, Amman city land consumption will increase by 14% between 2015 and 2030, in the amount of 41.44 km² (Business As Usual). Almost half of this growth (17 km²) is expected to happen outside zoned areas. Green or arable lands in the east and south of Amman are likely to be converted to urban use.

Enforcing the green building code for new buildings, using LED bulbs in the cities public lighting, increasing the use of solar panels, building several solar farms (a 16 MW solar farm in Amman) would reduce the GHG emissions per capita from 1308 to 1120 kg CO₂eq/capita/year in Amman.

⁴⁵ DOS, Population and Housing Census 2015.

Fig.10. 1. Urban Growth Scenarios Main Results by Scenario and City



Both compact growth and vision scenarios entail urban intensification with no additional built-up areas. Those scenarios are the less expensive in term of service delivery and greenhouse gas emissions. They both prove that all the population growth expected for 2030 can be accommodated within the existing city boundaries with proper planning, policy and investment interventions. The main policy lever applied is the reduction of the current vacant rate from 23% to 8% by introducing guarantees to landlords to rent their apartments and subdivide them if they are too large. About 742,910 future inhabitants could be housed in 141,238 existing but empty houses in Amman, instead of building new dwellings on the outskirts of the city. This measure will house three quarters of the expected population growth of the city by 2030. It would require financial and legal guarantees.

The second measure, is a Transport Oriented Development policy, with which densities along the new BRT lines have a two-fold increase. This lever yields benefits in reducing commuting

distances and increasing proximity to urban services. Only inducing the new population to settle near employment areas and public transportation could be enough to prevent the city from expanding horizontally. The number of housing units that can be built according to the land uses of the current Master Plan and the building norms limitations are enough to house the population growth expected for 2030. Planning for a compact growth of the city is what reduces the infrastructure costs indicator. This is because the investment needed is directly proportional to the km² of a new and upgraded city. It can be achieved by reducing the vacant housing rate, promoting housing in the BRT corridors and prioritizing infill.”

Amman future population growth could fit within current built-up areas with incentives to infill vacant land, aiming to reduce vacancy rates from the current 23% to 8%. Reducing the vacancy rates by giving guaranties to owners to rent was one the World Bank housing sector assessment suggestion in 2018. It was proved by the UGS that Greater Amman Master Plan does not allow the city to grow in a sustainable way as its zoned areas are very large. More compact solutions have been suggested in order to keep development in line with climate change mitigation policies and cost reduction.

10.3. Addressing Climate Change in National Urban Policies (UN Habitat 2016).

“National Urban Policy is a tool for government and other stakeholders that can assist with achieving more sustainable urban development. It also facilitates an enabling environment that allows stakeholders to take advantage of urban opportunity. How to address climate change in cities and human settlements represents one of the most pressing challenges facing urban policy-makers today. This Guide recommends how to mainstream such considerations into National Urban Policy, thus helping to empower national governments, local governments, and other stakeholders to effectively address climate change” (UN Habitat 2016).

Recommendations are as follows:

Promoting Low-Carbon Urban Development (‘Mitigation’)

Recommendation 1. Encourage and support the development of local level plans and strategies to reduce greenhouse gas emissions.

Recommendation 2. (i) Increasingly obtain energy from low-carbon and renewable sources, including via the decentralized or distributed provision of energy, while also (ii) promoting the more efficient consumption of energy.

Recommendation 3. (i) Encourage development patterns that are more conducive to reduced greenhouse gas emissions, including by minimizing travel distances. At the same time: (ii) promote more sustainable modes of transportation.

Recommendation 4. Reduce greenhouse gas emissions by promoting: (i) more sustainable design and construction of new buildings, and (ii) retrofitting of existing buildings.

Recommendation 5. Make municipal management of solid and liquid wastes more sustainable.

Building Climate Resilience ('Adaptation')

Recommendation 6. Promote applied research into the risks associated with the impacts of climate change, as well as other hazards, in urban areas. Provide for the use of findings to inform decision-making.

Recommendation 7. Encourage and support the development of local level climate change vulnerability assessments that include an analysis of climate resilience and adaptive capacity, to inform policy-making at all levels. Promote multi-hazard assessments.

Recommendation 8. Promote the mapping of hazards, including of climate-related hazards that may evolve over time.

Recommendation 9. Plan human settlements, regulate land use, and provide critical infrastructure and services in a way that takes into account risks and builds resilience, including climate resilience. To this end, encourage and support local level plans and strategies to build climate resilience.

Recommendation 10. Prioritize actions that build the resilience of vulnerable and marginalized communities. When possible upgrade slums and informal settlements in situ so as to build resilience to shocks and stresses, including those brought about by climate change impacts.

Recommendation 11. As part of adaptation efforts, promote the protection and restoration of ecosystems and natural buffers.

Recommendation 12. Provide for regional planning as one means to protect ecosystems and guard against 'mal-adaptation'.

Addressing Urban Climate Governance

Recommendation 13. While encouraging local autonomy, coordinate national and local action in addressing climate change in urban areas. Undertake collaborative action when appropriate.

Recommendation 14. Provide resources for, and build the institutional capacity of, urban managers to address climate change.

Recommendation 15. Promote public awareness of climate change, including of co-benefits and economic opportunities.

Recommendation 16. Ensure that national urban policies, laws, regulations, investment plans and so on are fully consistent with national policies for addressing climate change

(UN Habitat 2016).

11. Road Map for the Formulation of Jordan National Urban Policy

This section proposes a set of recommendations and tailored strategies that would create an enabling framework for policy formulation.

Challenges and Opportunities

Jordan can capitalize on existing opportunities to create resilient and productive cities:

Opportunities

1. Strong institutions with solid sectorial policies
2. Current Decentralization process with policies to empower municipalities in urban planning and local finance
3. Four large cities with strong private sector to stimulate the economy (Amman, Irbid, Zarqa, Aqaba)
4. Sufficient number of civil servants and local actors contributing to a successful provision of services
5. Significant foreign development assistance with funds and expertise
6. Economic stability with parity of the JD to the USD
7. High number of educated workers and engineers

Challenges

1. Multiple urban planning institutions
2. Lack of coordination between urban planning institutions
3. Need to reform the Higher Planning Council (lack of criteria to approve land use modifications), no accountability
4. Lack of integrated urban planning at regional level, and within governorates

Jordan National Urban Policy could help to overcome those challenges by

- Adopting an institutional approach to embed urban dimension in all sectorial policies
- Creating integrated sustainable urban planning limiting urban sprawl and fostering intensification
- Promoting public good over private real estate interest, through land value capture mechanisms
- Contributing to the adaptation to climate change threats

Recommendations

With a proper JNUP, Jordan could tackle the refugee crisis, the unemployment crisis and the housing crisis, as well as engage in climate change mitigation and adaptation. Limiting further

urban sprawl through urban densification would create more resilient cities and create job opportunities in new energy efficiency building. It requires some institutional reforms, an integrated planning approach and involving the private sector.

Institutional Reform

Creation of a National Physical Planning Institute

It is recommended that a National Physical Planning institution, under Prime Minister direction, is established. Key responsibilities of the proposed institution include:

- Authority over the Higher Planning Council transformed in a Higher Planning Zoning Council
- Coordinate between all institutions engaged in urban planning: Ministry of Local Development, GAM, ASEZA, JVA, PDTRA.
- Coordinate with the Jordan Investment Commission.
- Implementation of National Physical Plans and Regional urban policies to address critical urban issues, including housing, urban economic development, public transportation, city and neighbourhood planning, including disaster risk reduction
- Drafting urban law and planning regulations with relevant authorities to promote inclusive and sustainable planning, for more compact cities, with more public spaces
- Coordination of all existing databases in an Integrated Data Center (see below)

Empowering Municipalities in Urban Planning

It is widely recognized that local authorities have the ability to play an important role in urban development. In order to do so, they require empowerment and support from central authorities. The implementation of the current decentralization law hasn't been successful in empowering municipalities, to ensure it is, the following is required:

- An updated decentralization law, which provides municipalities with larger mandates and the means to achieve them
- An update of the current Urban Planning 1966 law to insure green growth, climate change adaptation, and public participation (citizens, civic organisations and investors),
- Ensure support for municipalities through capacity building; by training the members of local councils in sustainable urban planning with the assistance of technical experts from the National Physical Planning Institute
- Create integrated urban planning commissions at governorate level between main cities for public transportation, solid waste management, and coordination with utilities providers
- Empower urban planners by allowing the possibility of phasing the landuse modifications to resist public pressure, and create comprehensive urban planning
- Tax land value capital gain and promote idle land taxation for the municipalities

Integrated planning approaches

To promote integrated strategic planning and collaborative work dynamic, the following is suggested:

Encouraging knowledge capitalization

Data in relation to Jordan is abundant; the DOS is efficient and has up to date statistics, satellite imagery production is available via the Royal Jordanian Geographic Center, The Department of Land and Surveys, and MoLA are undergoing computerization, Municipalities such as, Irbid, Zarqa, Madaba, Tafila and Jerash as well as the public entities of GAM, ASEZA, JVA and universities have sufficient GIS files. However, the problem is in how scattered the information is, as Jordan does not have an integrated database available.

Palestine for instance has created the GeoMolg free database. <http://www.geomolg.ps/>

- **Integrated Data Centers** should be established at a national level, to ensure the availability and provision of data.
- **Territorial and Urban Observatories** should be established at municipal level. Observatories aim at organizing and sharing data in relation to a certain urban issues.
- **Capacity building and support** of existing centers for knowledge development and sharing.

Involving the private sector

The private sector can contribute to and ensure an integrated planning process. PPP is an example that is already prevalent in Jordan. Several PPPs exist in housing delivery, transportation, solid waste management. Additional PPP should be launched, including social corporate responsibility dimensions. Furthermore, clearly identifying the role of the private sector within the process will ensure that it complements the role of the public sector rather than overlap with it.

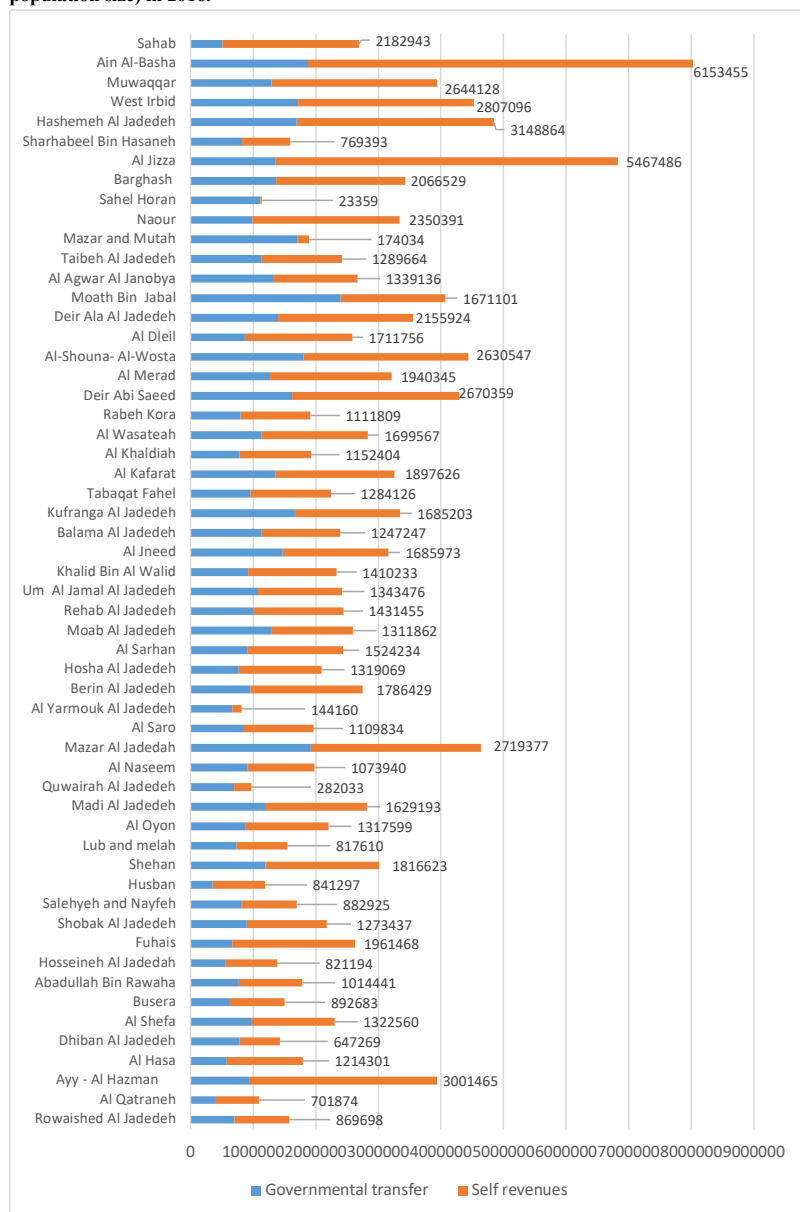
The involvement of universities and research centers is crucial to enhance the link between the cities and its inhabitants. Professors and students engaged in urban planning, architecture, sociology and geography should have engage in dialogue with planners at local and national levels through public workshops and forums.

It is also important to foster the creation of user associations in all public sectors; so far in Jordan user associations are limited to Ma'an Nasel which is associated with the transport sector.

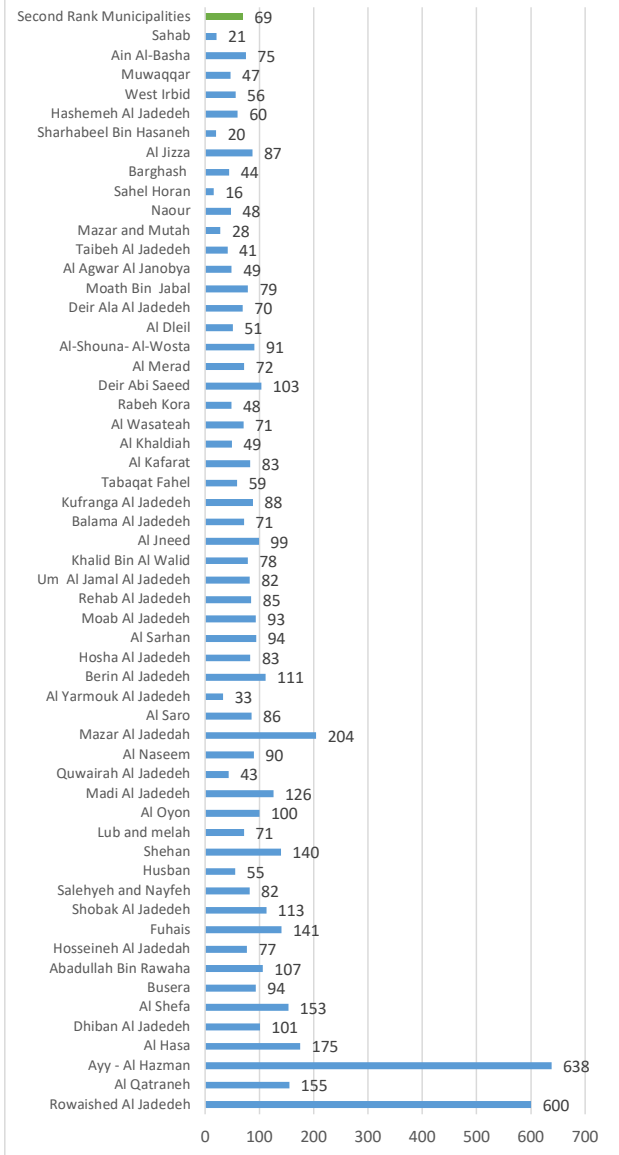
Annexes

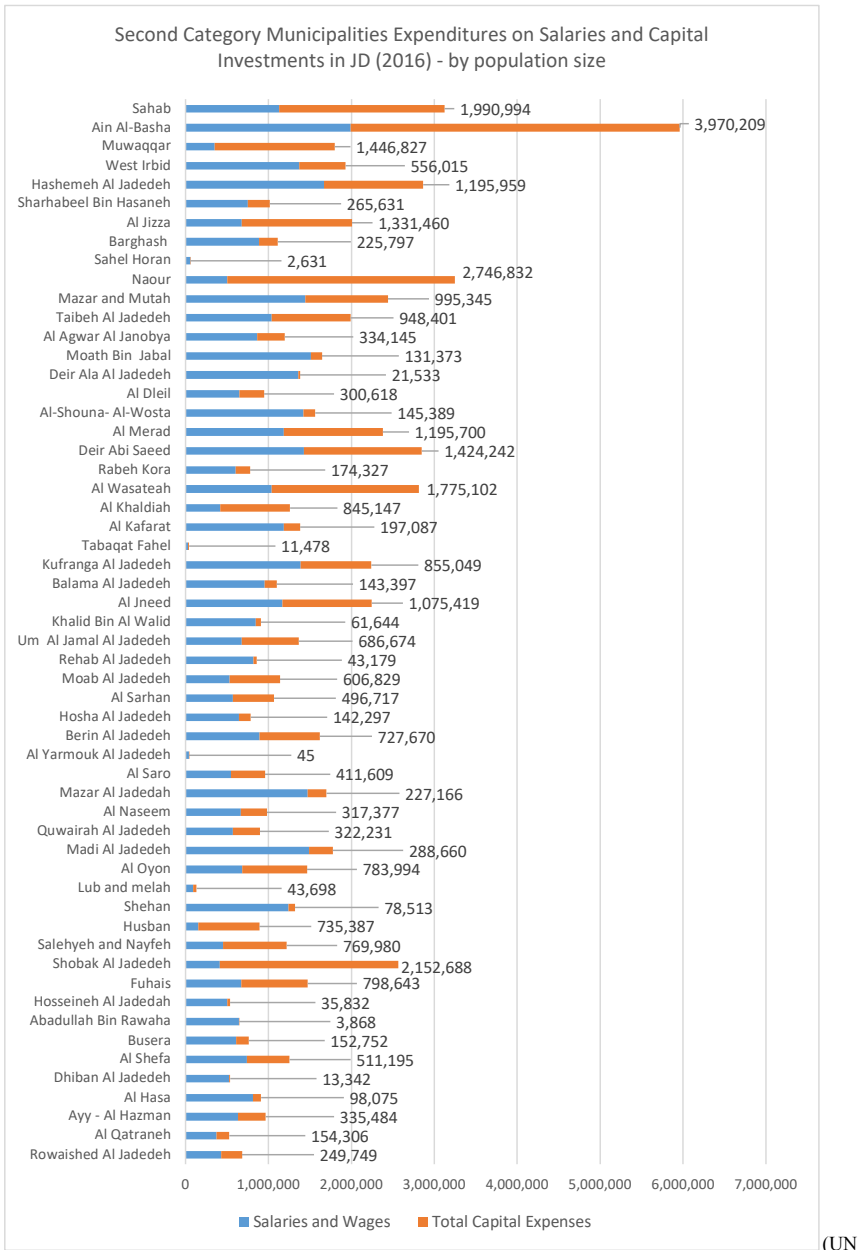
1. Municipal Budgets 2016

Second Category Municipalities Governmental Transfer and Self Incomes (from largest to smallest population size) in 2016.



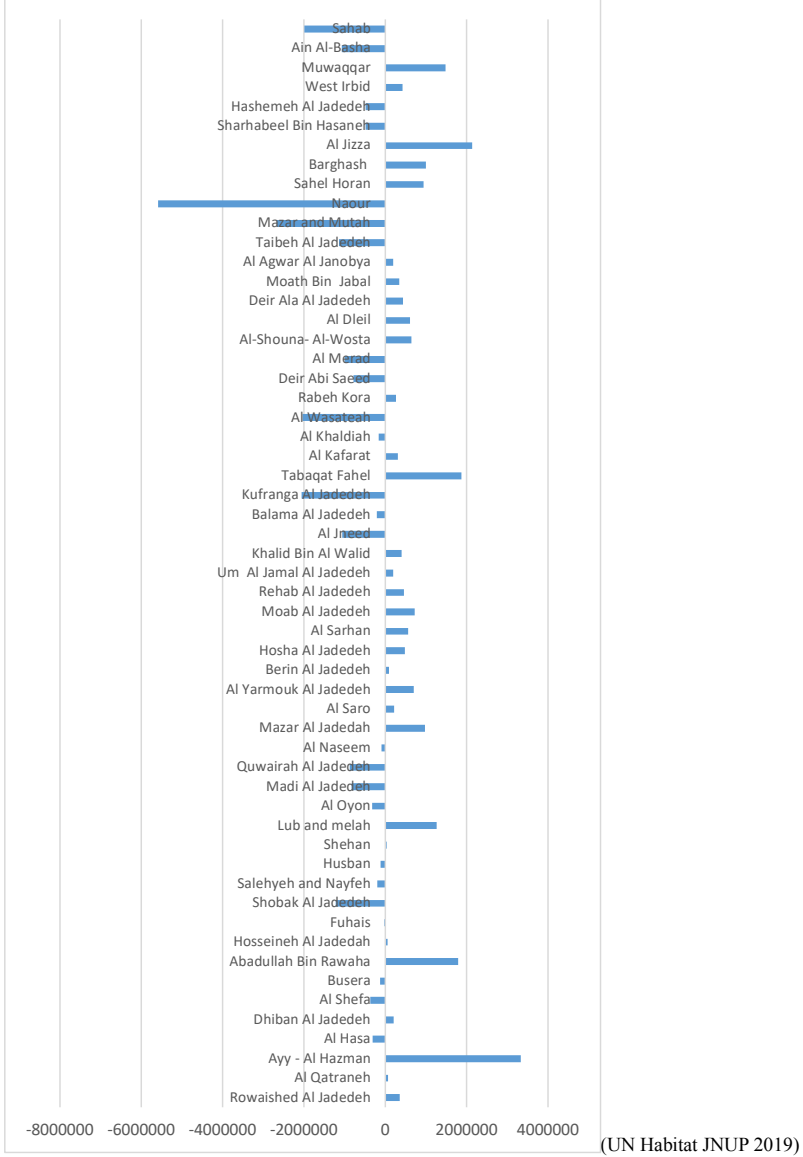
Second Category Municipalities Revenues per capita in JD (2016)



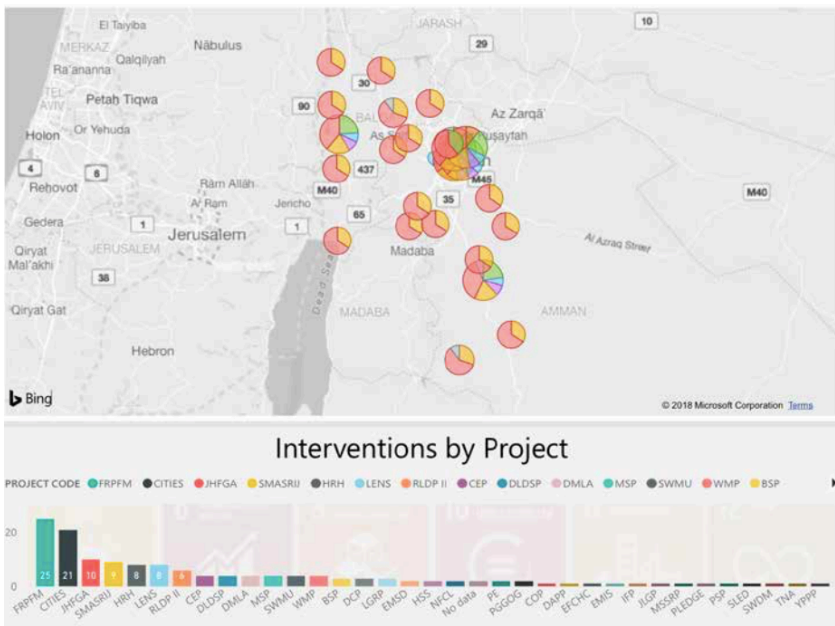


Habitat JNUP 2019)

Second Category Municipalities Budget Deficit in JD (2016) - by population size



Annex 2. Map of the international interventions to support LED (Central Jordan)



(UNDP-EU 2019, *Local Development in Jordan 2019-2021*).

Annex 3. Urban Indicators (HUDC, Dec 2017)

Urban indicators (National level)

This version is issued according to the population & housing census 2015,
As 2015 is the basic year

Release (3): December / 2017

Indicator types	Indicators name	2004	2015	2016	2017	Frequency of data collection
Population	Total population (000) ¹	5597	9532	9798		annual
	male(000)	2887	5047	5188		annual
	female(000)	2710	4485	4610		annual
	Population density (person/km ²)	63.0	107.7	110.4		annual
	Urban population (%)	90.4	90.3	90.3		annual
	Population growth rate (%)	-	5,3 ²	2,4		annual
	Total households (000) ³	-	1978	2033		annual
	Household growth rate	-				annual
	Average household size (person)	5,4	4,82	4,8		annual
	Percentage of households headed by female	10,5	13			annual
	Percentage of households headed by male	89,5	87,0			annual
	Economic	GDP at current price(MJD)	8091	26637	27445	13292 ⁴
GDP growth rate (current prices)		11,9	4,7	3	3,4 ⁵	Quarter
Percentage of contribution of construction sector to GDP at current prices		4	4,4	4,4		annual
Ratio of Contribution of construction sector (residential buildings) in Gross Fixed Capital Formation.		42,3				annual
Ratio of Gross fixed capital formation of GDP (%)		24,8				annual
GDP Per capita ((JD)		-	2795	2801		annual
Median annual income of household (JD)		4530				2Yrs.
Domestic savings ratio to GDP (current		2,9-				annual
Ratio of Jordanian employment Remittances abroad of GDP(current price)		18	9,1	8,6	8,7 ⁶	Quarter
Inflation rate (%)		2,6	0,9	0,8	3,3 ⁷	Quarter
Value added of the construction sector at current prices (MJD)		324,4	1159,5	1195,8		annual

¹ The values of total population are changed according to the results of the population & housing census 2015

² Population growth rate during the period 2004 -2015.

³ Includes Jordanian and non-Jordanian households

⁴ January-June/2017

⁵ January-June/2017

⁶ January-June/2017

⁷ January -September/2017

Annex 4: List of conducted meetings by the consultant (Dr. M. Ababsa)

Institutions Names of Persons Met	Date	Areas of focus
MOLA (MOMA until May 2019) Eng. Mohammed Nator, Director of Local Development Department Eng Roweida Habahbeh, Director of Planning Eng Murad Mbaqain, Director of Training and Institutional Development	8-1-2019	Presentation of the methodology
1 st Technical committee meeting	15-1-2019	Diagnosis phase
USAID Cities Mr. George Hartman Deema Abu Thiab (UN Habitat)	21-1-2019	Urban governance Municipal capacity building Innovative and Effective Solutions
ILO Mr. Patrick Daru Mr. Htun Hlaing Mr. Bashar ElSamarneh Deema Abu Thiab (UN Habitat)	23-1-2019	Cash for work projects for Jordanians and Syrians in main municipalities
AFD Mr. Samuel Lefebvre Mr. Nael Qurrani Mr. Antoine Simon Deema Abu Thiab (UN Habitat)	24-1-2019	RLDP 2 City mapping (Zarqa, Irbid, Madaba) CVDB restructuring Municipal Financing
Zarqa Municipality M. Mohammed Zawahreh Eng. Mayson Shamaila Eng. Nabil Al Hindi Eng. Deema Abu Thiab (UN Habitat)	28-1-2019	Urban planning challenges including zoning, violations, capacity building needs, and urban governance
World Bank Ms. Lina Abdallah Deema Abu Thiab (UN Habitat)	29-1-2019	Municipal Services and Social Resilience Project Innovation Fund, Municipal finance reform, city resilience global platform, and DRR related projects
At the HUDC: Eng. May Asfour Head of HUDC Eng. Basema al Soob Projects Eng. Rima Odeh (GAM) Mohammed Zawahreh (Zarqa) CAPSUS (Mexican planners)	31-1-2019	Meeting at HUDC about Urban planning issues in coordination HUDC site and services HUDC and UN Habitat Affordable housing solutions
Irbid Municipality Ms. Leila Youssef Ms. Reham Jammal Mr. Munzer Attar Mrs Hana Younis	6-2-2019	Urban planning challenges Urban expansion Property tax collection Development projects. Capacity building needs
MoMA Mr. Mohammed Al Nator Ms. Helwa Ghazzal Deema Abu Thiab (UN Habitat)	10-2-2019	On coordination for JNUP and training On building regulations law

World Bank Dr. Jad Mazahreh	11-2-2019	Municipal Financing
Mafraq Municipality Mr. Mohammed Al Omoush Mr. Muntasir Al Machaqba Mr. Suhaib Harahsheh	12-2-2019	Urban planning challenges Urban expansion Property tax collection Development projects. Capacity building needs
Ministry of Agriculture Eng. Adel Alobeiaat Eng. Shatha Nasrallah Eng. Ali Ghanim	14-2-2019	Coordination with MOMA and municipalities
Ministry of Environment Eng. Shada Al Sharif Eng. Buthaineh Batarseh Eng. Heba Zabalawi	14-2-2019	Green growth strategy adopted in 2013
Ministry of Water and Irrigation Eng. Ali Ghanim Director of Drought Management Unit Eng. Adel Alobeiaat Eng. Shatha Nasrallah	17-2-2019	Coordination with MOMA Greywater and sewage improvement policies
Jordan Valley Authority Eng. Rashed Zahran Al Kloob Eng. Samer Mohammed Al Dwairi Director of Urban Planning Eng. Manal Hasan Mahasneh Head of Land Registration Eng. Abeer Nassar Head of Planning Division	17-2-2019	Responsibilities and achievements of JVA. Zoning and building regulations description. Development projects.
ASEZA Dr. Khaled Abo Aisheh	7-3-2019	Urban planning challenges Urban expansion Property tax collection Development projects. Capacity building needs
GAM Eng Rima Odeh Head of Comprehensive planning Eng. Ahmad Zeyad	12-3-2019	Urban planning challenges Urban expansion Property tax collection Development projects. Capacity building needs
MOMA Eng. Roweida Habahbeh Eng. Helwa Ghazzal	13-3-2019 14-3-2019	Data collection GIS files Budgets 2016 Building and zoning regulations
Madaba Municipality Eng. Jalal Masandeh (Executive Director) Eng. Taghrid Al Foury (LED director)	25-3-2019	Urban planning challenges Urban expansion Property tax collection Development projects. Capacity building needs
Jordan Investment Company Dr Khaled Al Momani Eng. Deema Abu Thiab (UN Habitat)	3-4-2019	Responsibilities and achievements. Specific zoning and building regulations.
Second meeting at HUDC Eng. May Asfour Head of HUDC Eng. Basema al Soob Projects	3-4-2019	HUDC achievements. HUDC current programmes. Building regulations.

Jerash Municipality Mr Ali Shoka, Jerash Municipality Executive Director Mrs Ferial Atoum, Head of Planning M. Ahmad Shokri, Head of Cultural Projects	8-4-2019	Urban planning challenges Urban expansion Property tax collection Development projects. Capacity building needs
Tafla Municipality Mr Rami Znoun, Executive Director Mrs Maryana Hadarees, Head of Planning Mrs Reem Hasweh and Wafa Ormouh, MOMA	9-4-2019	Urban planning challenges Urban expansion Property tax collection Development projects. Capacity building needs
Department of Land and Survey Dr. Mazen Badwan, DLS Director Assistant Eng. Omar Al Sheikh, DLS Technical Assistant Eng. Mohammed Al Safawin, DLS Director Assistant	11-4-2019	Current land reforms concerning miri and mulk Land fragmentation Building and zoning regulations Penalties on informal construction
Jordan Construction Contractor Association Eng. Wael Toukan	21-4-2019	Building and zoning norms modifications In GAM and outside
MOPIC Eng. Hatem Hababbeh Head of Governorate Development Department Eng. Emad Al Rashed	21-4-2019	MOPIC role in economic and regional development planning Mafraq comprehensive governorate plan 2018

List of Participants at the first Technical Committee Meeting on 15-1-2019

Name	Institution
1 Roweida Hababbeh	Ministry of Municipal Affairs
2 Mohammed Al Nator	Ministry of Municipal Affairs
3 Areej Zuraigata	Ministry of Municipal Affairs
4 Reem Hasweh	Ministry of Municipal Affairs
5 Wafaa Ahmad	Ministry of Municipal Affairs
6 Amani Eghnaim	Ministry of Municipal Affairs
7 Haded Muhiar	Ministry of Municipal Affairs
8 Mohammed Al Shker	Ministry of Municipal Affairs
9 Abeer Nassar	Jordan Valley Authority
10 Lina Hiyari	Jordan Valley Authority
11 Omar Alsheikh	Department of Land and Survey
12 Aida Almasri	Ministry of Agriculture
13 Abdallah Alzyod	Ministry of Environment
14 Nada Al Munier	Ministry of Education
15 Dr Khaled Momani	Jordan Investment Commission
16 Emad Al Rasheed	MOPIC
17 Rima Odeh	GAM
18 Ali Ghanim	Ministry of Water and Irrigation

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|----|---------------------|-------------------------|
| 19 | Basema Al So'oub | HUDC |
| 20 | Deema Abu Thiab | UN Habitat |
| 21 | Myriam Ababsa | UN Habitat (consultant) |
| 22 | Shahad Laith | UN Habitat (intern) |
| 23 | Benedetta Ficarelli | UN Habitat (intern) |



(UN Habitat, MOMA, Technical Committee first meeting, 15-1-2019. Benedetta Ficarelli)



(UN Habitat, MOMA, Technical Committee first meeting, 15-1-2019. Benedetta Ficarelli)

REFERENCES

- Ababsa, Myriam, 2016, «Exclusion and Norms : Enforcing Women's Rights to Property in Jordan », in Al Dahdah Edouard, Corduneanu-Huci Cristina, Raballad Gael, Sergenti Ernest, Ababsa Myriam, (2016), *Rules on Paper, Rules in Practice. Enforcing Laws and Policies in the Middle East and North Africa*. IBRD/ The World Bank, Directions in Development, Public Sector Governance, pp. 93-121.
- Ababsa, Myriam, 2015, "Jordanie : la décentralisation par décision centralisée et la démocratie par volonté royale », in Harb Mona et Atallah Sami, *Local Governments and Public Goods : Assessing Decentralization in the Arab World*, Beyrouth : Lebanese Center for Policy Studies and Open Society Foundations, pp. 139-188.
- ABABSA M. (dir), 2013, *Atlas of Jordan. History, Territories and Society. Atlas al Urdunn. Al-tarikh, al-ardh, al-mujtama'*, IFPO, Beyrouth, 485 p. <http://books.openedition.org/ifpo/4560>
- Ababsa, Myriam, 2012, « Public Policies toward Informal Settlements in Jordan » (1965-2009), in ABABSA M., DENIS E., DUPRET B., 2012, *Popular Housing and Urban Land Tenure in the Middle East. Case Studies from Egypt, Syria, Jordan, Lebanon, and Turkey*, The American University in Cairo Press, pp. 259-282.
- Ababsa, M., Daher R., 2011, *Villes, pratiques urbaines et construction nationale en Jordanie. Cities, Urban Practices and Nation Building in Jordan*, IFPO, Beyrouth, 327 p. <http://ifpo.revues.org/1675>
- Abdulla F, Al-Shareef AW., 2009, "Roof rainwater harvesting systems for household water supply in Jordan". *Desalination* 2009; 243:195–207.
- Al-Bilbisi, H., 2019, "Spatial Monitoring of Urban Expansion Using Satellite Remote Sensing Images: A Case Study of Amman City", *Jordan, Sustainability* 2019, 11, 2260.
- Al-Kofahi, S. Hammouri N., Sawalhah M. Al-Hammouri A. Aukour F., 2018, "Assessment of the urban sprawl on agriculture lands of two major municipalities in Jordan using supervised classification techniques", *Arabian Journal of Geosciences*, 11:45, 12 p.
- AFD, 2018, *RLDP2, City profiles (Irbid, Jerash, Kerak, Madaba, Salt, Zarqa)*.
- Assayed A , Hatokay Z., Al-Zoubi R., Azzam Sh., Qbailat M., Al-Ulayyan A., Abu Saleem M., Bushnaq Sh., Maroni R., 2013, "On-site rainwater harvesting to achieve household water security among rural and peri-urban communities in Jordan". *Resources, Conservation and Recycling* 73 (2013) 72–77
- CSBE, 2017, *Public Transportation in Jordan: A Policy Study Report*, 21 p.
- Clark, J. 2018. *Local Politics in Jordan and Morocco : Strategies of centralisation and decentralization*, New-York : Columbia University Press, 2018.
- Clark, J. 2011. 'When Municipalities Go to Market: Economic Reform and Political Contestation in Jordan.' *Mediterranean Politics* 17 no. 3: 358-75.
- De Bel Air, Françoise, Ababsa, Myriam, 2013, "Demographic Trends", in Ababsa M. (dir.) *Atlas of Jordan. History, Territories, Society*, Ifpo Beirut, 485 p. <http://books.openedition.org/ifpo/4560>
- Department of Antiquities, 2014, *The Strategy for Management of Jordan's Archaeological Heritage*. USAID, Amman, 37 p.

Dijkstra L., Florczyk A., Freire S., Kemper Th., Pesaresi M., 2019, Applying the Degree of Urbanisation to the Globe: A New Harmonised Definition reveals a Different Picture of Global Urbanisation, Paper prepared for the 16th Conference of IAOS, OECD, 27 p.

DOS Department of Statistics, 2015, Population and Housing Census Report, Published on February 2016, http://census.dos.gov.jo/wp-content/uploads/sites/2/2016/02/Census_results_2016.pdf

DOS 2011, *Establishment Census 2011*, 213 p.

FAO, 2019, Franceschini, G., De Leo, E., Muchoney, D., *Jordan - Land Cover Atlas*. Rome, FAO. 66 p.

Haddad N., Fakhoury L., 2016, "Towards developing as sustainable heritage tourism and conservation action plan for Irbid's historic core", *International Journal of Architectural Research*, Volume 10. 3, pp. 36-59.

Hallaj O.A., Ababsa M., Karam K., Knox R., *Decentralization in the Mashrek Region: Challenges and Opportunities*, 2015, Platforma (The European voice of Local and Regional authorities for development), SKL, 54 p.

Hamashaa K. M., Almomani M.S., Abu-Allaban M., Arnott W.P., 2010, "Study of Black Carbon Levels in City Centers and Industrial Centers", *Jordan Journal of Physics* 3/1, p. 1-8.

Holston J., APPADURAI, A., 1996, « Cities and Citizenships », in *Public Culture*, n°8, pp. 187-204, The University of Chicago.

HUDC 2017, *Housing Policies in Jordan*, 33 p.

IUCN, MoA, 2013, *Updated Rangeland Strategy for Jordan*, 27 p.

IMF 2019, *Jordan. Second Review under the Extended Arrangement under the Extended Fund Facility*, 99 p.

IMF 2017, *Public Investment Management Assessment (PIMA)*.

Malkawi F., Abu Dayyeh N., 2004, *The Condition of Physical Planning in Jordan, 1970-1990*, Institut français du Proche-Orient. Document de l'Ifpo. Etudes contemporaines N°14. 66 p.

Ministry of Transport, 2012, *Jordan Long Term National Transport Strategy and Action Plan*, 223 p.

Ministry of Environment, 2015, *Intended Nationally Determined Contribution (INDC)*, 17 p.

Ministry of Environment, 2013, *The National Climate Change Policy of the Hashemite Kingdom of Jordan (2013-2020)*, 30 p.

Ministry of Tourism and Antiquities, World Bank, 2005, *'Third Tourism development project. Secondary Cities Revitalization Study. General Analysis of the Municipal Sector,' Annex B. 73.*

MOPIC, 2019, *Jordan Response Plan (JRP) for the Syrian Crisis*, 59 p.

MOPIC, 2015, *Jordan Response Plan (JRP) for the Syrian Crisis*, 172 p.

MOPIC, 2015, *Governorates Development Program (2016-2018)*. (one volume for each 12 governorates).

MOPIC, 2013. *Impact of Housing Syrian Refugees*.

MOPIC, 2006, *Municipal Joint Service Councils Assessment Study*, ERM

Mubaideen Sh., Al Kurdi N., 2017, “Heritage conservation and urban development: A supporting management model for the effective incorporation of archaeological sites in the planning process”, *Journal of Cultural Heritage* 28 (2017) 117–128.

MWI, 2016, *National Water Strategy of Jordan, 2016 – 2025*, Hashemite Kingdom of Jordan, 61 p.

Obeidat, Sufian, 2012, *The Rule of Law in Jordan: Prospects and Challenges*, HiiL’s Rule of Law Quick Scan Series, The Hague, The Netherlands, 55 p.

Reach, 2018, *Municipality Profiles, Cities Baseline Study*, 66 p.

Timofeev A., Wallace S., 2017, *An Assessment of the Subnational Fiscal Framework in Jordan*. Report for the World Bank, International Center for Public Policy Andrew Young School of Policy Studies Georgia State University November 2017, 78 p.

UNDP, GEF, 2017, *A Systemic Approach to Sustainable Urbanization and Resource Efficiency in Greater Amman Municipality*, 106 p.

UNDP, GEF, 2014, *Jordan’s third National Communication on Climate Change. Submitted to The United Nations Framework Convention on Climate Change (UNFCCC)*, 281 p.

UNDP 2013, *The Informal Sector in Jordanian Economy*. 58 p.

United Nations, 2016. *Habitat III, Policy Unit 3 Policy Paper. United Nations Conference on Housing and sustainable Urban Development*. Nairobi.

UNFPA 2016, Mapping of Youth Activities in Jordan. Who is doing what for Youth in Jordan (2014-2015), 97 p.

UN Habitat, 2018, *Jordan National Urban Policy. Inception Report* (K. Jalouqa), 24 p. Amman.

UN Habitat, 2018, *National Urban Policies Programme in Lebanon. Diagnosis Report*, 73 p.

UN Habitat, 2018, *A National Urban Policy for Liberia: Policy Note*, 40 p. Nairobi.

UN Habitat, 2017, *National Urban Policy. Arab State Report*, 96 p. Nairobi.

UN Habitat, 2016, *The Evolution of National Urban Policies. A Global Overview*, 96 p. Nairobi.

UN Habitat, 2016, *Addressing Climate Change in National Urban Policy: A Policy Guide for Low-Carbon and Climate-Resilient Urban Development*, 48 p.

UN Habitat, 2016, *National Urban Policy: A Guiding Framework*, 68 p. Nairobi.

UN Habitat, 2014, *The Evolution of National Urban Policies, a Global overview*. Nairobi.

UN Habitat, HUDC, 2014, *The Third National Report on the Habitat (Jordan)*. Habitat 3. 83 p.

USAID, Min of Finance, 2017, *Fiscal Decentralization in Jordan. Strengthening the role of*

governorates in improving public services, 32 p.

USAID, 2016, *Zarqa Municipality. Phase 1 of Planning for Local Economic Development*. 58 p.

World Bank 2018a, *Jordan Housing Sector Assessment*, 82 p.

World Bank. 2018b. *Urban Growth Model and Sustainable Urban Expansion for the Hashemite Kingdom of Jordan (English)*. Washington, D.C.

World Bank, 2016, Program for Results. Economic Opportunities for Jordanian and Syrian Refugees. Environmental and Social Systems Assessment (ESSA), 145 p.

World Bank, 2015, *Implementation Completion and Results Report (IBRD 74220) on a loan of USD 20 million to the Hashemite Kingdom of Jordan for a Regional and Local Development Project*, 74 p.

World Bank, 2014, Review of the Transport Sector of the Hashemite Kingdom of Jordan, 65 p.

Websites:

Ministry of Planning and International Cooperation. Organization Structure.
<http://www.mop.gov.jo/Pages/viewpage.aspx?pageID=8>

Jordan Investment Commission. http://www.jic.gov.jo/Contents/About_JIC.aspx

Ministry of Environment. <http://www.moenv.gov.jo/EN/Pages/default.aspx>

Ministry of Labor. <http://mol.gov.jo/Pages/default.aspx>

Jordanian Free Zones Corporation. <http://www.free-zones.gov.jo/english/law/LawLinkEn.aspx>

Jordan Development Zones Company. http://www.jdz.jo/?page_id=749

Jordan Industrial Estate Company. http://www.jiec.com/JIZC/JSP_/index.jsp

Ministry of Tourism and Antiquities. <http://www.mota.gov.jo/>

Ministry of Public Works and Housing. <http://www.mpwh.gov.jo/Pages/WelcomePage.aspx>

Ministry of Energy and Mineral Resources. <http://www.memr.gov.jo/>

Ministry of Finance. <http://www.mof.gov.jo/en-us/mainpage.aspx>

The General Directorate of Civil Defense Department. <http://www.cdd.gov.jo/english/index.php>

Ministry of Agriculture. <http://www.moa.gov.jo/ar-jo/home.aspx>

Vocational Training Corporation. <http://vtc.gov.jo/vtcar/>

Employment – Technical and Vocational Education and Training Fund.
<http://www.etvetfund.gov.jo/index.php?lang=en>

Development and Employment Fund. <http://www.defjo.net/site/>