Greater Amman Municipality

Second Voluntary Local Review
City of Amman

Smart Pathways to a Resilient and Liveable Future

July 2026

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Message from the Chairman of the Greater Amman Municipality Committee

H.E. Dr. Yousef Al Shawarbeh
Chairman of the
Greater Amman
Municipality Committee

The city of Amman, historically known as Philadelphia, is not only a city with deep historical roots; it is a living model of continuous renewal, where the authenticity of the past harmonizes with the dynamism of the present and the ambitions of the future. Over the decades, the Jordanian capital has firmly established itself as a hub of cultural and economic diversity, moving confidently towards a more prosperous and sustainable future, with people, their well-being and their quality of life at the core of its strategic priorities.

Amman continues its ambitious journey of comprehensive urban transformation, guided by a clear vision built on sustainable development, social equity and innovation in service delivery. The city places local communities at the heart of the development process, treating them as essential partners in shaping policies and decision-making, and strengthening a shared sense of belonging and collective responsibility for the city's future. This approach aligns with the directives of King Abdullah II and fits within a broader national framework that seeks to align local

plans with the Sustainable Development Goals (SDGs), ensuring integrated and balanced development.

The second voluntary local review (VLR) represents a significant strategic step in Amman's ongoing assessment and improvement process. It offers a detailed and comprehensive analysis of progress towards the SDGs, highlighting achievements, existing challenges, and gaps that require thoughtful and innovative interventions. The review goes beyond presenting the current situation; it sets out a forward-looking vision that builds on opportunities and strengths to improve institutional performance and raise the quality of services delivered to all residents.

The review also reflects a firm commitment to strengthening partnerships and collaboration with a wide range of stakeholders, including national institutions, international organizations and United Nations agencies, with the goal of exchanging expertise, aligning efforts, and making the best use of available resources. This collaborative approach is a cornerstone for achieving strategic objectives efficiently and effectively, and for reinforcing Amman's position as a leading model in the Arab region for sustainable urban development.

The review further emphasizes that genuine development must be inclusive and equitable, leaving no person or community behind. Amman is focused on ensuring that all neighbourhoods have fair access to basic services and development opportunities, and on promoting meaningful community participation across all stages of planning and implementation. The review also highlights the importance of embedding transparency and accountability, and of adopting clear performance indicators to measure outcomes, ensuring that efforts deliver tangible and lasting impact.

In terms of regional leadership, Amman holds a special distinction as the first Arab city to submit a VLR, reflecting a high level of institutional commitment and openness to evaluation and accountability. The second VLR builds on this standing and demonstrates the city's capacity to lead a comprehensive development model that actively contributes to accelerating the achievement of the SDGs at both the local and global levels.

The present report is not only an assessment document; it is an ambitious road map towards a more sustainable, resilient and prosperous future, grounded in a long-term strategic vision that places people at the centre of development. These efforts align with the Economic Modernization Vision of Jordan and with the strategy of the Greater Amman Municipality, and complement the principles of the New Urban Agenda, which calls for cities that are inclusive, safe, resilient and sustainable. Together, they support Amman's transition towards becoming a smarter city, better equipped to adapt to change and to turn challenges into real opportunities for growth and progress.

Message from ESCWA and UN-Habitat

It is with great pride and a deep sense of shared purpose that we present the second voluntary local review (VLR) of the City of Amman. This milestone reflects the Greater Amman Municipality's sustained commitment to transparent governance, inclusive development, and the localization of the Sustainable Development Goals (SDGs). When Amman published its first VLR in 2022, it became the first Arab city to undertake such a process. Today, through its second edition, Amman reaffirms that this commitment was not a one-time exercise, but an enduring institutional approach rooted in participatory governance, evidence-based planning, and inclusive urban development.

We commend the leadership of H.E. Dr. Yousef Al Shawarbeh, Chairman of the Greater Amman Municipality Committee, and the dedicated efforts of the Amman Urban Observatory under the leadership of Mr. Akram Khraisat, whose vision, technical commitment and institutional coordination made the review possible. Amman's second VLR demonstrates how cities can translate global commitments into local priorities, while strengthening the links between municipal action and national development agendas. The alignment of this second VLR of the city of Amman with the 2026 Voluntary National Review of Jordan, and the coordination between GAM and the Ministry of Planning and International Cooperation, further reinforces the importance of coherent local-national reporting and policy coherence and positions Amman as an active partner in advancing the country's SDG trajectory. This approach is also aligned with key development frameworks in Jordan, notably the Economic Modernization Vision (2023–2033), which serves as a national road map for development over the next decade and guides sectoral executive programmes and plans under its two main pillars: quality of life and economic growth.

Building on the baseline and lessons of the first VLR, this second review advances Amman's SDG engagement with greater analytical depth and strategic ambition, and ensures a higher alignment with national reporting and dialogue. It focuses on eight priority SDGs through two cross-cutting lenses: resilience and smartness. These lenses help assess progress not only through data, but also through the city's capacity to absorb shocks, deliver services inclusively, and use innovation and evidence to improve quality of life. The review highlights important institutional milestones, including the country's first National Urban Policy, the second Amman Climate Action Plan, the operationalization of the Bus Rapid Transit (BRT) system, the new Planning and Zoning Bylaw, and Amman's recognition on the UN-Habitat Quality of Life Platform.

The second VLR is also candid about persistent challenges, including spatial inequalities, service accessibility, and the need to strengthen inclusion for refugees,

persons with disabilities, women, young people and other communities. Importantly, the review does not stop at diagnosis. It concludes with prioritized and action-oriented policy recommendations that can guide implementation, investment mobilization and partnership-building. In this sense, Amman's second VLR is both a reporting tool and a road map for accelerated local action.

The credibility of the review is also grounded in its participatory process. Its preparation brought together municipal departments, national ministries, civil society, academia, the private sector and United Nations partners. Through stakeholder forums, SDG taskforces, technical validation and structured consultations on policy recommendations, the process created a shared platform for dialogue, accountability and collective ownership.

ESCWA and UN-Habitat are proud to have supported the development of the second VLR, building on their partnership with Amman since the first review in 2022. With fewer than five years remaining until 2030, the urgency to accelerate SDG delivery at the local level has never been greater. Amman's second VLR offers an important model for the Arab region, showing how an Arab city can combine institutional maturity, data-driven governance, inclusive engagement, resilience and smart transformation into a coherent framework for action. Importantly, it also demonstrates how VLRs can strengthen alignment between local priorities and national development frameworks, promote policy coherence across government levels, and ensure that municipal action contributes directly to national SDG commitments. This alignment will be further highlighted at the joint presentation of the 2026 voluntary national review of Jordan and of Amman's second VLR at the 2026 High-level Political Forum on Sustainable Development (HLPF). A milestone that positions Amman as a leading example of good practice in the region, one that other cities can draw from and adapt to their own contexts.

We remain committed to supporting Amman and cities across the region in translating this momentum into tangible improvements in the lives of all residents, leaving no person and no neighbourhood behind.

Acknowledgements

The second Voluntary Local Review (VLR) of the City of Amman was led by the United Nations Economic and Social Commission for Western Asia (ESCWA) and the United Nations Human Settlements Programme (UN-Habitat), in close collaboration with the Greater Amman Municipality (GAM).

The review was developed by Mr. Joao De Freitas, Lead Consultant, who led the drafting and overall coordination of the second VLR. It benefited from the technical guidance, inputs, and coordination provided by Ms. Lina Nasereddin, SDG Localization Lead at the UN-Habitat Jordan Country Programme. Her contribution to strengthening the alignment between the VLR and the VNR and ensuring coherence across both reporting processes was instrumental.

The development of the second VLR of the City of Amman was overseen by Ms. Sukaina Abdul Ilah Al-Nasrawi, Programme Management Officer and Lead of the Sustainable Urban Development Portfolio of the ESCWA Cluster on Gender Justice, Population and Inclusive Development, under the leadership of Ms. Mehrinaz Al-Awady, ESCWA Acting Deputy Executive Secretary for Programmes. The process benefited from the guidance of Ms. Deema Abu Thiab, Head of the UN-Habitat Programme in Jordan; and the support of Ms. Nagwa Lachine, Programme Officer at the UN-Habitat Regional Office for Arab States, under the leadership of Ms. Rania Hedeya.

Members of the ESCWA urban development team, namely Ms. Tala Abdul Samad and Mr. Adnan Hassoun, played a key role in the preparation and validation of the VLR. They contributed to the drafting of several chapters, provided technical inputs throughout the review process, and supported the overall coordination and preparation of the VLR. The process further benefited from the technical review, contribution, and coordination provided by Ms. Alia Asad, Urban Programme and Partnerships Officer at the UN-Habitat Jordan Country Programme.

Within GAM, the process was coordinated by an internal committee comprising representatives from various sectors and departments of the municipality, under the strategic leadership of Mr. Akram Khraisat, Director of the Amman Urban Observatory, with the support and contributions of Ms. Maha Al Wraikat and Mr. Fares Bakri.

Technical inputs to the VLR and its policy recommendations were provided by a wide range of stakeholders from the public sector, civil society organizations, academia, international organizations, and United Nations agencies. The draft VLR was reviewed by GAM, the Jordanian Ministry of Planning and International Cooperation, ESCWA, UN-Habitat, and the United Nations Country Team.

The VLR team extends its sincere gratitude to H.E. Dr. Yousef Al Shawarbeh, Chairman of the GAM Committee, for his guidance and continued support throughout the development of the second VLR of the City of Amman, marking an important milestone in advancing SDG localization and sustainable urban development in the Arab region.

Executive summary

Four years after its first voluntary local review (VLR), Amman is at a decisive mid-decade juncture. This second VLR is a governance instrument designed to translate the 2030 Agenda for Sustainable Development into an operational locally owned agenda, aligned with the 2026 voluntary national review (VNR) of Jordan and embedded in the strategy of the Greater Amman Municipality (GAM). Co-produced with UN-Habitat and ESCWA and informed by SDG taskforces convened across municipal departments and partners, the review consolidates what has been built since 2022, and highlights Amman's way forward. Moreover, the second VLR translates its diagnostic findings into a structured pipeline of candidate bankable projects ready to attract climate finance, international financial institution (IFI) capital, and partnership-based investment.

What distinguishes the present edition is the deliberate reading of every SDG through two cross-cutting lenses: resilience (anchored in the Urban Economic Resilience Diagnostic and Planning Tool and in the City Resilience Framework) and smartness (grounded in the Amman Smart City Strategy and the United Nations people-centred smart city guidelines). Taken together, these lenses reframe progress as the city's capacity to absorb shocks, deliver inclusively, and convert data into public value. Resilience and smartness are two sides of the same governance upgrade.

Amman's review is intentionally synchronized with the Jordanian VNR, the Economic Modernization Vision (EMV) 2023–2033, and the Ministry of Planning and International Cooperation's coordination architecture, while remaining anchored in the GAM strategic plan, the Amman Resilience Strategy, and the Smart City Roadmap. This vertical coherence is more than methodological; it produces measurable policy impact. When national strategies on climate, gender, energy, governance and innovation are translated through municipal mandates and operationalized through GAM service delivery, fiscal planning and data systems, alignment converts into outcomes, faster project preparation, reduced duplication across reporting cycles, stronger access to climate and development finance, and more equitable service reach across Amman's districts. The second VLR positions the municipality not as a downstream implementer but as a co-architect of the Jordanian SDG trajectory, where local-level coherence amplifies the reach of national reforms.

The review focuses on eight SDGs selected for continuity with 2022, alignment with national priorities, stakeholder salience, data availability, and systemic leverage. A consistent pattern emerges across them: Amman has matured its institutional foundations with clearer mandates, stronger data practices, a denser project pipeline, and visible leadership in resilience and digital services, while structural challenges in inclusion, equity and service reach persist.

Progress is real but uneven, and the next phase of delivery depends on execution capacity, financing and the ability to scale what already works.

A distinguishing contribution of the present edition is the structured identification of 24 priority policy recommendations across the eight SDGs under review, complemented by three cross-cutting implementation enablers that address systemic preconditions across multiple goals. Each recommendation is anchored in a specific gap or priority highlighted through the diagnostic chapters and validated through SDG taskforce consultations. Each is presented as a candidate bankable project with the scaffolding needed for development into a full project document: a lead institution and supporting partners, a phased implementation pathway, output and outcome indicators, and a financing route mapped across municipal budgets, IFI lending, climate funds, public-private partnerships (PPP) and technical assistance.

By framing recommendations as candidate bankable projects, the second VLR equips GAM and its partners to move from planning to delivery, from pilots to systems, and from sectoral action to integrated, resilient and smart urban governance. It provides a structured basis for selecting individual priority interventions to be developed into full project documents – the next step in Amman's SDG financing trajectory. In doing so, the second VLR offers a blueprint for how a capital city in the Arab region can lead SDG localization into its most critical phase.

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Acronyms and abbreviations

AFD	Agence Française de Développement
AI	artificial intelligence
AUO	Amman Urban Observatory
AVID	Amman Vision for Investment and Development
BMZ	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (German Federal Ministry for Economic Cooperation and Development)
BRT	Bus Rapid Transit
C40	C40 Cities Network
CCTV	closed-circuit television
CDP	Carbon Disclosure Project
CO_2	carbon dioxide
COVID-19	coronavirus disease
DRR	disaster risk reduction
EBRD	European Bank for Reconstruction and Development
EMV	Economic Modernization Vision
ESCWA	Economic and Social Commission for Western Asia
EV	electric vehicle
GAM	Greater Amman Municipality
GCF	Green Climate Fund
GDP	gross domestic product
GEF	Global Environment Facility
GHG	greenhouse gas
GIS	geographic information system
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Corporation for International Cooperation)
GPC	Global Protocol for Community-Scale Greenhouse Gas Emission Inventories

GWh	gigawatt-hour
HACCP	hazard analysis and critical control points
HDP	humanitarian-development-peace
HLPF	High-Level Political Forum on Sustainable Development
ICT	information and communications technology
IFI	international financial institution
ILCA	Improving Living Conditions in Disadvantaged Areas
IoT	Internet of Things
IPSAS	International Public Sector Accounting Standards
ISO	International Organization for Standardization
IT	information technology
JHFR	Jordan Health Fund for Refugees
JNUP	Jordan National Urban Policy
JOD	Jordanian dinar
JOHUD	Jordanian Hashemite Fund for Human Development
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
KPI	key performance indicator
LED	light-emitting diode
LOSI	Local Online Service Index
MASE	Ministero dell'Ambiente e della Sicurezza Energetica (Partnership Platform on Localizing the SDGs)
MBT	mechanical-biological treatment
MDB	multilateral development bank
MIL	Media and Information Literacy
MRV	monitoring, reporting and verification
$MtCO_2e$	megatons of carbon dioxide equivalent
MSDI	Municipal Spatial Data Infrastructure
MW	megawatt
NCD	non-communicable disease
NCSCM	National Centre for Security and Crisis Management

NDC	nationally determined contribution
NGO	non-governmental organization
ODA	Official Development Assistance
PM	Particulate Matter
PPP	public-private partnership
PV	photovoltaic
QoL	Quality of Life
QR	quick response (code)
SDG	Sustainable Development Goal
SIT	smart inclusive transition
SME	small and medium-sized enterprise
STEM	science, technology, engineering and mathematics
SuDS	sustainable urban drainage systems
U4SSC	United for Smart Sustainable Cities
UCLG	United Cities and Local Governments
UMF	Urban Monitoring Framework
UN-Habitat	United Nations Human Settlements Programme
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
VLR	voluntary local review
VNR	voluntary national review
WCCD	World Council on City Data
WHO	World Health Organization

Introduction

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Introduction

Why now

Amman's first VLR[1] in 2022 laid the groundwork for Sustainable Development Goal (SDG) localization by setting a unified framework for local action. The second edition builds directly on that foundation by retaining core indicators wherever feasible, thus enabling likeforlike comparisons and trend analysis. Maintaining continuity makes it possible to assess whether strategies, policies and flagship projects have translated into demonstrable change. It also helps guide course corrections where progress has faced barriers.

With fewer than five years to 2030, the second VLR comes at a pivotal mid-decade juncture. It responds to global calls for accelerated delivery on the SDGs and aligns with national review cycles, translating international momentum into local action. By taking stock now, Amman can sharpen priorities, focus implementation where impact is greatest, and demonstrate how municipal progress contributes to implementing national commitments.

The present edition articulates the VLR commitment to the principle of leaving no one behind, which the 2030 Agenda places at the core of sustainable development, and which the New Urban Agenda translates into inclusive rights-based urbanization. For a capital city that hosts Jordanians, refugees of multiple nationalities and legal statuses, persons with disabilities, low-income households and populations at the intersection of these categories, leaving no one behind is not an abstract principle but a daily operational reality.

Amman is consolidating its position as a pioneer in the Arab region by embedding the SDGs across municipal strategies and initiatives. The city's approach to building institutional capacity, aligning strategic priorities, and integrating sustainability, resilience and innovation into urban governance provides a forward-looking model recognized across the region. Publishing a second VLR signals continuity and institutional learning, and positions Amman to share practices and collaborate with cities regionally and internationally on data, project design, and policy alignment. Beyond this regional leadership, the VLR also deepens Amman's role within the country's evolving national governance architecture.

A critical added value of this second VLR is its role in strengthening multilevel governance between the national and municipal levels. Jordanian decentralization reforms, including the Local Administration Law of 2021 and Greater Amman Municipality (GAM) Law No. 18 of 2021, have expanded the city's autonomy, formalized its responsibilities in areas such as climate action and resilience, and reinforced the expectation that municipalities act as primary agents of development. These reforms are complemented by institutional mechanisms that embed municipalities directly into national SDG governance, notably through the Coordination Committee and task forces under the National Higher Committee for Sustainable Development. By producing its VLR in parallel with the Jordanian VNR, Amman is contributing to a more coherent and mutually reinforcing policy cycle, ensuring that local priorities inform national strategies

and that national commitments translate into actionable urban agendas.

In a milestone achievement for urban governance, GAM endorsed the country's first urban planning bylaw in 2024, marking a fundamental transformation in the city's approach to territorial development. This policy innovation has shifted the planning paradigm from project-based interventions to comprehensive policy-based frameworks that integrate sustainability, resilience and smart city principles across all municipal planning processes. The bylaw not only establishes binding guidelines for land use, density, green space provision and infrastructure development within Amman, but also serves as the foundational model for forthcoming national urban planning, positioning the capital as a policy laboratory for broader urban transformation. This achievement exemplifies how SDG localization translates into institutional reform, moving beyond reporting and indicators to embed sustainable development principles into the legal and regulatory architecture that shapes the city's future.

Amman's second VLR offers a clear, comparable snapshot of change since 2022. It highlights where progress has accelerated, where it has plateaued, and where setbacks have emerged. This evidence-led picture strengthens transparency and supports accountable, data-informed decisions across GAM and its partners.

Beyond the performance of individual metrics, the present edition assesses aggregate and systemic patterns, such as acceleration or deceleration across clusters of indicators and their alignment with resilience and smartness dimensions. This citywide view reflects how urban change actually happens, complementing technical dashboards, and providing strategic guidance for local policymakers. In practice, the analysis links indicator trends with institutional capabilities and enabling conditions, helping identify where cross-sector action can unlock higher impact.

The present report is anchored in the United Nations guidelines for developing action-oriented VLRs,[2,3] and in the New Urban Agenda principles of inclusive and rights-based urbanization, the Sendai Framework for Disaster Risk Reduction approach to planning, and the Paris Agreement call for climate action. At the national level, the second VLR aligns directly with the Jordanian VNR,[4] the country's EMV priorities,[5] and National Urban Policy instruments.[6] Together, these frameworks ensure that Amman's results are internationally credible, nationally relevant, and aligned with Jordanian commitments.

Within GAM, the second VLR is closely linked to the city's broader strategic approach to sustainable development. Rather than standing alone, it draws on and reinforces a range of operational and strategic instruments, of which the GAM Strategic Plan,[7] the Amman Resilience Strategy,[8] the Amman Smart City Strategy,[9] and the Amman Climate Action Plan are key examples.[10] Together, these frameworks translate high-level commitments into service delivery, guide the city in managing risks and strengthening adaptive capacity, and commit Amman to ambitious climate mitigation and adaptation targets. By aligning with such strategies, the second VLR ensures that indicator trends, projects and institutional reforms move in the same direction, turning international and national commitments into locally actionable agendas.

What distinguishes the present edition is the explicit use of resilience and smartness as lenses applied across every SDG. Each chapter assesses how interventions strengthen Amman's capacity to anticipate, absorb and adapt to shocks, while also examining the role of digital tools, data governance and innovation in improving service delivery and public value. This dual framing focuses on risk and opportunity simultaneously, ensuring that progress is measured not only by outputs but by system robustness and learning.

The present report brings together three evidence bases, namely indicators, project portfolios and strategic documents, to provide a richer, contextualized assessment of Amman's performance towards the SDGs. Indicators reveal trajectories and gaps. Project

pipelines demonstrate where implementation is occurring and at what scale. Strategy and policy documents clarify intent, enabling conditions and governance commitments. Read together, these sources validate one another, surface inconsistencies, and reveal where additional coordination, resourcing or policy adjustment is needed to turn plans into results.

By combining these elements, the second VLR moves beyond diagnosis to identify actionable priorities and investment-ready opportunities. It highlights where targeted policy reforms can unlock impact, providing a practical bridge from evidence to execution, thereby helping Amman and partners channel resources towards interventions with the highest potential for tangible, scalable impact.

The second VLR does not attempt a uniform review of all 17 SDGs. Instead, it concentrates analytical depth on eight SDGs selected through a deliberate, multi-criteria prioritization process that reflects both methodological rigor and strategic relevance to Amman's mid-decade agenda.

Five considerations shaped the selection. Firstly, continuity with the 2022 VLR: priority was given to SDGs where the first edition established a robust baseline, enabling like-for-like comparison, trend analysis, and honest assessment of whether strategies and flagship projects have translated into demonstrable change.

Secondly, alignment with Jordanian national policy architecture: the selected SDGs map directly onto the priorities of the EMV, and the policy domains where the GAM municipal mandate most meaningfully intersects with national commitments, ensuring that the second VLR reinforces, rather than duplicates, the VNR and sectoral strategies.

Thirdly, priorities emerging from stakeholder engagement: SDG taskforce consultations and broader engagement with GAM departments, United Nations partners and community actors surfaced a consistent set of urban priorities that informed which SDGs warranted detailed analysis in the present edition.

Fourthly, data availability and project portfolio evidence: the selection favoured SDGs where indicators, municipal datasets and an active pipeline of projects and investments provided sufficient evidence to move beyond diagnosis towards actionable, investment-ready insights.

Fifthly, systemic leverage: preference was given to SDGs that function as force multipliers within Amman's context, through strong interlinkages with resilience, smartness, inclusion and institutional performance.

These criteria identified eight SDGs where Amman's municipal action could generate the highest strategic return at this mid-decade juncture. The remaining SDGs are not absent from the city's agenda; they are addressed through the Jordanian VNR, sectoral strategies and complementary municipal instruments, and will be revisited in future VLR editions as data maturity and policy priorities evolve.

The present report is organized to guide readers from context to action. Chapter 1 introduces Amman and its enabling environment, outlines the stakeholder engagement process and methodology underpinning the review, and presents the resilience and smartness lenses applied throughout the analysis. Chapter 2 takes stock of progress since 2022, combining a portfolio review of over 500 municipal projects with an indicator-based assessment of measurable change. Chapter 3 presents the eight thematic SDG sections, each following a consistent structure: a global and regional framing, national-local policy alignment, a project portfolio review, focus areas for smart and resilient development, and three policy recommendations developed and validated through the SDG taskforce consultations. These recommendations are not framed as abstract proposals: each is presented as a candidate bankable project, with a lead institution, an implementation pathway, output and outcome indicators, and a financing route, providing the scaffolding needed to develop full project documents in the next stage of Amman's SDG financing trajectory. Read sequentially, the document moves from diagnosis to delivery; read selectively, each chapter functions as a stand-alone reference for the SDG, sector or partnership it addresses.

1. Background

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1. Background

A. Amman at a glance

Amman is the capital of Jordan and the political, economic and cultural heart of the country. Located in the Capital Governorate on the Mountain Heights Plateau in north-western Jordan, the city extends across approximately 800 km² and is organized into 22 districts grouped into six service-delivery sectors. Its strategic position at the crossroads of regional trade routes has long anchored Amman's role as a centre for commerce, finance, industry, education and tourism.

With an estimated population of more than 4.5 million, Amman is home to roughly 38% of the country's 11.85 million inhabitants, making it by far the largest urban centre in Jordan and one of the most demographically concentrated capital cities in the Arab region. The city is also among the world's leading refugee-hosting urban areas, accommodating a substantial share of the country's registered Syrian refugees alongside long-standing Palestinian refugee communities, including four United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)-recognized camps within its boundaries, in addition to Iraqi, Sudanese, Yemeni and other displaced communities. Population density varies sharply across the city, exceeding 20,000 inhabitants per km² in eastern neighbourhoods and falling below 10,000 in parts of the west, reflecting deep spatial inequalities that shape the city's resilience and service-delivery agenda.

Amman comprises a disproportionate share of Jordanian economic activity, accounting for an estimated 40% of national gross domestic product (GDP) and approximately 58% of all municipal expenditures nationwide. It records the lowest unemployment rate among the country's twelve governorates (11.3% in the third quarter of 2025, against a national average of 21.4%) and serves as the principal hub for financial services, manufacturing, information and communication technology (ICT), and government. Tourism and medical tourism are pillars of the city's economy: in 2024, Jordan welcomed over 6.1 million visitors and more than 224,000 medical tourists, with Amman serving as the primary gateway and destination. The city is also a magnet for foreign direct investment and hosts Amman Vision for Investment and Development (AVID), the municipal company that has mobilized 950 million Jordanian dinars (JOD) across 32 projects since 2018.

GAM is governed under Law No. 18 of 2021, as amended by Law No. 11 of 2024, which transferred planning and zoning authorities to GAM and established the Central Planning Committee as the city's highest planning body. The Mayor is appointed by the Cabinet and reports to the Prime Minister; H.E. Dr. Yousef Al Shawarbeh has held the office since 2017. The GAM mandate covers urban planning, transport and roads, parks and public space, solid waste, and environmental and occupational health, alongside a stewardship role in safeguarding the city's cultural identity and

heritage through public space management, neighbourhood character, and community-facing institutions such as the Zaha Cultural Center. Education, public security, economic development policy, and water and electricity provision are the responsibility of national authorities and utilities. The municipality's 2024 budget reached JOD 488.7 million (approximately $689 million), up 13% from 2022, drawing on property taxes, fees, investment returns, and international financing from partners including the European Bank for Reconstruction and Development (EBRD), the French Development Agency (AFD), the Kreditanstalt für Wiederaufbau (KfW) Development Bank, the German Corporation for International Cooperation (GIZ) and the World Bank.

Since its first VLR (2022), Amman has consolidated its position as a policy laboratory for Jordanian urban transformation. Landmark milestones include the endorsement of the country's first National Urban Policy in March 2024, the publication of the second Amman Climate Action Plan in September 2024 (with a 2050 carbon-neutrality vision), the operationalization of the Bus Rapid Transit (BRT) system carrying 18 million passengers in 2024, the introduction of Amman's first electric buses in 2025, the launch of the Amman is Listening participatory governance platform, and the entry into force of the new Planning and Zoning Bylaw No. 81 of 2025 in January 2026 – the first instrument of its kind in Jordan. Amman now ranks tenth globally on the United Nations Human Settlements Programme (UN-Habitat) Quality of Life Platform and is the second Arab city to publish its indicators there.

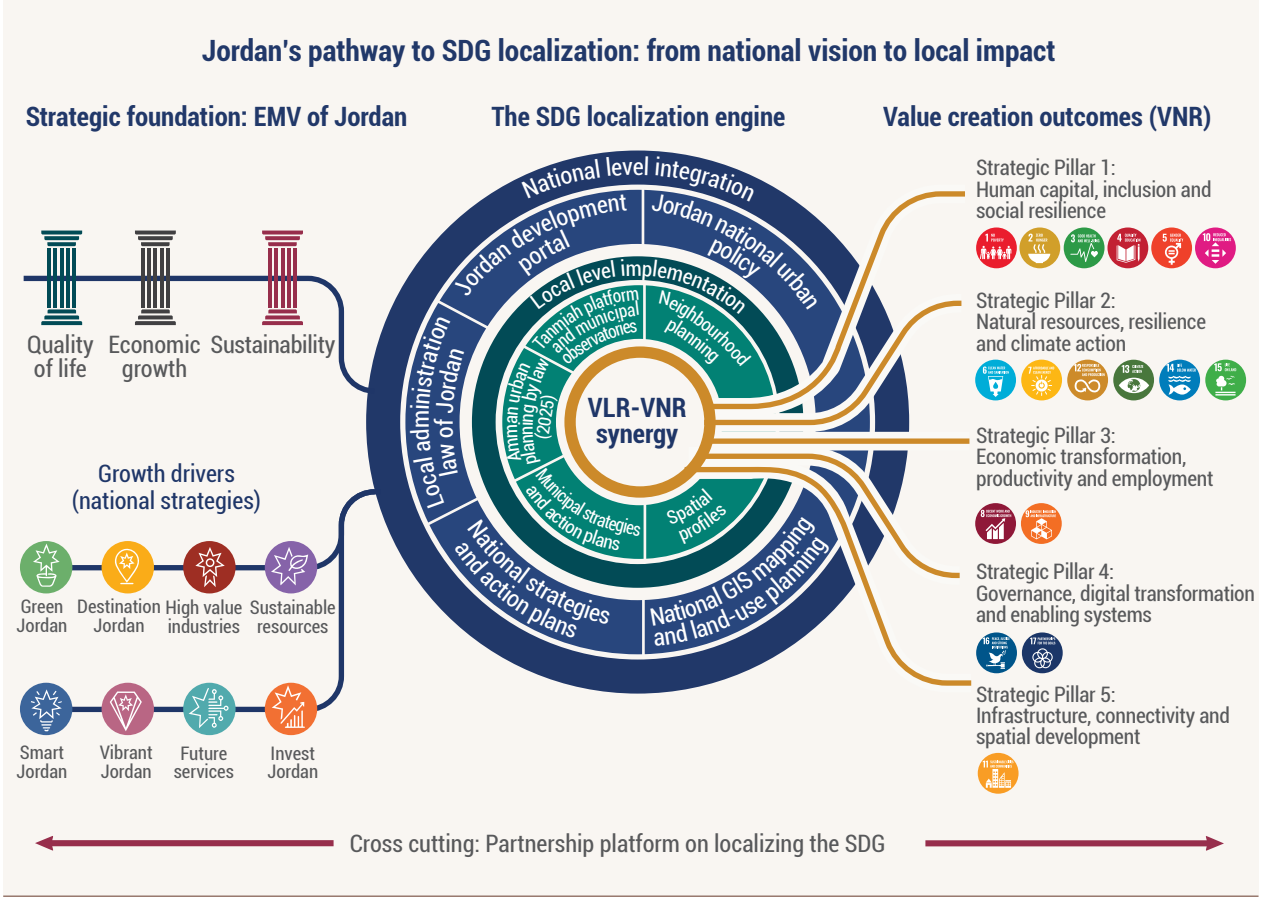
B. Enabling environment

Amman's sustainable development trajectory is increasingly shaped by an evolving regulatory environment that links national urban policy ambitions to concrete local action. Two interconnected developments stand out: the Jordan National Urban Policy (JNUP) and the 2025 Planning and Zoning Regulation under GAM. Together, they establish a coherent framework in which national strategy, local regulation and evidence-based planning reinforce one another. This alignment is visualized in figure 1, showing how the VNR and VLR processes operate as parallel, mutually reinforcing tracks within the Jordanian SDG reporting architecture.

Figure 1 illustrates how the Jordanian VNR, coordinated by the Ministry of Planning and International Cooperation, and Amman's VLR, led by GAM, operate as parallel and mutually reinforcing tracks, sharing a common SDG framework, exchanging data, and feeding into a coherent reporting cycle.

JNUP follows a phased implementation logic that links policy design to scalable urban transformation. Its first phase, spanning the initial two years, focuses on demonstration through strategic interventions across three priority areas: neighbourhood planning, agriculture and tourism, and public transit. These interventions are designed as catalytic, cross-sectoral and community-based pilots that intersect with the JNUP six urbanization objectives. Beyond their immediate impact, they serve as learning platforms to develop institutional structures, planning processes, tools, standards and capacities for community-based planning, while raising public awareness of the policy itself.

Figure 1. VNR-VLR linkages



Source: Developed by authors.

The second phase, with a 10-year horizon, builds on these pilots through scaled and institutionalized implementation. The Government is committed to direct investment and private sector engagement in three "big moves": mandating neighbourhood plans, developing agriculture and tourism, and building public transit systems. Together, these represent the long-term structural transformation of the Jordanian urban system and provide a national scaffolding under which local action in Amman can be situated.

Recent regulatory developments in Amman demonstrate how JNUP is being operationalized at the local level. In a milestone achievement for urban governance, the Cabinet endorsed the 2025 Planning and Zoning Regulation under GAM, introducing a modern urban planning system designed to accommodate population growth while meeting economic, social and environmental objectives, supporting climate adaptation, and aligning national, regional and local environmental frameworks.

The new bylaw streamlines procedures for land subdivision, shared ownership, expropriation and the allocation of development rights under clear legal frameworks, promoting fairness, investment and sustainable urban development. It facilitates the balanced distribution of services across the city and clarifies the respective roles of the municipality and other government entities, strengthening coordination and service delivery.

Critically, the regulation institutionalizes participatory planning processes for the first time. It requires public hearings prior

to the approval of plans or zoning changes, and mandates the publication of planning decisions and outcomes. This ensures that diverse stakeholder groups, including women, men, young people, older persons, persons with disabilities, investors and business owners, are actively engaged in shaping the city's development. In doing so, the bylaw embeds in law a participatory logic that initiatives such as Amman is Listening and the Quality of Life dashboard had begun to pilot in practice, marking a maturity shift from ad hoc citizen listening towards institutionalized engagement.

These regulatory developments are closely aligned with area 6 on "Governance and management" of JNUP, which comprises a set of interlinked policies and initiatives aimed at strengthening institutional coordination, transparency and accountability in urban development. They also respond directly to the priority area of neighbourhood planning identified in JNUP phase one, positioning Amman as a frontrunner in translating national urban policy into local regulatory practice.

Locally generated data from VLRs, urban observatories and spatial profiles complement this process by providing the evidence base needed to guide both pilot interventions and long-term planning. Together, they create a coherent system linking local implementation, national policy frameworks, and global reporting commitments. Within this system, Amman's second VLR is not a stand-alone exercise: it draws on and feeds into an enabling environment in which regulation, participation and evidence are increasingly aligned in service of sustainable urban development.

C. Stakeholder engagement

1. Context

The preparation of Amman's second VLR has been intentionally designed as a participatory process that blends technical rigor with inclusive dialogue. From the outset, engagement went beyond collecting statistics and reviewing documents to actively convening civil society organizations, private sector actors, academia, national representatives and municipal departments. Their inputs helped test assumptions, validate findings and surface blind spots. This co-creation approach strengthens legitimacy and fosters shared ownership of priorities, turning the VLR into a platform for collective problem-solving rather than a one-off reporting exercise.

This level of engagement is possible because Amman has cultivated a supportive enabling environment around the SDGs. Clear political commitment from GAM leadership, coupled with alignment to national priorities and United Nations frameworks, has provided the mandate and momentum for cross-sector collaboration. Internally, teams have embedded SDG considerations into strategies and project pipelines. Externally, partners recognize the VLR process as a credible vehicle to align actions and pool evidence. Together, these conditions allow the review to function as both an accountability tool and a catalyst for coordinated action across Government, partners and communities.

2. Stakeholders Forum

The Stakeholders Forum served as the first major engagement milestone for the second VLR, convening a participatory session that brought together several GAM departments.

The forum's design aimed to launch the second VLR publicly, align expectations across actors, and establish a shared understanding of scope, timeline and roles. By prioritizing inclusivity and co-creation at the outset, it ensured that diverse perspectives would inform the VLR policy direction and analytical choices from the outset.

The session blended structured exercises with open dialogue to capture evidence and lived experience. Participants began with a needs assessment and SDG alignment exercise, identifying priority challenges and mapping them to specific targets. They then broke into SDG-based taskforces to review key chapters from the first VLR, reflecting on progress, gaps and emerging issues. An impact assessment segment invited participants to appraise the influence of the first VLR on decision-making and implementation.

Polls and worksheets highlighted clear themes. Most respondents perceived the first VLR as having at least a moderate influence on municipal decisionmaking. Participants also noted that public awareness of the SDGs had risen since 2022, while improvements in data collection were acknowledged as uneven, advancing in some areas more than others. Qualitative inputs repeatedly emphasized partnerships, quality of life, equity and resilience as crosscutting priorities to guide the next phase of the review.

The forum provided both substantive input and a foundation for continued engagement. Taskforce insights directly informed the drafting of SDG sections, while reflections on the first VLR influence help validate methods and refine focus. Priorities surfaced through polls and discussion shaped the policy recommendations phase, guiding where GAM and partners should concentrate efforts. By anchoring the process in shared evidence and expectations, the forum strengthened legitimacy and ownership, positioning the VLR process to translate collective insight into coordinated action.

3. External Partners Consultation

The External Partners Consultation convened key institutional stakeholders to align the second VLR with national and international frameworks and to validate the methodological approach. Unlike the broader Stakeholders Forum, this focused session brought together representatives from United Nations agencies, national ministries, academia and non-governmental organizations alongside GAM teams. Its purpose was to ensure coherence with the country's reporting cycles, confirm the scope and timelines, and secure early technical feedback so that evidence generation and drafting remained credible and decision-relevant.

The consultation followed an agenda structured around transparency and problem-solving. The team first presented progress to date, including SDGs under review, data-collection status, and the plan for stakeholder taskforces. This was followed by a plenary discussion focused on procedures, known data gaps, and options to strengthen multi-level coordination between GAM, national entities and external partners. The session closed with agreed next steps for sharing datasets, aligning timelines and scheduling targeted follow-ups where technical support was required.

Partners emphasized methodological rigor, comparability with the 2022 baseline, and consistency with the VNR process. Participants encouraged using the VLR process to signal where enabling policies, financing arrangements or inter-agency agreements could accelerate implementation. The meeting reaffirmed the credibility of the process and strengthened direct communication with institutional partners, ensuring that the second VLR not only reports progress but also mobilizes partnerships and resources for delivery.

4. SDG taskforces

The SDG taskforces were the backbone of stakeholder engagement in the second VLR, complementing consultation events with a continuous engagement process. Organized by SDG, the taskforces provided a standing space for dialogue where experts and practitioners could validate assumptions, evidence and narratives as the chapters evolved. This structure sustained momentum between milestones and kept technical analysis anchored in operational realities and community priorities.

Each taskforce was deliberately assembled to reflect Amman's multi-actor ecosystem. Participants included staff members from across GAM sectors and national ministries, academic researchers, private-sector representatives, and civil society organizations. This participatory approach combined institutional mandates with diverse lived experience, enabling the groups to surface trade-offs, equity considerations, and feasibility constraints that might be missed in purely technical reviews. The result was a more legitimate, inclusive and context-aware assessment.

5. Strategy consultation

The policy recommendations outlined in the present review are the product of a structured, multi-stage process designed to ensure that the second VLR moves beyond diagnostic assessment towards actionable commitments grounded in institutional ownership. Following the analytical work underpinning each SDG section, a set of three policy recommendations was developed for each of the eight selected SDGs, resulting in 24 proposed recommendations across the review. These recommendations were informed by the city's performance data, the policy landscape, and the strategic priorities identified through the review process.

To validate and refine these recommendations, GAM conducted a structured consultation with members of the SDG taskforces established for the second review. Stakeholders participated across the eight consultations, contributing 62 individual SDG-level responses. Respondents represented a broad institutional cross-section across multiple sectors and administrative units, including GAM, national ministries (Digital Economy and Entrepreneurship, Environment, Social Development, and Labour), the National Center for Security and Crisis Management (NCSCM), the Housing and Urban Development Corporation, the Royal Scientific Society, the Jordanian National Commission for Women, the Friedrich Ebert Foundation, the University of Jordan, and the Department of Statistics.

For each SDG, taskforce members were invited to rate the three proposed policy recommendations on a scale of 1 (very low priority) to 5 (very high priority), and to optionally provide qualitative inputs on three dimensions: which institutions could be responsible for implementation, how a recommendation could be implemented in practice, and what measurable goals or indicators could be used to track progress. At the end of each consultation, respondents were also invited to propose additional policy recommendations that they considered important but not reflected in the existing set.

All 24 recommendations received average ratings above 3.3 out of 5, with the majority rated above 4, indicating broad institutional endorsement of the proposed policy direction. Qualitative inputs were substantive across all eight SDGs, with respondents identifying specific institutional actors, implementation mechanisms, measurable indicators, and cross-SDG linkages. In several cases, respondents proposed additional recommendations or enhancements to existing ones, reflecting genuine engagement with the substance of the review rather than passive validation.

For each SDG, the present report provides the following:

- **A priority recommendation:** the highest-rated recommendation from the taskforce consultation, presented as a full implementation card. Each card identifies the lead institution and supporting partners, structured according to their implementation roles. It outlines an implementation pathway organized in short-, mid- and long-term horizons that reflect a foundation phase focused on institutional arrangements and baseline work that can proceed within existing mandates; a deployment phase involving infrastructure, systems or programme rollout; and an integration phase in which the recommendation becomes embedded in municipal planning, budgeting and governance systems. Each card also identifies output and outcome indicators (distinguishing between what the municipality directly controls and what constitutes real-world change) and maps the financing route across phases, specifying where existing budgets, international development finance, climate funds, public-private partnerships (PPPs) or technical assistance are most appropriate.
- **Two supporting recommendations:** the remaining recommendations for each SDG, presented in a lighter format identifying the lead entity, key implementation actions, primary partners, measurable indicators and financing route.

Where taskforce members proposed additional recommendations or enhancements to existing ones, they were handled in one of three ways depending on their nature:

1. Proposals strengthening an existing recommendation were absorbed into the relevant implementation card as specific actions or subcomponents.
2. Proposals representing a distinct but sector-specific action were integrated into the most closely aligned recommendation.
3. Proposals addressing systemic, cross-cutting needs affecting multiple SDGs were elevated to the status of cross-cutting implementation enablers and are presented in a dedicated section.

- **Cross-cutting implementation enablers:** the consultation process highlighted three priorities that cut across multiple SDGs and cannot be adequately addressed within any single SDG section. These are not sector-specific recommendations but institutional preconditions that underpin the delivery of multiple policy recommendations across the review.

D. Methodology

1. Quantitative indicators

Across the Arab region, SDG localization is constrained by persistent city-level data gaps. National statistics are often not disaggregated for urban contexts, while municipal systems face resource and capacity limitations to collect and manage data.[11] These constraints hinder evidence-based decision-making, rendering it harder to monitor progress, identify gaps and plan effectively. Strengthening local monitoring is therefore not a technical afterthought but a prerequisite for meaningful SDG implementation.

GAM established the Amman Urban Observatory (AUO), a pioneering municipal platform that systematically collects, validates and disseminates city-level

data. AUO provides a reliable evidence base for municipal policy and national reporting, while advancing transparency and public accountability. As one of the few initiatives of its kind in the region, it offers a replicable model to address structural data shortages and to foster regional knowledge-sharing.

Amman's Quality of Life Index was officially integrated into the Global Quality of Life Platform, making Amman the second Arab city to be included after Al Madinah in Saudi Arabia (pilot city), and the tenth city globally among 100 participating cities.

For the quantitative analysis, the second VLR updates the indicator set first established in 2022 with the most recent values available for 2025. The emphasis here is on methodological consistency: maintaining the same core metrics ensures reliability while allowing trends to be tracked over time. Data collection was led by AUO, with complementary inputs from national statistics and, where necessary, international datasets. This blended approach strengthened both the robustness of the results and their alignment with national and global monitoring systems.

2. Project portfolio

Mapping projects against the SDGs ensures that city investments translate strategic commitments into visible outcomes for residents. By aligning initiatives to specific targets, Amman demonstrates that its development agenda is grounded in trackable actions that respond to community needs and global obligations, making progress more transparent and policy choices more accountable.

Within the project portfolio, special emphasis is placed on projects that embody resilience and smart-city principles. Resilience initiatives strengthen Amman's capacity to anticipate, absorb and adapt to shocks, including climate impacts and fiscal pressures. Smart initiatives leverage technology, data and innovation to improve service delivery, efficiency and citizen engagement. Highlighting these categories shows how the city is advancing the SDGs while positioning Amman as both resilient and smart.

The analysis covers more than 500 GAM-led and partner-supported projects spanning infrastructure, mobility, environmental management, social inclusion and governance. It includes municipal initiatives and those delivered with national and international partners, capturing both completed and ongoing efforts since the 2022 baseline and illustrating sustained commitment to SDG localization.

The portfolio view complements indicators and document review to create a multidimensional picture of progress. By triangulating projects with quantitative trends and strategic commitments, the analysis tests whether investments target the most urgent gaps and whether they are driving measurable improvements. It also provides a compelling narrative for partners and financiers that Amman is not only planning but actively implementing the SDGs through diverse, locally owned initiatives.

3. Document review

Amman is among the few cities in the Arab region that has systematically embedded the SDGs, resilience and smartness into municipal strategy. Since the first VLR in 2022, the city has advanced a coherent agenda built around its several strategic and sectoral documents. Together, these instruments have positioned Amman as a regional reference point for SDG localization and urban innovation, strengthening internal planning while elevating the city's profile in international networks.

The second VLR highlights strong multilevel coordination to ensure coherence between

local and national reporting. The Jordanian VNR in 2022 showcased the city's role in advancing national SDG progress, connecting municipal initiatives with priorities emanating from national strategies such as economic modernization,[12] food security,[13] water,[14] energy,[15] and climate change,[16] among others. This alignment demonstrates how Amman operates both as a driver and a partner in the sustainable development path of Jordan.

The 2026 VNR is guided by the High-level Political Forum on Sustainable Development (HLPF) theme: "Transformative, equitable, innovative and coordinated actions for the 2030 Agenda and its Sustainable Development Goals for a sustainable future for all".

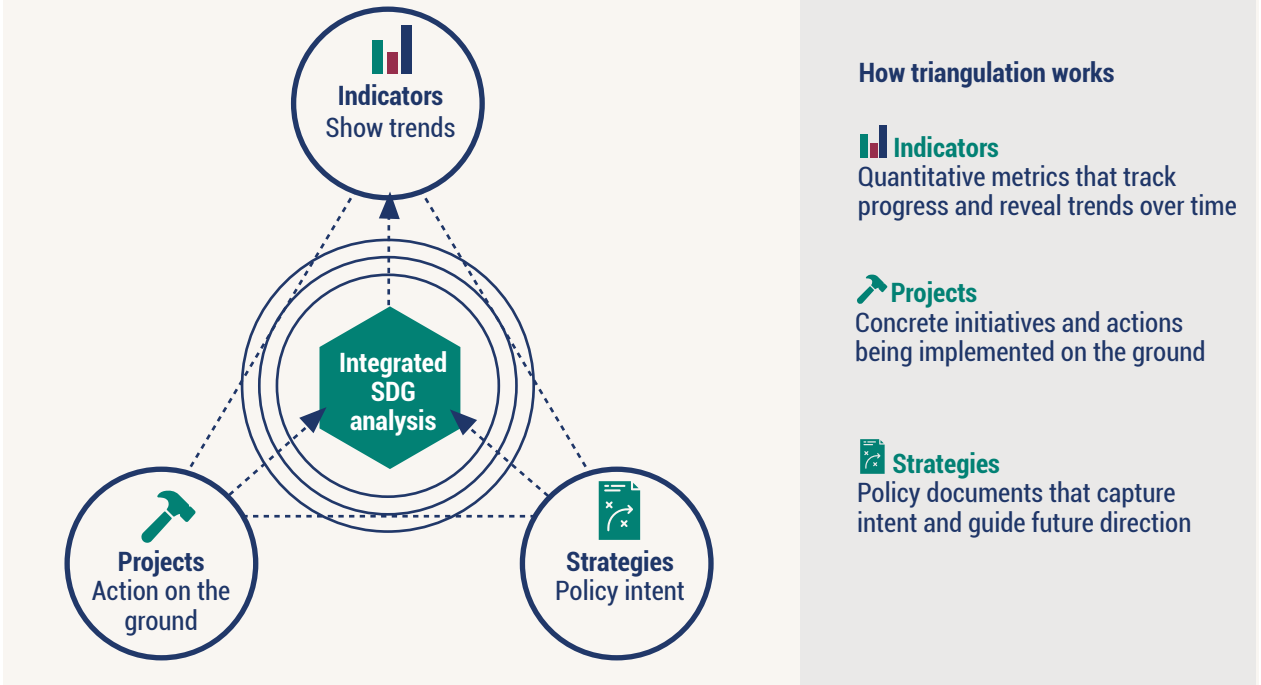
The 2026 VNR examines progress through four strategic dimensions that mirror the country's national reform architecture: the economic dimension, the administrative and governance dimension, the social protection dimension, and the digitalization dimension. This structure, while grounded in domestic planning realities, is designed to remain accessible to international audiences and to be fully aligned with the United Nations Secretary-General's voluntary common reporting guidelines. The Jordanian 2023 SDG Summit commitments provide the most concrete articulation to date of this acceleration agenda.

Amman's documents mainstream SDG principles, ensuring consistency with global commitments. This combination of local adaptation and international benchmarking strengthens credibility, supports mutual learning, and helps calibrate Amman's strategies to evolving best practice.

4. Triangulation

Triangulation links quantitative indicators, the project portfolio and strategic documents to build a single, coherent picture of progress (figure 2). Each source on its own is partial: indicators show trends, projects reveal action on the ground, and documents capture policy intent. Together, they reduce blind spots and

Figure 2. Integrated SDG analysis



Source: Compiled by authors.

allow findings to be interpreted in context rather than as isolated data points.

For each SDG section in the present VLR, indicator movements are cross-checked against relevant projects and explicit references in city and national strategies. This layered reading helps judge whether observed changes are plausibly linked to interventions and whether enabling policies are in place.

The method also tests alignment between what the city plans, finances and measures. Projects are checked against stated priorities, and indicators are examined for consistency with those same areas. Where the three strands diverge, the analysis flags narrative gaps, data issues or policy-delivery mismatches, strengthening credibility and limiting selective interpretation.

Beyond rigor, triangulation makes the second VLR more usable for decision makers. It clarifies where investments and policies are yielding measurable impact, where momentum is stalling despite activity, and where targeted reforms or additional financing could unlock progress. The result is a practical basis for prioritizing actions, shaping bankable projects, and tightening the link between planning, implementation and monitoring.

E. Cross-cutting framework: resilience and smartness

1. Context

A defining innovation of Amman's second VLR is the deliberate integration of resilience and smartness as cross-cutting lenses across the entire assessment. Rather than simply mapping SDGs to projects and indicators, the present edition uses these complementary perspectives to interpret progress and guide priorities. The resilience lens focuses on the city's capacity to anticipate, withstand and adapt to shocks and stresses, while the smartness lens examines how technology, data and innovation improve service delivery, efficiency and inclusion. Together, they shift the emphasis from outputs alone to system performance and learning, ensuring the second VLR is both diagnostic and actionable.

Applying these lenses jointly captures what it means for Amman to localize the SDGs in practice. The resilience perspective highlights systemic vulnerabilities, interdependencies and adaptive capacity across sectors and communities.

The smartness perspective anchors innovation in people-centred outcomes, stressing digital equity, data governance and user-focused design. Combined, they connect global frameworks with local realities, positioning Amman at the forefront of urban sustainability in the Arab region and providing a coherent approach for translating evidence into decisions and investments.

2. Resilience lens

Amman's resilience approach in the second VLR is anchored in the concept of urban economic resilience, which has shaped international urban policy and practice over more than a decade. Rather than treating resilience as a sector, this framing positions it as a systemic property: the capacity of cities to anticipate, absorb and adapt to shocks and chronic stresses, while sustaining long-term planning, inclusive governance and economic continuity. This systems-based perspective ensures coherence and aligns the second

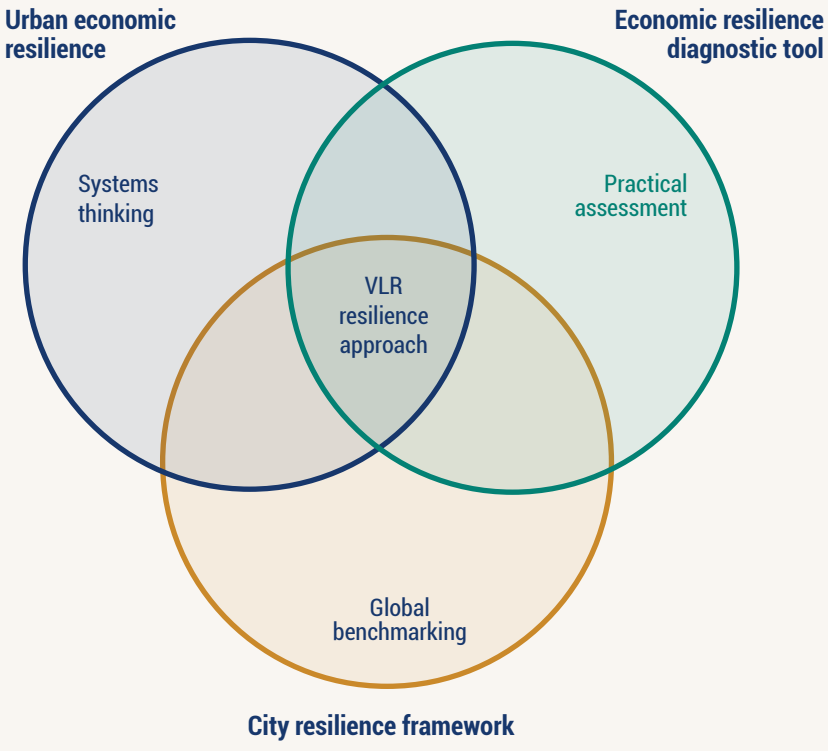
VLR with the broader body of regional and international resilience work in which Amman is actively engaged.

Given Amman's exposure to external shocks, fiscal constraints and demographic pressures, the Urban Economic Resilience Diagnostic and Planning Tool (2021) helps assess vulnerabilities and capacities across five areas: business environment, labour market, financial system, economic governance, and basic services and connectivity. Embedding this perspective highlights how economic resilience underpins wider urban resilience, including recovery planning and investment readiness.

The City Resilience Framework, a global benchmark, organizes resilience through four dimensions (health and well-being, economy and society, infrastructure and environment, and leadership and strategy), and seven qualities (reflective, resourceful, inclusive, integrated, robust, redundant and flexible). Applying this framework enables Amman to benchmark performance using internationally recognized categories and qualities that complement the urban economic resilience lens.

The emerging GAM sustainability policy further strengthens the institutional foundation for resilience. Designed as a comprehensive governance and reporting framework, the policy embeds sustainability, climate action and resilience across all municipal sectors through structured data collection, performance monitoring, and alignment with international best practices. It establishes clear principles of transparency, accountability, community participation and cross-sectoral integration, ensuring that environmental protection, social equity, economic sustainability, and climate adaptation and mitigation are treated as interconnected priorities. By institutionalizing sustainability reporting and linking it directly to planning and decision-making, the policy provides a formal mechanism for

Figure 3. Amman's VLR resilience lens: a conceptual framework



Source: Compiled by authors.

continuous improvement, enabling GAM to document progress, identify systemic risks, and integrate resilience considerations into service delivery, infrastructure investment and long-term urban management. This positions the municipality to operationalize the resilience frameworks (figure 3) used in the second VLR and reinforces Amman's role as a regional leader in sustainable and climate-aligned urban governance.

Together, these frameworks make resilience both a conceptual lens and an operational practice. The urban economic resilience approach grounds the second VLR in systems thinking and economic continuity. The diagnostic tool anchors analysis in fiscal and market realities. The City Resilience Framework provides a common language for measurement and planning. Combined, they generate actionable insights for governance, investment and community well-being, and position Amman as a leader in resilience measurement and planning.

3. Smartness lens

Amman's smartness approach moves beyond a technology-first narrative, anchoring digital transformation in a people-centred, inclusive and sustainable paradigm. In the second VLR, smartness is treated as a means to improve quality of life, strengthen equity and enhance sustainability, rather than an end in itself. This framing aligns technical choices with social outcomes, ensuring that data, platforms and tools are directed towards public value, transparency and trust.

This conceptual orientation is consistent with the regional evidence base on the role of Smart Sustainable Cities (SSCs) in advancing urban resilience. ESCWA and UN-Habitat have shown that the dimensions of SSCs (smart economy, environment, governance, living, mobility and people) are closely interlinked with the components of urban economic resilience (business environment, economic governance, labour market conditions, financial environment, and basic service infrastructure and connectivity), and with the targets of SDG 11 and its connected Goals.[17] This mapping reframes smartness not as a parallel agenda to resilience but as one of its operational levers: digital infrastructure, e-services, real-time data systems and inclusive platforms are the instruments through which cities sustain service continuity under shock, protect vulnerable populations, and recover capacity after disruption. Applying this logic to Amman, the second VLR treats every smartness intervention as a candidate contribution to the city's resilience and SDG 11 trajectory, rather than as a stand-alone technological investment.

This vision is operationalized through the Amman Smart City Strategy (2024) and its supporting Smart City Roadmap (2021), which together form the institutional and programmatic backbone for digital transformation. The 2021 Roadmap has already launched more than 160 e-services, piloted smart mobility systems such as BRT, introduced Internet of Things (IoT)-enabled infrastructure, and expanded tools like the Zahran App for waste management. The strategy aligns with the Jordanian EMV (2023–2033) and Circular Economy 2050 goals, underscoring that smartness is integrated into both national reform and local service delivery.

Beyond strategy formulation, Amman is also formalizing its smart city operating model in line with the International Organization for Standardization (ISO) 37106:2021 standard, which provides a globally recognized framework for implementing smart and sustainable city programmes. A recent stage 1 assessment confirmed that GAM has addressed all core requirements of the standard, with no non-conformances identified and several elements already under active implementation.

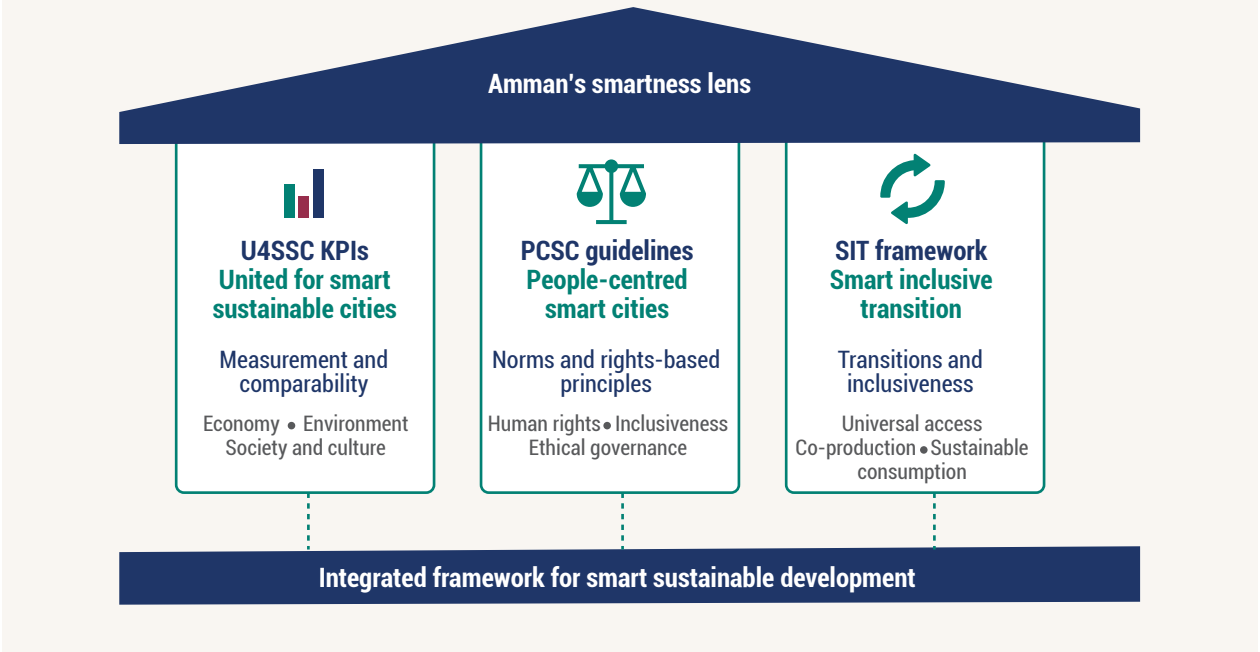
This external review validates the robustness of Amman's governance, its alignment with national frameworks such as the EMV, and coherence between the 2021 Roadmap and the 2024 Smart City Strategy. It also highlights a structured institutional architecture, comprising the Smart City Directorate, Executive Committee, Steering Committee and Project Management Office, which increasingly anchors decision-making, monitoring and cross-departmental coordination.

For measurement and comparability, the analysis draws on the United for Smart Sustainable Cities (U4SSC) key performance indicators (KPIs). Organized across economy, environment, and society and culture, the U4SSC framework offers a structured evidence base for tracking progress in areas such as mobility, ICT-enabled services, digital inclusion and environmental performance. Even where a full KPI assessment is pending, adopting these categories provides a consistent backbone for indicator selection, gap identification, and peer benchmarking with cities worldwide.

Normatively, Amman's approach is guided by the International Guidelines on People-centred Smart Cities, which position human rights, inclusiveness and sustainability at the core of smart development. The guidelines emphasize participation, accessibility and ethical data governance, calling for digital strategies that bridge divides and protect rights. Reflecting these principles in the second VLR ensures that smart initiatives are evaluated not only for technical efficacy but also for their contribution to equity, accountability and community well-being.

Independent assessments confirm both Amman's progress and its remaining challenges. According to the United Nations Department of Economic and Social Affairs/ United Nations University Local Online Services Index Report (2022), Amman is the only Jordanian city ranked in the "high Local Online Service Index (LOSI)" group, with a score of 0.57, far ahead of peers such as Irbid or Zarqa. This demonstrates GAM leadership in digital presence and municipal e-services. Yet the same assessment highlights critical

Figure 4. Amman's smart lens



Source: Compiled by authors.

gaps in participatory tools, open data and advanced local service provision, many of which remain governed at the national level. Addressing these gaps will be essential for Amman to fully realize its people-centred smart city vision.

To monitor the transition itself, the Smart Inclusive Transition (SIT) framework[18] introduces five strategic focuses: universal access to infrastructure and essential services, collaborative co-production, accountable empowerment, interactive participation, and sustainable production and consumption. Applied to Amman, SIT helps assess whether smart projects are evolving towards inclusiveness and equity, clarifying the steps needed to scale pilots, broaden access, and embed safeguards as systems mature.

Integrating U4SSC KPIs, public-private collaboration for smart cities guidelines, and the SIT framework unites measurement, norms and transition management into a single lens. This layered approach (figure 4) enables Amman to benchmark performance, align with up-to-date United Nations guidance, and monitor the inclusiveness of its digital development trajectory. It positions the city as a regional leader in smart urban governance, demonstrating how technical innovation can deliver tangible public benefits while advancing rights, resilience and sustainability.

4. Operational integration

In the second VLR, resilience and smartness are treated as cross-cutting dimensions that shape the full analytical workflow rather than as stand-alone issues. Integrating these lenses ensures that progress is assessed not only against SDG indicators, but also in terms of Amman's adaptive capacity, innovation ecosystem, and ability to deliver inclusive technology-enabled services. This approach keeps attention on both outcomes and the capabilities required to sustain them.

At the aggregate level, trends since 2022 are interpreted through the twin lenses. Improvements or setbacks in indicators are read alongside evidence of resilience capacity, such as the city's ability to manage shocks and stresses, and smart transformations, such as expanded data use or digital public services. This framing recasts topline results as signals of systemic strengthening or weakening, not just statistical movement.

Within each SDG section in chapter 3, projects and policies are examined for how they enhance resilience qualities (robustness, inclusiveness and flexibility) and how they apply smart principles (digital equity, open data and ICT-enabled services). Strategies are assessed for alignment with resilience frameworks and people-centred smart city guidelines. As a result, resilience and smartness become integral to every narrative, clarifying how delivery choices affect long-term capacities and citizen outcomes.

2. From vision to impact: progress since the first VLR

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2. From vision to impact: progress since the first VLR

A. Purpose and approach

Amman's second VLR marks a pivotal mid-decade moment to assess how far the city has progressed since its 2022 baseline when the first VLR was conducted. Chapter 2 brings together the main strands of evidence now available (strategic documents, project implementation and quantitative indicators) to provide an integrated picture of Amman's evolution towards achieving the SDGs. Together, these three aspects offer a comprehensive understanding of both the city's institutional maturity and the tangible results of its ongoing efforts in sustainable development.

By combining vision (through documents), effort (through projects) and results (through quantitative data), the present chapter assesses Amman's strategic direction towards concrete delivery and measurable outcomes. It reviews key policies and planning frameworks that anchor the city's SDG agenda, and analyses how these strategies have translated into action through a growing portfolio of projects. It also examines the quantitative data that capture changes in performance and outcomes since 2022. This holistic approach highlights Amman's progress while identifying the systemic capacities and remaining gaps that will shape its trajectory towards 2030.

B. Strategic foundations and policy alignment

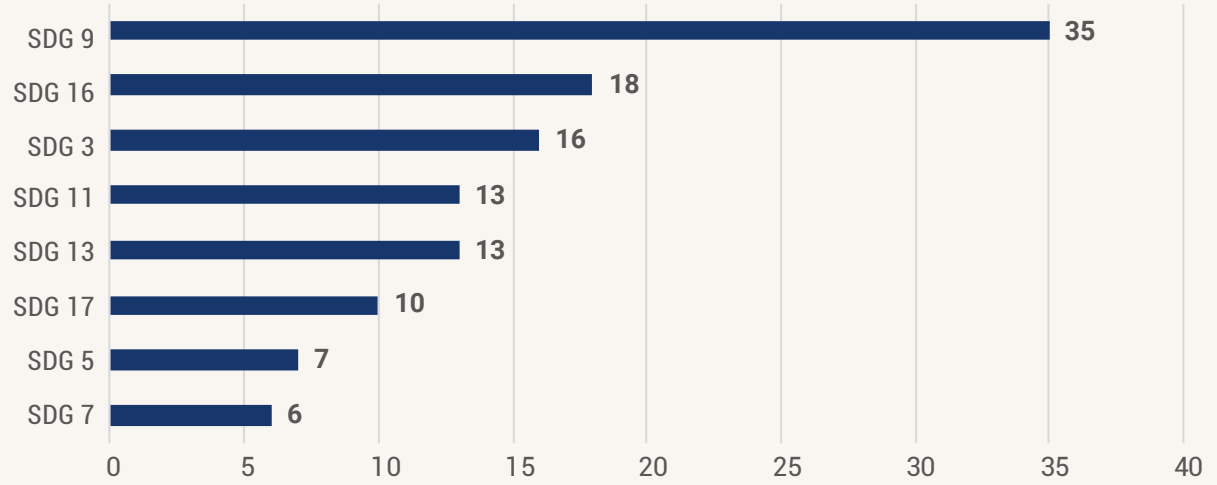
Over the past decade, Amman has built a coherent and forward-looking policy framework that connects its local ambitions with global and national agendas. The city's strategic milestones have progressively aligned urban governance, environmental management and digital transformation under a unified sustainability vision. These documents, developed alongside national frameworks, laid the groundwork for a mature and integrated approach to sustainable urban development. By 2026, Amman's policy architecture had evolved into a robust ecosystem capable of linking local action with national targets and international climate commitments, setting the stage for a new phase of strategic acceleration.

The Jordanian national policy architecture reflects a deliberate effort to embed the 2030 Agenda across sectoral planning. A comprehensive review of national strategies and action plans reveals that all eight SDGs under review in the

present VLR are addressed by multiple policy instruments, with SDG 9 showing the broadest alignment anchored by the EMV and its executive programmes, followed by SDG 16 and SDG 3 (figure 5). This mapping provides the foundation for Amman's localization effort: identifying where national frameworks already create an enabling environment for municipal action, and where the city can complement national coverage through targeted local interventions.

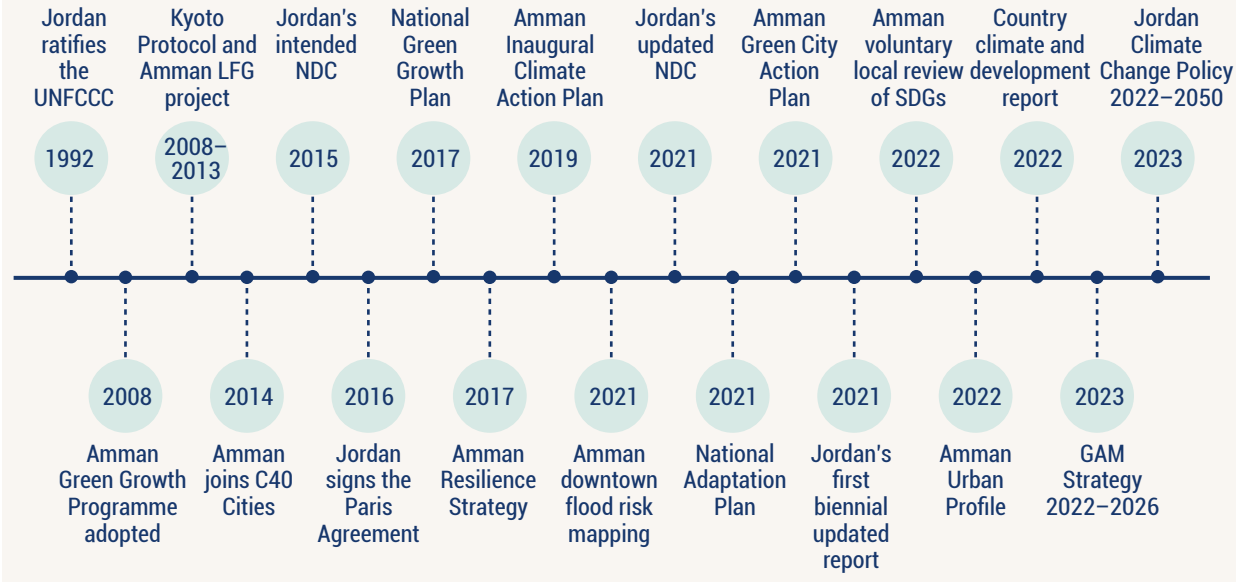
Amman's trajectory is marked by important municipal and national milestones that have shaped Jordanian leadership on climate action (figure 6). Since Jordan ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1993 and launched the Green Growth Programme in 2008, both the Government and the city have advanced a shared sustainability agenda. The city's accession to the C40 Cities Network in 2014 and the

Figure 5. National strategy coverage by SDG



Source: Compiled by authors based on data provided by GAM.

Figure 6. Amman leadership on climate action



Source: Amman Climate Action Plan 2024.

country's submission of its first nationally determined contribution (NDC) in 2015 marked a decisive step towards integrated climate governance. The subsequent years consolidated this trajectory through the Resilience Strategy (2017), Amman's inaugural Climate Action Plan (2019) and the National Adaptation Plan (2021), all of which strengthened coordination between local action, national planning and global frameworks, such as the Paris Agreement. Collectively, these milestones illustrate how Amman and Jordan have advanced in synergic alignment, reinforcing each other's commitments towards low-carbon and resilient urban transformation.

From 2023 to 2025, this policy momentum has continued, with Amman more active than ever in translating strategy into measurable progress. In addition to the second VLR, other major milestones include the launch of the Municipal Spatial Data Infrastructure (MSDI) framework and the adoption of the 2050 Carbon-Neutral Vision and circular economy road map, demonstrating a continued shift from planning to delivery. This period marks the consolidation of Amman's role as both a national and regional leader in sustainable urban governance.

Key documents published in 2024 include the updated Amman Climate Action Plan and the Future Amman: Three Strategies Toward Climate-Smart Spatial Transformation report, which together mark a new stage of strategic maturity and policy coherence. The Amman Climate Action Plan represents the city's most comprehensive climate framework to date, outlining a pathway towards carbon neutrality and climate resilience by 2050. Developed under the leadership of the GAM Sustainable Development and Resilience Unit, and supported by the United Nations Development Programme (UNDP), UN-Habitat and C40 Cities, the plan integrates mitigation, adaptation and circular economy strategies across key sectors, including energy, mobility, waste, water and buildings. It introduces a governance model based on periodic review, data-driven decision-making and cross-sectoral coordination, ensuring that climate action is systematically embedded in municipal planning and investment. By aligning local initiatives with national and international climate policies, the plan reaffirms Amman's leadership in the region's urban climate transition.

Complementing this agenda, the Future Amman: Three Strategies Toward Climate-Smart Spatial Transformation report reframes urban growth as both a climate and economic opportunity. The report translates Amman's vision into a set of spatial and institutional reforms built around three strategic pillars: integrated urban planning, institutional and legislative modernization, and land-based financing and asset management. It calls for compact, connected and low-carbon urban development supported by digital governance tools such as MSDI, while promoting public-private partnerships and value-capture mechanisms to finance sustainable infrastructure. Positioned alongside the GAM Strategy 2022–2026 and the Jordan Climate Change Policy 2022–2050, the document consolidates Amman's emergence as a regional leader in climate-smart and data-driven urban transformation, bridging spatial planning, climate policy and fiscal resilience into one integrated vision for the city's future.

These frameworks collectively establish the strategic intent behind Amman's transition towards a smart, green and resilient future, shaping both the projects the city undertakes and the indicators it tracks. The next sections examine this evidence base in action, first through the lens of project implementation and then through the quantitative results that reveal the city's trajectory since 2022.

C. Operationalizing the SDGs: Amman's project ecosystem

1. Why projects matter

Projects are the most tangible expression of how the SDGs are being localized in Amman. While indicators capture progress in outcomes, projects reveal the city's capacity to translate commitments into real actions that improve people's lives. They make visible where GAM directs its efforts, resources and partnerships, offering an operational lens on the 2030 Agenda. Through projects, policy intentions become concrete interventions – from infrastructure and mobility systems to social programmes and environmental initiatives – showing how Amman's priorities are implemented on the ground.

This project stocktake analyses 533 municipal projects implemented or initiated across the SDGs reviewed in the second VLR. By examining start and end years, thematic focus and project duration, the analysis provides a dynamic view of how Amman's portfolio has evolved over time. It highlights the scale of municipal engagement and helps identify where growth, diversification or saturation are occurring, offering insight into how GAM's institutional capacity has matured since the city's first VLR in 2022.

The present section explores how Amman mobilizes its portfolio to advance sustainability through its smart and resilient lenses. It also assesses how technological innovation, data-driven governance and adaptive planning are increasingly embedded in project design and delivery. Taken together, these insights show that Amman's SDG localization is not only about tracking performance but also about shaping a forward-looking municipal ecosystem, one that learns, adapts and continuously strengthens its capacity to act.

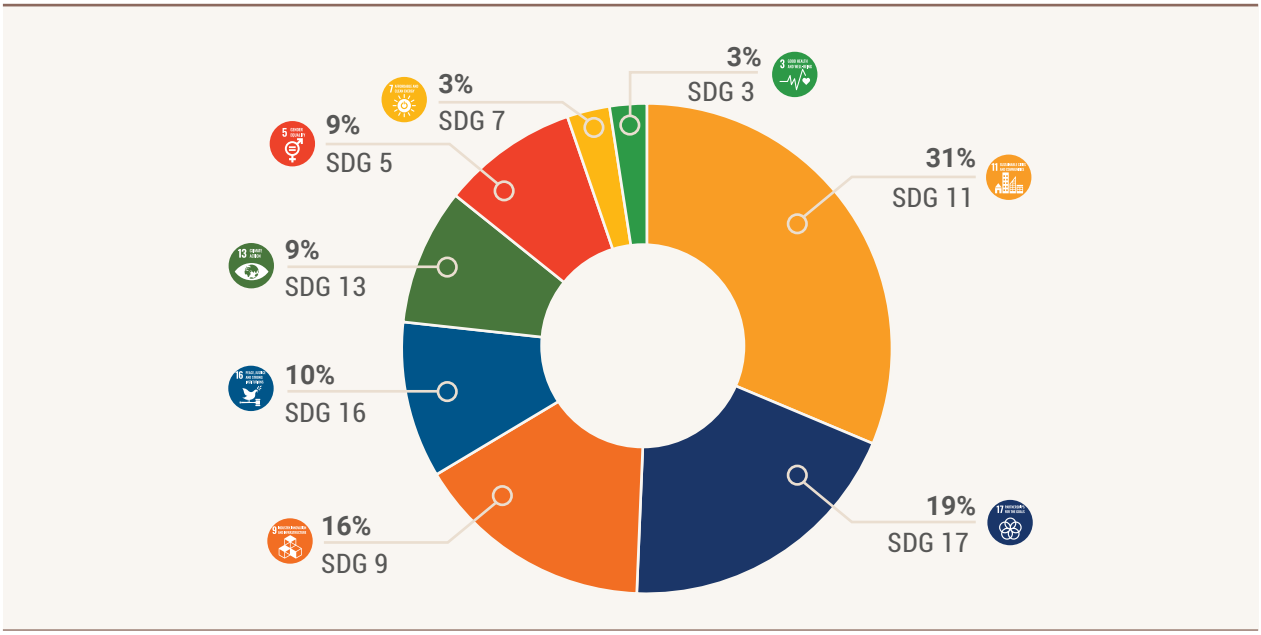
2. Overall project ecosystem

Amman's current project portfolio reflects a high level of institutional maturity and implementation capacity. This scale of activity shows that the city's commitment to the SDGs has moved beyond planning into consistent execution. The portfolio encompasses projects managed across different departments, development partners and timeframes, underscoring the ability of GAM to coordinate complex initiatives and maintain operational momentum. Compared with the first VLR baseline, this expanded set of projects highlights the city's growing institutional resilience and ability to sustain a large and diversified pipeline.

The portfolio spans nearly all SDGs under review, confirming the multidimensional nature of Amman's sustainability agenda (figure 7). Projects range from hard infrastructure investments to social and institutional programmes, collectively addressing the economic, environmental and governance dimensions of urban sustainability. This diversity shows how the GAM planning framework connects long-term spatial, environmental and social priorities, aligning city operations with global commitments.

The distribution of projects across SDGs highlights Amman's dual focus on urban systems and collaborative governance. Nearly half of the portfolio falls under SDG 11 (sustainable cities) and SDG 17 (partnerships), reflecting the city's emphasis on infrastructure, mobility and multilevel coordination. Mid-range activity under SDG 13 (climate action) and SDG 16 (institutions) shows the increasing integration of climate resilience and transparency principles. Meanwhile, SDG 3 (health) and

Figure 7. Amman's projects by SDG, start year: 2019 - end year: 2037



Source: Compiled by authors based on data provided by GAM.

SDG 7 (energy) remain less represented, suggesting opportunities for diversification and innovation through smart and green solutions. Together, this balanced distribution underscores how Amman's sustainability strategy bridges physical transformation with institutional strength, forming a coherent foundation for its smart and resilient agenda.

3. Temporal dynamics: growth and momentum

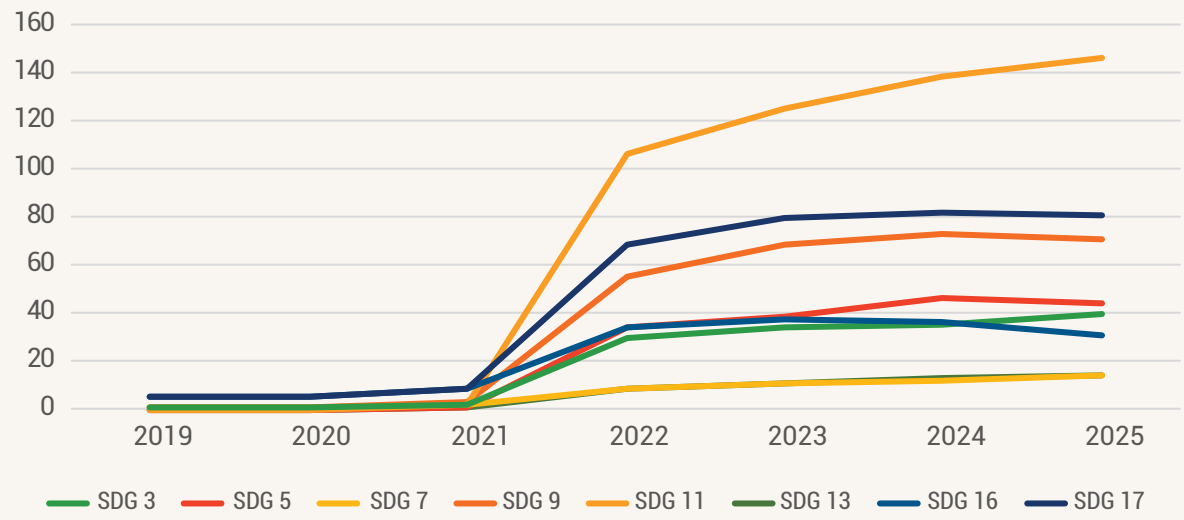
Tracking the timing of project starts and active years reveals how Amman's implementation rhythm has evolved since 2017. The data show clear cycles of disruption, recovery and consolidation, reflecting both external shocks and the city's growing institutional capacity to adapt. The cumulative number of active projects provides a useful proxy for momentum, illustrating how Amman has progressively strengthened its project delivery system over time (figure 8).

The year 2020 stands out as a complete pause in project initiation, marking the impact of the coronavirus disease (COVID-19) pandemic on municipal operations. No new projects were launched across any SDG, as resources were redirected to emergency response and essential service continuity. This disruption created a visible inflection point in the city's trajectory and underscored the vulnerability of implementation cycles to global crises.

In contrast, 2022 saw a decisive rebound. A surge of new projects started, combining postponed initiatives with newly funded programmes, demonstrating the ability of GAM to remobilize partnerships and financing once conditions stabilized. The city moved from a standstill to more than 300 active projects, signalling institutional resilience and strong coordination between planning, finance and delivery units.

Since 2023, Amman's project ecosystem has entered a consolidation phase, maintaining consistently high levels of activity. This plateau suggests that the municipality has reached a sustainable absorption capacity, allowing it to manage large-scale implementation without overextension. Looking ahead, a gradual stabilization beyond 2025 may reflect a shift from expansion

Figure 8. New projects per year



Source: Compiled by authors based on data provided by GAM.

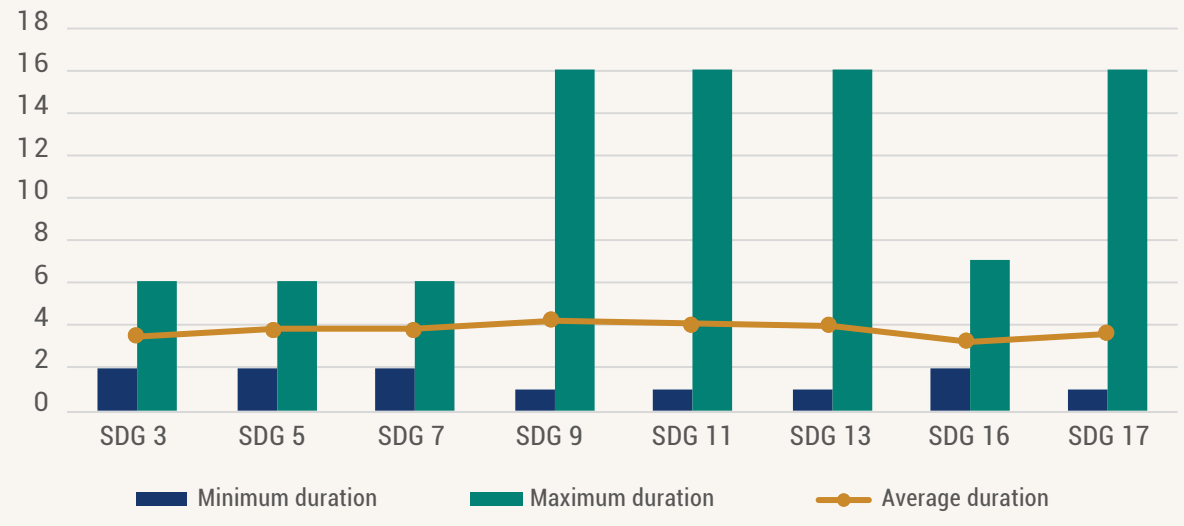
towards integration and quality enhancement. Keeping project pipelines diversified and innovative will be key to sustaining progress towards 2030.

4. Duration and investment stability

Project duration offers additional insight into Amman's investment stability and planning horizons. With an average length of 3.8 years, most initiatives fall within a medium-term cycle – long enough to achieve results, yet flexible enough to adapt. This balance reflects a deliberate strategy to prioritize sustained and measurable outcomes over short-term interventions (figure 9).

Amman's portfolio combines short-, medium- and long-term projects ranging from 1 to 16 years, creating a dynamic yet stable

Figure 9. Projects average duration by SDG (Years)



Source: Compiled by authors based on data provided by GAM.

implementation structure. Shorter projects, often under SDGs 3 and 7, deliver quick service or efficiency gains. Longer ones, particularly under SDGs 11 and 13, address infrastructure, mobility and environmental systems requiring multi-year commitments. This mix strengthens municipal resilience by coupling quick wins with enduring structural change.

Some domains, notably SDG 5 on gender equality, involve longer-term institutional reform and social inclusion programmes that evolve gradually. These timelines are consistent with the action plan of the Jordanian National Strategy for Women 2023–2025 and the gender-equality objectives embedded in the EMV, both of which frame women's empowerment as a long-horizon structural transformation, rather than a short-cycle deliverable. At the local level, these timelines align with Amman's resilience agenda, building systems that learn, adapt and withstand shocks, rather than producing one-off results. In this sense, duration becomes a proxy for resilience: demonstrating continuity, learning and the ability to sustain momentum through changing conditions.

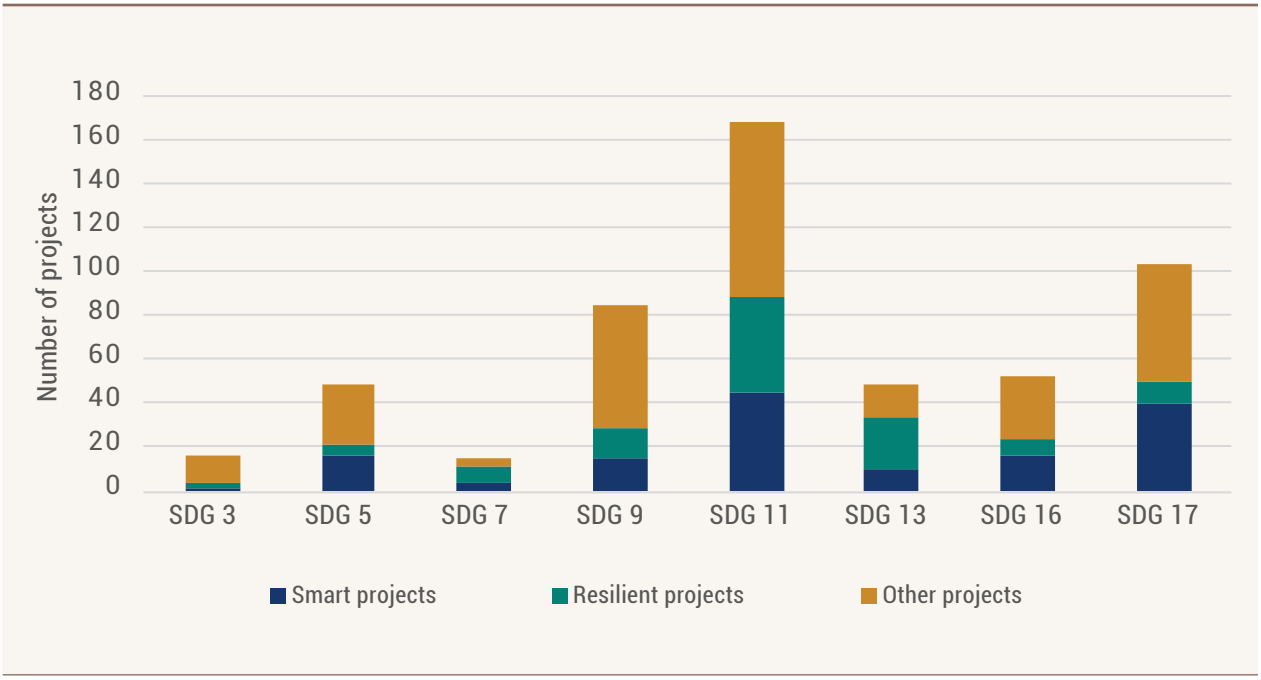
Overall, Amman's balanced temporal profile demonstrates a mature investment approach. The combination of steady long-term commitments and agile short cycles enhances both flexibility and reliability in achieving SDG targets. This resilience-by-design ensures that Amman's progress is not only measurable but also sustainable.

5. Smart and resilient projects

Amman's project portfolio shows that the city's smart and resilient agendas are no longer conceptual frameworks but operational realities guiding implementation across sectors. Together, they represent a shift from traditional service delivery towards innovation-driven and adaptive governance. This dual approach ensures that technology and foresight are systematically integrated into the city's sustainability agenda, strengthening efficiency, transparency and preparedness in equal measure (figure 10).

Nearly half of all municipal projects (48%) already integrate smart or resilient

Figure 10. Proportion of smart and resilient projects by SDG



Source: Compiled by authors based on data provided by GAM.

components, demonstrating the depth of mainstreaming achieved since the first VLR. Around 27% of projects are smart, emphasizing data systems, ICT-enabled services and digital governance, while 21% include resilient elements focused on risk management, climate adaptation and institutional capacity. This balance confirms that both dimensions are being advanced simultaneously, reflecting Amman's effort to align innovation with continuity and stability.

Across SDGs, these dimensions converge most strongly around urban systems, infrastructure and governance. SDG 11 (sustainable cities) leads both categories, showing how Amman's smart mobility, spatial planning and infrastructure programmes are directly linked to resilience and risk reduction. SDG 9 (industry, innovation and infrastructure) follows, highlighting the city's growing attention to technology-enabled infrastructure and data-driven planning. On the resilience side, SDG 13 (climate action) and SDG 16 (institutions) dominate, anchoring Amman's work on climate adaptation and institutional strengthening. SDG 5 (gender equality) also stands out as a cross-cutting resilience domain through programmes that build social inclusion and capacity.

Together, these patterns confirm that smartness and resilience are not isolated themes, but complementary lenses shaping Amman's long-term development model. Smart initiatives enhance operational efficiency and citizen engagement, while resilient ones ensure adaptability and social equity, thereby reinforcing one another through shared goals. Underrepresented areas such as health (SDG 3) and energy (SDG 7) constitute new frontiers for integration, where digital health, renewable systems and energy efficiency could extend Amman's innovation agenda into social and environmental spheres. By embedding both innovation and adaptability at the heart of its project ecosystem, Amman is advancing a governance model that is forward-looking, inclusive and equipped to deliver sustainable outcomes well beyond 2030.

A robust, diversified and resilient portfolio driving SDG localization

- **Scale and capacity:** with 533 active and completed projects, Amman demonstrates strong institutional capability to plan, finance and deliver complex SDG-aligned initiatives.
- **Strategic focus:** nearly half of all projects fall under SDG 11 (sustainable cities) and SDG 17 (partnerships), reflecting a dual emphasis on infrastructure and collaborative governance.
- **Dynamic momentum:** after a pandemic-related pause in 2020, project activity rebounded sharply in 2022 and stabilized above 300 active projects annually, confirming institutional resilience and recovery.
- **Balanced investment mix:** an average project duration of 3.8 years reveals a pragmatic balance between quick-impact initiatives and long-term transformation programmes.
- **Resilient investment logic:** long-running projects in climate, urban systems and gender equality embed inclusiveness and adaptability into Amman's planning cycle, ensuring the city is not only delivering projects but building systems that endure.

Source: Compiled by authors.

D. Data-driven progress: SDG indicators since 2022

Indicator analysis forms the quantitative backbone of the second VLR, providing the measurable evidence needed to understand Amman's progress towards the SDGs. While the project portfolio reflects the city's efforts, investments and implementation momentum, indicators reveal whether those actions are translating into tangible outcomes for residents and urban systems. Together, these two dimensions complete the picture: projects show "what" the city is doing, and indicators show "what difference" those actions are making. This evidence base strengthens accountability, enables targeted policy adjustments, and supports long-term evaluation of development strategies. As in the first VLR, Amman continues to rely on globally recognized SDG indicators while tailoring them to local data realities, ensuring that measurement remains internationally comparable yet operationally relevant for municipal decision-making.

Since 2022, GAM has invested significantly in strengthening its data ecosystem through the expansion of AUO. The Observatory now provides more frequent, structured, and spatially disaggregated datasets, enabling a clearer view of neighbourhood-level disparities and service performance. This progress reflects a broader institutional shift towards data-enabled governance, including improved integration between local and national systems and more consistent coordination with external data producers.

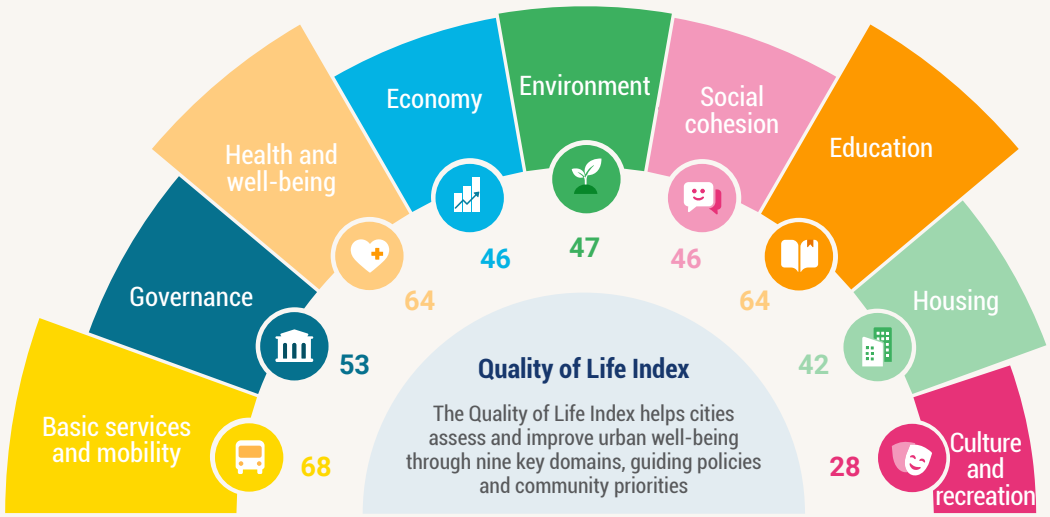
Amman's quantitative evidence base for the second VLR, though deliberately concentrated on eight SDGs, already maps directly onto six Urban Monitoring Framework (UMF) indicators, advancing three of the four UMF pillars (society, economy and environment) and three of the four UMF principles (inclusive, safe and peaceful, and resilient). This mapping indicates where the second VLR is already advancing UMF in practice, and where the next data investments would extend that reach.

The introduction of new analytical tools, such as the Quality of Life Dashboard, further enhances the city's ability to monitor living conditions and track change across multiple domains. Despite these advances, gaps remain in timeliness and coverage, underscoring the importance of continued investment in local statistical capacity.

Quality of Life (QoL) analysis provides a people-centred perspective that complements the SDG indicator framework and deepens the understanding of how urban change is experienced across Amman's communities. While SDG indicators track systemic performance and project portfolios reveal institutional effort, QoL data illuminate lived experience: how people perceive services, well-being, public spaces, affordability and governance. By structuring this information across seven domains (health and well-being, environment, basic services and mobility, education, culture and recreation, governance, and housing), the QoL Dashboard has become an essential tool within Amman's monitoring ecosystem (figure 11). It enables the municipality to observe not only "what" is changing but "how" those changes affect daily life, ensuring that SDG localization remains grounded in the realities of residents and neighbourhoods.

The latest QoL results highlight clear strengths in several foundational urban systems. Under basic services and mobility, solid waste collection (at 99%) and the share of waste disposed in sanitary landfill (at 100%) reflect near-universal service performance, demonstrating the effectiveness of Amman's operational infrastructure and long-standing investment in waste

Figure 11. QoL domain performance overview



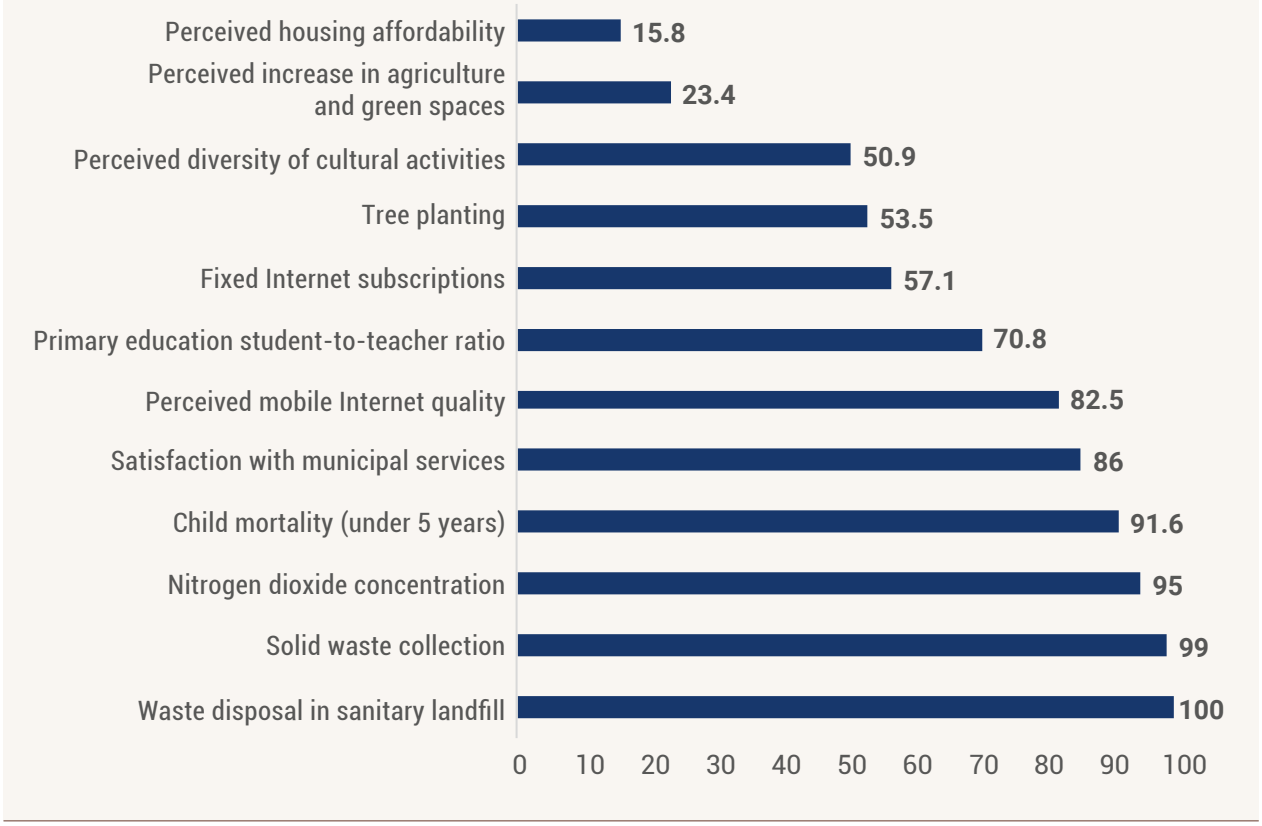
Source: UN-Habitat, Quality of Life Initiative, Amman.

management. Mobile Internet quality (at 82.5%) further highlights strong service reliability within the city's digital ecosystem, while fixed Internet subscriptions (at 57%) point to the importance of continued investment in expanding digital inclusion. Environmental indicators also reveal positive trends: low nitrogen dioxide concentrations (at 95%) indicate strong air-quality outcomes, and moderate performance in tree planting (at 53%) signals the need for steady progress in greening initiatives. The health and well-being domain remains a municipal strength, with child mortality (at 91%) reflecting the stability of health systems and strong national-local alignment. Together, these results show that where the GAM mandate is clear and institutional experience is deep, service performance is consistently strong.

At the same time, QoL findings identify several domains where residents perceive significant gaps or unmet needs, pointing to strategic opportunities for municipal action (figure 12). Perceived housing affordability (at 15.8%) reflects growing pressures linked to densification, land values and household income constraints, signalling the need for integrated housing and land-use interventions. Environmental perception is similarly mixed: despite improvements in air quality, residents report low satisfaction with increases in agriculture and green spaces (at 23.4%), indicating that greening efforts, while under way, are not yet sufficiently visible or distributed across neighbourhoods. Cultural and recreational life scores remain moderate, with perceived diversity of activities (at 50.9%) suggesting opportunities to expand inclusive and community-based cultural programming. Overall, satisfaction with the municipality stands at 85%, underscoring the healthy state of public trust, transparent communication and participatory engagement.

These insights demonstrate the value of QoL analysis as a strategic compass for prioritizing investments and enhancing policy coherence. High-performing domains validate the strength of Amman's foundational service systems, while lower-scoring areas point to where targeted interventions could yield the greatest improvements in daily well-being. For the resilience agenda, QoL indicators reveal social conditions that influence adaptive capacity, such as trust in institutions, access to green spaces, and perceived affordability. For the smart city agenda, they provide direct measures of digital inclusion,

Figure 12. QoL indicator performance (Percentage)



Source: UN-Habitat, Quality of Life Initiative, Amman.

service satisfaction and user experience, offering feedback loops that support people-centred digital transformation. More broadly, QoL outcomes map directly onto SDGs 3, 5, 11, 13, 16 and 17, strengthening the link between global commitments and tangible social outcomes.

By integrating the QoL lens into the second VLR, Amman is reinforcing its commitment to measuring progress not only through institutional outputs but also through improvements in everyday urban experience. This approach ensures that development remains both evidence-based and meaningful to residents, guiding GAM towards interventions that enhance well-being, strengthen trust, and deliver inclusive, sustainable urban transformation.

3. Sustainable Development Goals

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3. Sustainable Development Goals

A. SDG 3: Good health and well-being

1. Background

Global health trends show a world in transition. While maternal and child mortality have declined significantly in the past decades, recent years have seen stagnation and widening inequalities across regions. At the same time, non-communicable diseases (NCD), mental health conditions and unmet needs in sexual and reproductive health continue to exert growing pressure on health systems. Yet progress has been substantial: global life expectancy continues to rise, vaccine-preventable diseases are increasingly controlled, and more countries are institutionalizing universal health coverage reforms. Innovations in digital health, stronger primary care models, and renewed investment in pandemic preparedness are emerging as promising pathways to accelerate SDG 3 progress.

The Arab region reflects many of these global patterns, with persistent gaps alongside important achievements. NCDs, environmental risks and uneven access to services continue to challenge population health, especially in countries affected by conflict or economic instability. However, maternal and child mortality have fallen sharply over two decades, high-income countries have established robust health financing systems, and several middle-income countries are expanding preventive services and early-detection programmes. Regional initiatives led by the World Health Organization (WHO), the United Nations Population Fund (UNFPA) and Governments, including NCD investment cases, cross-border disease surveillance and reproductive health strategies, are helping improve coverage, quality and equity.

Urban environments across the region add complex layers of vulnerability, from air pollution and heat stress to overcrowded housing and inequitable access to services. Nonetheless, cities are emerging as focal points of innovation: municipal digital-health platforms are improving service delivery, air-quality and climate-risk monitoring systems are expanding, and integrated upgrading programmes in informal settlements are strengthening links between health, mobility and environmental quality. New urban green-space initiatives, road-safety programmes and city-level climate adaptation plans further demonstrate how healthier environments can be built through coordinated urban action.

Conflict and displacement continue to strain health systems in several Arab countries, creating service gaps for millions. Yet even in these contexts, progress is visible. Humanitarian health partners have strengthened emergency obstetric

care, expanded mobile clinics, and restored essential vaccination services in hard-to-reach areas. Countries hosting large refugee populations have advanced inclusive health policies, integrating refugees into national systems and developing innovative financing mechanisms with international partners. Across the region, Governments are increasingly prioritizing health system resilience, community-based care and multi-sectoral approaches, laying the groundwork for more equitable, adaptive and sustainable progress towards SDG 3.

2. National-local alignment: a shared vision for SDG 3

Jordan and Amman's progress towards SDG 3 reflects effective multilevel governance that aligns national commitments with local implementation through a shared vision, coordinated action, and integrated planning. This partnership demonstrates how vertical alignment between government levels and horizontal integration across sectors can transform health from an aspiration into measurable outcomes.

At the national level, Jordan has established comprehensive health governance through the Ministry of Health's National Epidemiology and Infectious Diseases Centre, enhanced disease-surveillance systems, and maternal health monitoring. A royal decree stipulates that uninsured Jordanians identified as poor (and all children under 6 years old) receive free healthcare services at public facilities, removing financial barriers to essential care. This inclusive approach was demonstrated during the COVID-19 pandemic, when the national vaccination programme included citizens, residents and refugees equally, making Jordan among the first countries globally to vaccinate refugees. These commitments guide key strategies, including the Health Sector Reform Plan 2018–2022, the National Reproductive and Sexual Health Strategy 2020–2030 and the Climate Change Policy 2022–2050, which link environmental sustainability directly to population health.

At the national level, Jordan has built one of the region's most comprehensive health policy ecosystems. Sixteen national strategies directly address SDG 3, anchored in the Ministry of Health's Strategy 2023–2025 and extending well beyond clinical care into mental health, nutrition, tobacco control, food security, social protection and climate adaptation. This cross-sectoral breadth is significant: rather than treating health as a stand-alone sector, the country's policy architecture recognizes it as an outcome shaped by poverty, environmental resilience and food systems alike. The same inclusive logic applies to crisis response, with the Jordan Refugee Response Plan embedding health access for displaced populations.

Amman translates these national objectives into local action for its residents. GAM implements national health policies through the application of relevant regulations and laws, pursuing the goal of preventing the spread of diseases and epidemics. The GAM approach positions health as the outcome of integrated urban systems that connect health to climate resilience, transport safety, environmental quality and digital access through strategic documents including the Climate Action Plan, Green City Action Plan and the Resilience Strategy.

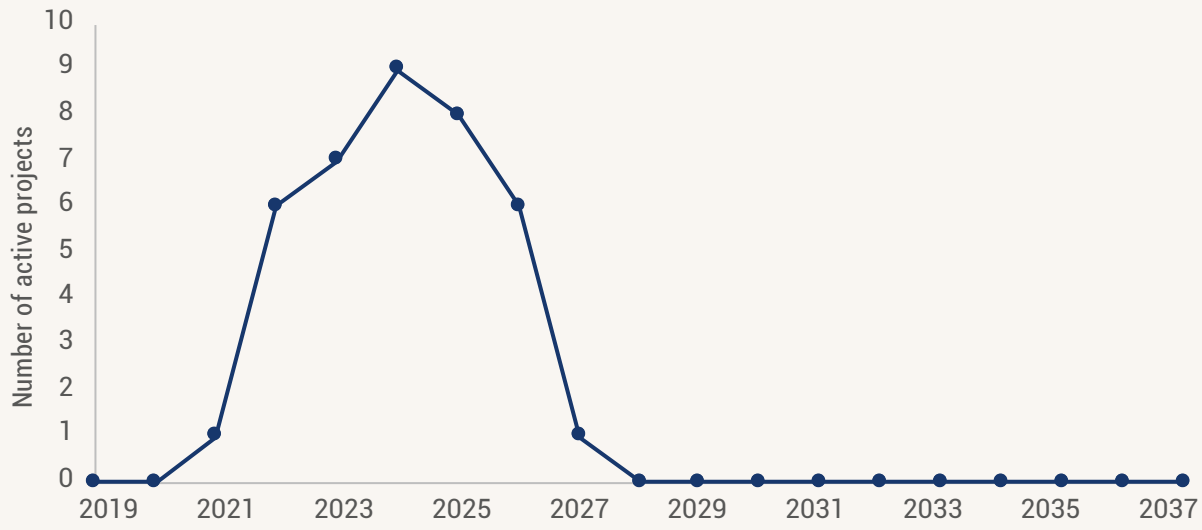
Policy coherence is reflected at both levels. Nationally, the Climate Adaptation Strategy and Green Growth Plan link environment directly to population health. Locally, Amman's Climate Action Plan addresses health through flood resilience, heat mitigation and air quality management. The breadth of national policy alignment, namely 16 strategies across health, social protection, environment, food security and crisis response, provides Amman with a robust enabling framework, while the city's localization efforts identify where municipal action can complement national coverage with place-specific interventions.

The simultaneous preparation of the Jordanian VNR and Amman's second VLR exemplifies this coordinated approach, ensuring coherence between national and local evidence on SDG 3.

3. Project portfolio towards SDG 3 in Amman

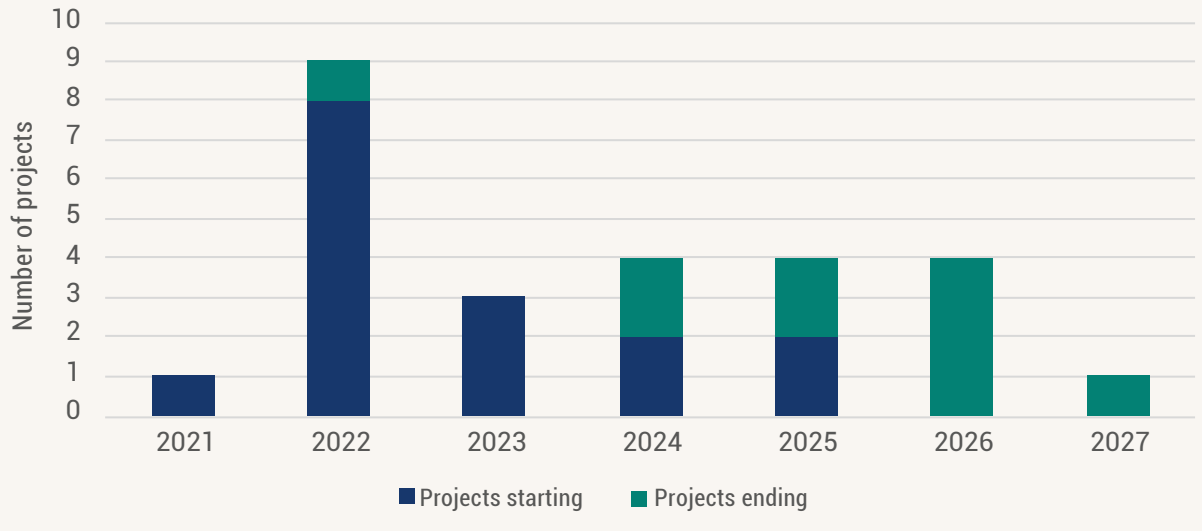
SDG 3 projects in Amman reflect a comprehensive health agenda led by departments such as the Health and Professional Control Department, the Disease Vector Control and Animal Care Department, and the Slaughterhouse and Environmental Projects Departments. Most initiatives fall under the health and agriculture sector and target improvements in public-health infrastructure, food safety, occupational hygiene, zoonotic-disease prevention and vector control.

Figure 13. Active projects per year for SDG 3 in Amman



Source: Compiled by authors based on data provided by GAM.

Figure 14. Projects starting and ending per year for SDG 3 in Amman



Source: Compiled by authors based on data provided by GAM.

Project activity accelerated from 2021, peaking at 14 initiatives in 2024–2025 (figure 13), a period of strong institutional mobilization following pandemic recovery. After 2026, the portfolio stabilized at six to seven projects annually, indicating a transition from short-term initiatives to consolidated long-term programmes. This pattern reflects GAM maturation from rapid expansion to sustained implementation. A closure peak projected for 2037 aligns with major infrastructure and environmental health projects initiated in the early 2020s (figure 14).

The GAM approach combines institutional capacity-building and preventive action. Projects raise technical standards through ISO and laboratory accreditations, expanded testing, and hazard analysis and critical control points (HACCP) protocols in food production. Others enhance human capacity through training and awareness campaigns on issues like smoking cessation. GAM invests in digitalization and efficiency, linking field inspections and animal care to geographic information systems (GIS) while improving sample logistics.

Complementary initiatives strengthen environmental health and waste management, including the establishment of a mechanical-biological treatment (MBT) plant for organic waste and the modernization of slaughterhouse infrastructure to ensure hygienic practices and energy efficiency. Efforts to enforce professional licensing laws and prevent unauthorized slaughtering further reinforce regulatory compliance and consumer protection.

Together, these projects illustrate the GAM integrated model for SDG 3 implementation, combining health surveillance, food-safety governance, environmental services and institutional modernization under a coordinated municipal framework that enhances the city's resilience, service quality and contribution to national public-health goals.

4. Focus areas for smart and resilient development

(a) Resilient and smart urban environments for public health

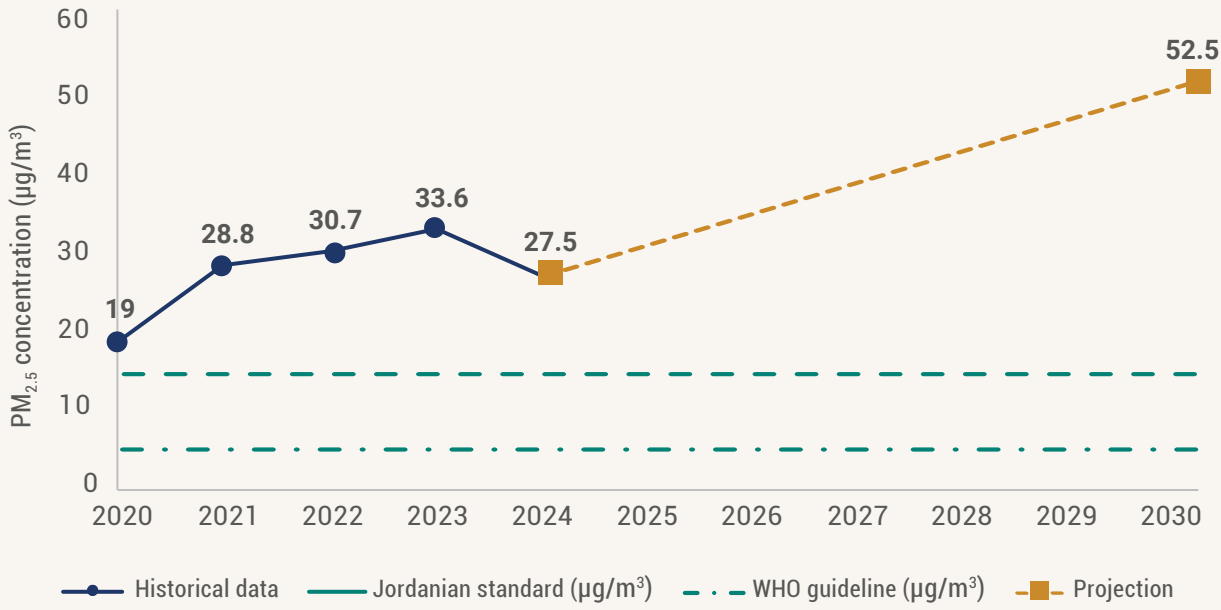
GAM holds a clear mandate for health and safety, which tasks it with disease prevention, emergency coordination, and maintaining safe living conditions. This responsibility has evolved from reactive crisis response to proactive risk management, embedded in the GAM Strategic Plan 2022–2026, the Climate Action Plan and the Resilience Strategy.

Healthy cities depend on resilient environments. In Amman, cleaner air, controlled waste, reliable water systems and greener spaces are treated as preventive health measures. This approach aligns with global agendas that call for cities to protect residents from pollution and climate impacts while promoting active and inclusive lifestyles. Through the Climate Action Plan, the Green City Action Plan and the Resilience Strategy, Amman links environmental resilience and smart urban systems to public well-being.

Environmental health has become a core element of Amman's resilience framework. The Flood Resilience Strategy aims for a 50% reduction in flood risks by 2040 and universal access to safe water and wastewater networks. Nature-based solutions such as the Urban Micro-Lungs Initiative and new green corridors mitigate heat, restore ecology and expand recreation. Sustainable drainage and water-harvesting projects support climate adaptation and disease prevention, while blue-green investments strengthen health security and liveability.

Air quality remains one of Amman's most urgent challenges. The municipality is deploying low-emission technologies and digital monitoring through the C40 Clean Air Cities Accelerator, the BRT expansion,

Figure 15. $PM_{2.5}$ annual concentrations in 2020–2024 with 2030 projections (μg/m³)



Source: Compiled by authors based on data provided by GAM.

and light-emitting diode (LED) street lighting. Annual average concentrations of $PM_{2.5}$ rose from 19.0 μg/m³ in 2020 to 33.6 μg/m³ in 2023 before improving to 27.5 μg/m³ in 2024 (figure 15). This still exceeds the Jordanian standard by 83% and the WHO guideline five-fold. If current trends continue, levels could reach 52.5 μg/m³ by 2030, highlighting the need for sustained emission control and enforcement.

Achieving air-quality targets faces major obstacles. Limited resources slow public-transport expansion, and coordination among agencies remains complex. Enforcement of vehicle-emission and industrial standards requires better training, equipment and legal tools. Balancing economic growth with environmental protection involves difficult trade-offs, as businesses and residents adapt to stricter rules. Experience from 2020–2023 shows that lasting improvements depend on political commitment, citizen engagement and stable financing.

Waste management also contributes directly to public health. Under the Green City Action Plan, Amman expanded biogas recovery at the Al Ghabawi Landfill, generating 4.8 megawatt (MW) of clean energy while cutting methane emissions. The city is upgrading transfer stations, developing material-recovery facilities, and integrating informal recyclers into formal value chains. These measures advance SDG indicator 3.1.4 (hazardous waste) by reducing exposure to pollutants and promoting a circular economy.

Reducing environmental inequalities remains a priority. Residents of East Amman face higher exposure to pollution and fewer green spaces than those in western districts. Targeted interventions are improving waste collection, green infrastructure and localized air-quality monitoring in underserved areas. Aligning resilience planning with social equity ensures that environmental-health benefits reach the most vulnerable communities.

Amman's preventive agenda also covers food safety, nutrition and housing quality. Modernized slaughterhouse facilities, ISO and HACCP laboratory accreditation, and digital oversight of vector-control operations strengthen institutional capacity. Combined with housing upgrades and wastewater

expansion, these actions create a data-driven model of environmental resilience where technology, ecological restoration and inclusion work together.

(b) Health preparedness and safe mobility

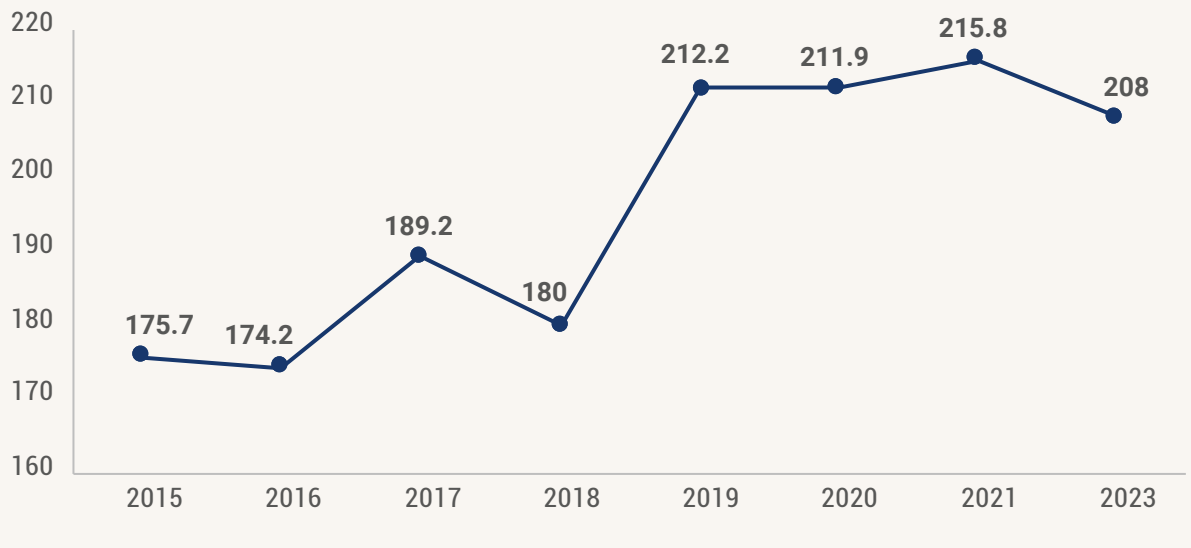
Strong and adaptive health systems are essential for urban resilience and social stability. Amman's approach integrates public-health management, emergency coordination and sustainable mobility to create a safer, more adaptive and people-centred city. Coordination is led by the Deputy City Manager for Health and Agricultural Affairs in collaboration with the Civil Defence and NCSCM through the Tla' Al-Ali Emergency Center, which oversees citywide incident response and public complaints.

After the 2019 flash floods, GAM established permanent coordination mechanisms between district managers and sectoral departments, introducing business-continuity and crisis-management protocols. During the pandemic, the municipality activated its contingency plan before the first national case, launching coordinated actions such as disinfection campaigns, compliance inspections and animal control. These experiences underscored the need for decentralized health access, integrated data systems and closer collaboration with the Ministry of Health.

Digital transformation is now the backbone of preparedness. The Climate Action Plan provides a strategy that focuses on tracking communicable diseases through an online platform interoperable with Jordan Electronic Reporting and Information System (JERIS). By 2025, 60% of municipal health staff will be trained in this system, improving data exchange between local and national authorities. AUO monitors hospital capacity and health-service coverage, while the Urban Resilience Research Centre applies predictive modelling to anticipate health, climate and socioeconomic risks.

Hospital-bed availability improved from 176 beds per 100,000 people in 2015 to 208 in 2023 (figure 16), reflecting continued investment in emergency preparedness and critical care. However, the figure remains below international resilience benchmarks of 300–500 beds per 100,000. Preventive health indicators show similar progress.

Figure 16. Hospital beds per 100,000 population, 2015–2023



Source: Compiled by authors based on data provided by GAM.

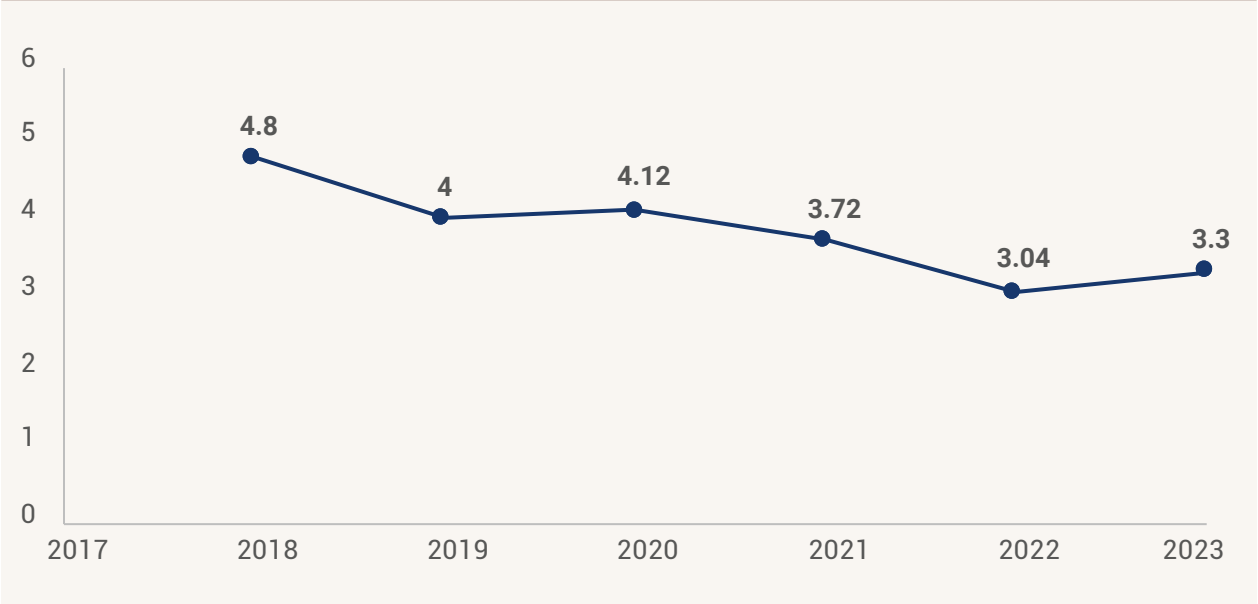
Vaccination coverage remains nearly universal at 99% of children under 5, achieved through coordination between the Ministry of Health, the United Nations Children's Fund (UNICEF) and municipal facilities. During the pandemic, Jordan was among the first countries to include refugees in its vaccination campaign, underscoring its commitment to equitable access. Together, these indicators show a health system that is gradually strengthening both its treatment capacity and its preventive reach.

Expanding capacity faces fiscal and operational constraints. Hospital construction requires major capital investment, while staffing depends on addressing workforce shortages in nursing and specialized care. The pandemic revealed that infrastructure alone is insufficient without adequate protective equipment, ventilation systems and supply-chain resilience. Future efforts must balance investment in facilities with workforce training, digital readiness and operational continuity.

Beyond clinical systems, public health in Amman is also shaped by the safety and sustainability of its mobility network. Recognizing that car dependency drives pollution, accidents and sedentary lifestyles, the municipality is redesigning transport around public transit, data-driven management, and safer, more walkable streets. The BRT network now forms the backbone of a low-emission mobility system, supported by fleet modernization under the Bus Amman initiative, with modern diesel buses operating on stringent low-emission standards (such as Euro V and Euro VI) and electric vehicles (EVs). These efforts aim to raise the share of public transport from 13% in 2017 to 30% by 2030 while reducing emissions and road injuries.

Digital infrastructure enables this transition. The Traffic Management Center operates adaptive systems that coordinate signals, monitor traffic in real time, and enforce safety rules through artificial intelligence (AI)-based surveillance and automated violation detection. Smart parking and route-optimization applications further cut congestion and fuel use. At the street level, walkability projects ensure shaded continuous sidewalks and safer crossings around BRT stations, while periodic car-free days reclaim public space for recreation and social interaction.

Figure 17. Death rate due to road traffic injuries



Source: Compiled by authors based on data provided by GAM.

The quantitative data support some of these outcomes, especially related to road accidents (figure 17). The death rate due to road traffic injuries fell from 4.8 deaths per 100,000 people in 2018 to 3.3 in 2023, meeting the SDG 3.6 target. A temporary spike to 4.1 in 2020 corresponded to pandemic-related mobility disruptions but was reversed through stricter enforcement and safer infrastructure.

By linking emergency preparedness, preventive care and sustainable mobility, Amman is building a resilient urban health system that protects citizens during crises and improves daily life. Institutional readiness, smart infrastructure and inclusive planning ensure that safety, accessibility and health progress together.

(c) Inclusive and data-driven governance

Amman is combining social inclusion and digital innovation to advance health equity. Equitable access to services depends not only on medical care but on the social, spatial and technological conditions that allow people to live safely and thrive. GAM integrates these dimensions through a governance model that connects inclusion, data and service delivery to reduce disparities and strengthen community resilience.

The GAM Resilience Strategy, Climate Action Plan and Strategic Plan 2022–2026 place equity at the centre of urban policy. Persistent gaps between East and West Amman have guided investments in underserved areas, where access to health services and infrastructure remains limited. The Improving Living Conditions in Disadvantaged Areas (ILCA) project engages residents (especially women, young people and persons with disabilities) in redesigning public spaces to improve safety, shade and accessibility. Complementary initiatives such as Urban Micro-Lungs and the Servicing and Implementation Plan for East Amman expand green coverage, enhance air quality, and attract investment to high-vulnerability zones. Together, these programmes bridge social, environmental and health outcomes.

However, east Amman continues to face lower facility density, longer travel times, and higher exposure to environmental hazards. Private investment is constrained by low returns and insecure land tenure, while short political cycles hinder continuity. Achieving spatial equity requires sustained multi-year funding and transparent monitoring to track results across electoral periods. Community participation remains a powerful equalizer: women-led enterprises, water-harvesting initiatives and the Creative Women Hub promote local leadership and digital literacy.

Amman's approach to universal health coverage combines national policy with municipal action. A royal decree guarantees free healthcare for uninsured poor households and children under six, covering immunization, prenatal and chronic-disease care. United Nations High Commissioner for Refugees (UNHCR)-registered refugees are entitled to receive public health services at the Ministry of Health facilities at the same subsidized rate provided to non-insured Jordanians. This policy was first established by a decree from the Office of the Prime Minister in March 2019, which granted Syrian refugees access to subsidized public health services. In June 2022, the policy was expanded to include non-Syrian refugees. The subsidies for refugee health services are financed through the Jordan Health Fund for Refugees (JHFR), based on a bilateral arrangement between the Ministry of Health and JHFR donors. Refugees under the same arrangement can access preventive reproductive health and vaccination services free of cost at public health facilities. GAM complements this with evidence-based facility planning, prioritizing East Amman and low-income settlements. AUO maps service coverage and identifies gaps while digital platforms, such as telemedicine, mobile health applications and automated

e-services, extend access for residents with mobility or transport constraints.

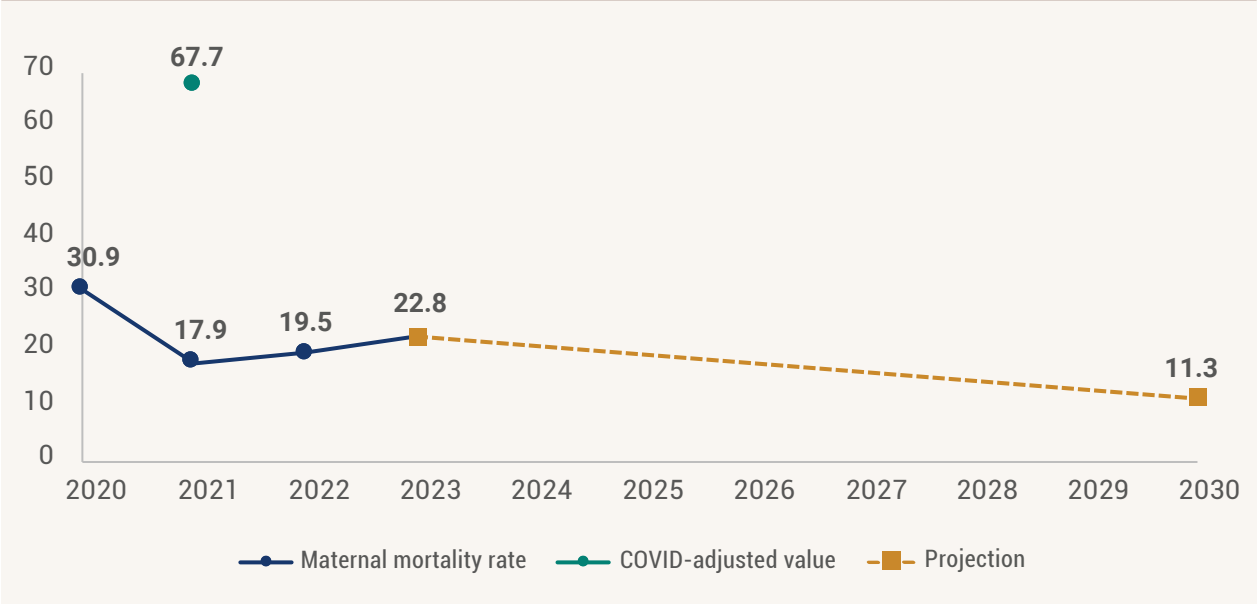
Although city-level universal health coverage data remain limited, Amman demonstrates how municipalities can operationalize national commitments through spatial planning and digital tools. The inclusion of refugees in the Jordanian universal health coverage architecture, and Amman's territorial complement of spatial planning and digital access, represents one of the clearest expressions of the 2030 Agenda's commitment to reach the furthest behind first, positioning health as a right.

Digital transformation underpins Amman's approach to inclusive health governance, especially under the Smart City Roadmap, where GAM has automated 134 e-services, reducing in-person visits by 98% and improving access for residents with limited mobility. Quick response (QR) codes, chatbots and cloud-based platforms simplify interactions and increase transparency. AUO harmonizes data across departments, applying gender-, age- and income-disaggregated indicators for equitable policymaking. MSDI and GIS databases consolidate health, environmental and infrastructure datasets, enabling cross-sector analysis. The forthcoming Urban Resilience Research Centre will act as a hub for predictive modelling, AI analytics and research partnerships with universities, the Ministry of Digital Economy and Entrepreneurship and international organizations.

Despite important improvements in the health sector, challenges persist. Digital literacy gaps, uneven Internet connectivity and data-integration issues risk excluding vulnerable groups. Therefore, strengthening digital skills, system interoperability and cybersecurity governance is critical to ensure that technology narrows rather than widens inequalities.

Health quantitative indicators show measurable progress in these areas. Maternal mortality declined from 30.9 to 22.1 deaths per 100,000 live births between 2020 and 2024, with projections pointing to 11.3 by 2030 (figure 18). Skilled birth attendance rose from 97.3% in 2017 to nearly 100% in 2023. The under-5 mortality rate fell from 16.0 to 11.7 per 1,000 live births between 2020 and 2024, supported by near-universal childhood

Figure 18. Maternal mortality rate



Source: Compiled by authors based on data provided by GAM.

vaccination at 99% coverage. These gains reflect the strong leadership of the Ministry of Health, supported by UNFPA and other partners in demonstrating how social inclusion and targeted service planning improve health outcomes, even during national crises.

Progress, however, remains fragile. The pandemic exposed weaknesses in emergency obstetric care and access to tertiary facilities, particularly for refugees and low-income settlement residents. Meeting the 2030 maternal-mortality target will require ongoing investment in skilled birth attendants, emergency transport and antenatal outreach, alongside sustained attention to sexual and reproductive health and rights as part of broader efforts to strengthen health systems and ensure equitable service delivery.

Broader social-health indicators reinforce this resilience. The adolescent birth rate remains low and stable at about three births per 1,000 women, meeting the SDG target. Life expectancy rose from 74.5 years in 2019 to 75.3 in 2024, recovering from the pandemic plateau and reflecting long-term gains in road safety, green infrastructure and public health. Mental-health data show suicide mortality at 1.3 per 100,000 in 2018 and 1.6 in 2020 (among the region's lowest levels) supported by community partnerships with Our Step Association, WHO and the Ministry of Health. AUO now tracks mental-health metrics to inform preventive policies.

Amman's pursuit of health equity demonstrates that social inclusion and digital governance are mutually reinforcing. By embedding data systems, disaggregated indicators and participatory planning into everyday management, the city ensures that public-health progress translates into tangible benefits for all residents. Service-access mapping, e-governance and spatial equity policies are delivering measurable results: declining maternal and child mortality, near-universal vaccination and narrowing disparities between East and West Amman.

(d) Active living and community well-being through sports

Amman's sports initiatives form an important component of its agenda for promoting health and well-being under SDG 3. Through the Community Development Sector and the Directorate of Sports Affairs, the municipality is investing in early-age physical activity, inclusive sports participation and community health promotion. The city operates a network of 56 high-potential sports centres that engage around 1,400 young athletes aged 8–14 across a broad range of disciplines, from football and volleyball to martial arts, boxing and fitness, ensuring that sport is accessible to both boys and girls. These programmes are complemented by inclusive activities for persons with disabilities and vulnerable groups, reinforcing the GAM commitment to reducing inequalities in access to healthy lifestyles.

In addition to youth development, community-wide sports and physical-activity initiatives support Amman's preventive public-health objectives. Awareness lectures, walking festivals, municipal-employee fitness programmes and tournaments involving civil and military institutions demonstrate how the municipality integrates sport into broader wellness and community-building agendas. With 786 direct beneficiaries by August 2025 and new initiatives such as a municipal Mixed Martial Arts championship, these programmes contribute to reducing the burden of NCDs, fostering social cohesion and strengthening behavioural foundations for sustainable health. Together, they highlight the role of active living as a municipal lever for advancing SDG 3, and in improving the overall health environment in the city.

Beyond programme delivery, Amman's investments in sports and active living contribute to measurable progress across several SDG 3 indicators. Declining under-5 mortality, for example, is reinforced by

early-age physical activity, which supports stronger immune systems and healthier developmental outcomes. Similarly, the improvement in life expectancy aligns with global evidence that regular physical activity reduces long-term risks associated with cardiovascular disease, obesity, diabetes and mental-health conditions. Sports participation also complements Amman's strong performance on road-safety indicators (SDG 3.6), as walking festivals, car-free events and community sports help normalize non-motorized mobility and promote safer use of public space. Together with environmental-health interventions and resilient mobility systems, community sport programmes form part of an integrated preventive-health ecosystem that supports healthier behaviours, reduces future disease burden, and strengthens Amman's long-term trajectory towards achieving SDG 3 targets.

(e) Integration

Taken together, smartness and resilience operate as mutually reinforcing health logics across Amman's SDG 3 agenda: smart systems generate surveillance data, digital service platforms and predictive analytics that enable preventive and responsive health governance, while resilience thinking ensures that environmental safeguards, emergency preparedness and social inclusion protect health outcomes under stress, making the two lenses inseparable in any credible strategy for urban well-being.

Amman's SDG 3 progress emerges from infrastructure and governance systems that simultaneously serve multiple sustainable development objectives: air quality and emission reductions depend on low-carbon transport and energy transitions (SDGs 7 and 13); safe mobility builds on the same BRT network and walkability investments advancing sustainable cities (SDG 11); flood resilience and drainage infrastructure that protect public health also underpin climate adaptation (SDG 13) and water management (SDG 6); waste management and circular economy initiatives at Al Ghabawi connect environmental health to industrial development (SDG 9); digital health governance and e-services rest on the institutional transparency and data architecture enabling effective institutions (SDG 16); and closing the health gap between East and West Amman requires the same spatial equity and inclusive planning that drive reductions in inequality (SDG 10).

5. Policy recommendations and means of implementation for SDG 3

(a) Priority recommendation: climate-health early warning system

Policy objective: build on the early warning and emergency preparedness work already advanced by the Ministry of Local Administration, NCSCM and partners by extending coverage to neighbourhood-level alerts for floods, heat, pollution and disease outbreaks, ensuring consolidated protocols connect national-level systems to district-level response capacity across all 22 districts.

Responsible institutions

- GAM, Sustainable Development and Resilience Unit.
- NCSCM.
- Ministry of Health.
- Ministry of Interior: including Civil Defence Directorate and Public Security Directorate.

Supporting partners

- Meteorological Department.
- Ministry of Environment.
- Ministry of Public Works and Housing.
- Royal Scientific Society.

Implementation pathway

- **Short term:** establish the data-sharing architecture connecting meteorological, environmental and health datasets into a single feed, building directly on the climate risk platform developed under SDG 3's Multi-Hazard Climate Risk Management System rather than creating a parallel infrastructure. Define health-specific alert thresholds and activation triggers for each hazard type (heat, flood, air pollution and disease outbreak) calibrated to neighbourhood-level vulnerability data. Map existing early warning assets and communication channels across NCSCM, the Ministry of Local Administration, the Civil Defence and GAM to identify coverage gaps, particularly in reaching vulnerable populations such as residents with respiratory conditions.
- **Mid term:** activate neighbourhood-level health alert protocols across all 22 districts, with clear communication channels reaching vulnerable communities. Integrate air quality monitoring data from the Ministry of Environment's monitoring network, with technical testing and analytical support from the Royal Scientific Society, with health outcome data from the Ministry of Health to enable real-time health guidance, translating raw monitoring data into actionable advice for the public. Deploy a public-facing health alert interface, which could be integrated into the broader climate risk platform dashboard. Train district-level health and emergency personnel on protocol activation and community communication.
- **Long term:** connect health early warning outputs to municipal planning decisions, using spatial health data to inform where GAM invests in green infrastructure, cooling and air quality interventions. Establish a feedback loop between health outcome data and urban investment prioritization, so that districts with the worst health indicators receive targeted attention through GAM capital budgeting. Extend the system's analytical capacity from reactive alerts to predictive health risk modelling, in partnership with universities and the Ministry of Health.

Indicators and targets

- **Outputs**
  - Districts with activated neighbourhood-level health alert protocols.
  - Health-specific alert thresholds defined and operational for each hazard type.
  - Data-sharing agreements operational between health, environmental, and climate data providers.
- **Outcomes**
  - Response time for health-related alerts compared to baseline.
  - Reduction in heat-related and pollution-related hospital admissions during extreme events.
  - Population coverage of early warning communication channels, particularly among identified vulnerable groups.

Financing route

The short term is primarily institutional and should be designed to extend, not duplicate, climate risk platform investments, keeping marginal costs low. Technical assistance from international organizations, or bilateral health-climate programmes can support threshold definition and protocol design. In the mid term, deployment costs depend on the extent to which existing communication infrastructure can be leveraged; if the alert system is integrated into existing platforms, costs are modest. In the long term, predictive modelling and planning integration can attract public health research funding and climate-health nexus financing, an area of growing donor interest.

(b) Supporting recommendation: health equity and active living programme

- **Lead:** GAM AUO, in coordination with the Strategic Planning Unit.
- **Key actions:** use spatial health data in collaboration with the Ministry of Health to establish a health equity monitoring framework that identifies and tracks disparities in health outcomes, service access and environmental exposure across East and West Amman. Inform investment prioritization under GAM capital budgeting and PPP frameworks to progressively close the district-level health gap. Apply ISO standards for safe work environments and public safety benchmarks as proposed in the consultation. Partner with the Ministry of Health for disease, hospitalization and mortality data, and the Ministry of Environment for environmental exposure data.
- **Key partners:** Ministry of Health; Ministry of Environment; GAM Engineering and Public Works sectors; universities; and public health research institutions.
- **Primary indicators:** health equity gap between East and West Amman districts (composite indicator covering service access, environmental exposure, and health outcomes); share of capital budget directed to districts with the highest health disparities; and number of districts with published health equity profiles.
- **Financing:** the monitoring framework is a data and analytics exercise financeable through existing AUO resources and technical assistance. Capital investments to close the health gap would flow through GAM standard budgeting and PPP mechanisms, informed by equity data.

(c) Supporting recommendation: integrated air quality programme

- **Lead:** Ministry of Environment (regulatory and policy), with GAM responsible for urban-level interventions.
- **Key actions:** densify air quality monitoring coverage with complementary IoT sensors in pollution hotspots across East Amman, building on the Ministry of Environment's existing monitoring stations. Strengthen enforcement mechanisms targeting the primary pollution sources. Coordinate green infrastructure investments to reduce $PM_{2.5}$ levels. Develop a public-facing air quality dashboard with real-time alerts for vulnerable populations, integrated with the health early warning system rather than as a separate platform. It is important to note that the role of GAM is limited to urban-level interventions.
- **Key partners:** Royal Scientific Society (monitoring data management); GAM Environment Sector; GAM Traffic Directorate (traffic regulation as pollution intervention); and universities.
- **Primary indicators:** $PM_{2.5}$ levels in target districts (target: below 20 µg/m³ by 2030); number of IoT monitoring points deployed; and public dashboard operational with real-time alerts.
- **Financing:** IoT sensor deployment is relatively low-cost and can be co-financed through smart city and environmental monitoring programmes. Enforcement strengthening is an operational cost.

B. SDG 5: Gender equality

1. Background

Achieving gender equality and empowering all women and girls remains a foundational pillar of the 2030 Agenda. Moreover, gender equality is a prerequisite and an outcome of sustainable urban development, shaping more inclusive, safe and resilient cities that cater to the needs of all. Global progress towards gender equality reveals both achievements and widening gaps. Over the past two decades, education has witnessed advancements by expanding girls' access to education, strengthening legal protection, and increasing women's representation in political systems. Yet progress has been unequal in certain areas: women remain underrepresented in the workforce, gender-based violence persists, and the gender digital divide is increasing. Almost one in three women have been subject to physical and/or sexual intimate partner violence, non-partner sexual violence, or both at least once in their life. These disparities have widened due to global crises including pandemics and rising living costs, thus increasing existing vulnerabilities for women worldwide.

The Arab region reflects many of these global patterns where urban areas face complex challenges influenced by demographic shifts, economic pressures, and political instability. Over the past decade, countries have advanced key reforms, established national strategies for women, and strengthened protections against violence. However, structural barriers continue to limit women's economic and political participation despite rising educational achievements, with gaps in labour force participation, wage equity and access to formal employment opportunities. In 2022, 73% of men against only 48% of women globally were engaged in the labour market. Historically, the average for the Arab region has been even lower, with only 20% of women participating in the labour market in 2022 versus 70% of men. Jordan sits well below even this regional baseline: the Department of Statistics reports female labour force participation at 14.9% in 2024. These challenges are compounded by climate pressures, economic instability and conflict, which further slow progress towards SDG 5.

Gender-based violence remains a further structural constraint. In Jordan, 2023 data indicate that 18% of ever-married women aged 15–49 have experienced spousal violence (physical, sexual or emotional) at the hands of their current or most recent husband. Yet only about one in three women who have experienced physical or sexual spousal violence have sought help to stop it, while 57% have never sought help or disclosed the violence to anyone. These figures underscore that advancing SDG 5 in the region requires not only expanding economic and political participation, but also strengthening the reporting, support and protection systems that determine whether formal rights translate into lived safety.

2. National-local alignment: a shared vision for SDG 5

Jordan and Amman's progress towards SDG 5 reflects a multilevel governance model that links national gender-equality commitments with local action. National strategies such as the National Strategy for Persons with Disabilities, the Strategic Plan for Education, the Operational Strategy for Prevention of Gender-Based Violence, the National Women's Strategy, the National Social Protection Strategy and the National Youth Strategy provide the overarching framework for advancing women's rights, economic participation, safety and digital

inclusion. Building on this foundation, the Executive Plans for the Prevention of Gender-Based Violence, Domestic Violence, and Violence against Children (2021–2023) established an initial implementation architecture, which has since been succeeded by the new National Action Plan for the Prevention and Response to Child Protection, Domestic Violence, and Violence against Women and Girls (2026–2030). Together with parallel efforts to support women's entrepreneurship and address the gender digital divide, these instruments demonstrate a sustained government commitment to removing structural barriers and ensuring equal access to opportunities.

Amman translates these national priorities into local action through programmes that strengthen women's economic empowerment, improve safety in public spaces, expand digital-skills training, and enhance inclusion in community activities. Initiatives such as the Youth and Women Empowerment Program, the Steps Towards the Future robotics and digital skills initiatives, and the Your Health is Your Strength programme for women translate national gender objectives at the local level, strengthening women's participation, safety and access to opportunities. Through its Smart City Project[19] and expansion of municipal e-services, GAM also contributes to narrowing the gender digital divide by improving access to digital platforms and enabling broader participation. The alignment of the Jordanian VNR with Amman's VLR reinforces policy coherence, ensuring that gender equality is mainstreamed across sectors at both national and local levels, and reinforcing coordinated reporting and shared accountability for SDG 5.

Policy coherence is visible in national-local level alignment in embedding gender equality across sectors. At the national level, gender equality considerations are integrated into labour-market reforms, social protection measures and digital transformation agendas. At the local level, these priorities translate into initiatives such as inclusive public spaces, women-focused skill-building programmes, and data systems that track spatial inequalities.

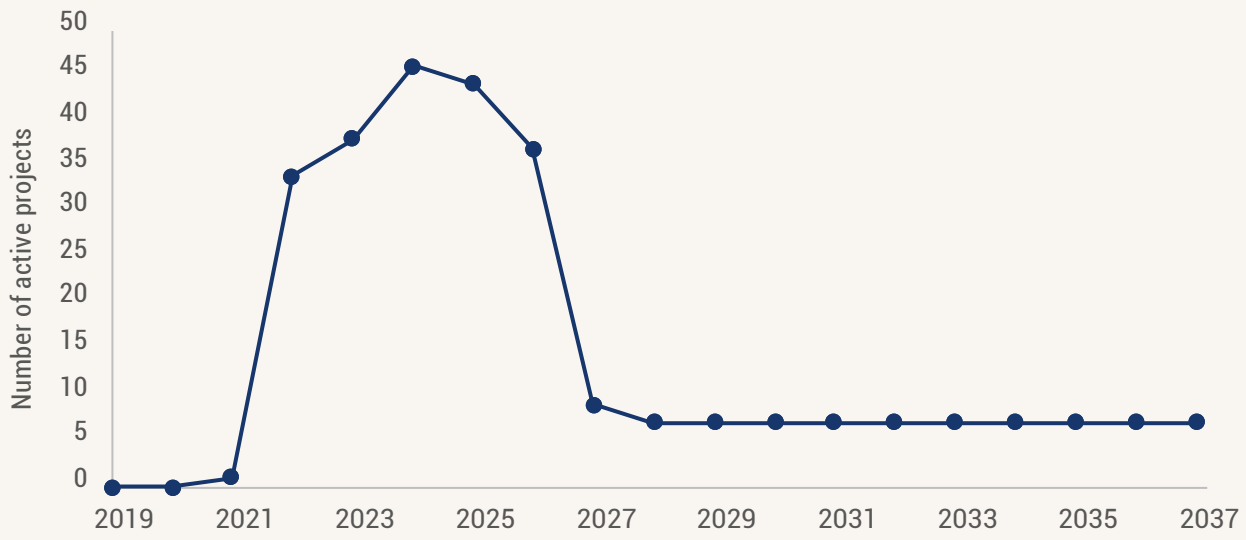
3. Project portfolio towards SDG 5 in Amman

SDG 5 projects in Amman reflect a cross-sectoral agenda driven primarily by the Community Development Department, the Public Works Department, the Human Resources Department, the Institutional Performance Development Directorate, the Planning and Economic Development Sector, the Strategic Planning Department, and the Internal Audit and Control Unit. These initiatives focus on expanding women's access to safe and inclusive public spaces, strengthening pathways for economic empowerment, advancing digital inclusion, and integrating gender-responsive planning across municipal services.

The project portfolio shows notable fluctuation across the reporting years, reflecting shifts in local priorities and external pressures. Project activity began at 11 initiatives in 2023, followed by a temporary decrease to 6 initiatives in 2024. Project activity then increased to 10 projects in 2025 and peaked at 20 projects in 2026 (figure 19), marking the period of strongest institutional mobilization around women's empowerment, digital skills, public-space safety and community development. The portfolio narrows to one planned project in 2027, indicating a transition from rapid expansion to the integration of gender-responsive approaches into longer-term municipal programmes (figure 20).

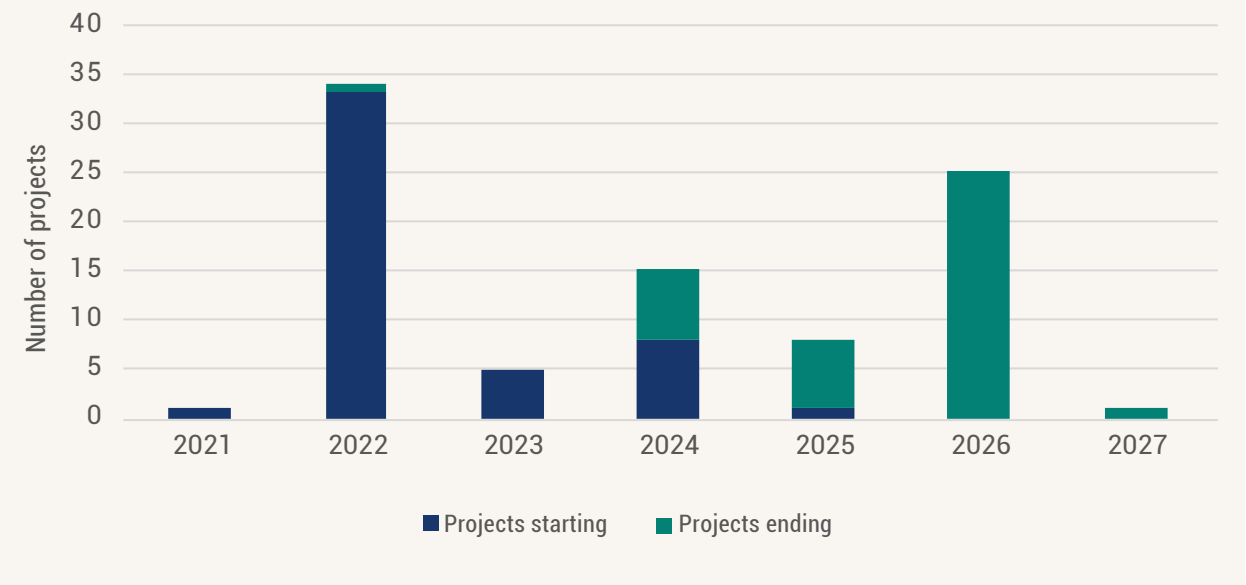
The GAM SDG 5 project portfolio reflects a coordinated municipal effort that blends institutional strengthening, women's economic empowerment, social protection and safer public spaces. The peak in projects started in 2023 with 33 initiatives, marking a shift towards integrating gender priorities across multiple sectors, including digital-

Figure 19. Active projects per year for SDG 5 in Amman



Source: Compiled by authors based on data provided by GAM.

Figure 20. Projects starting and ending per year for SDG 5 in Amman



Source: Compiled by authors based on data provided by GAM.

skills training and entrepreneurship support to programmes aimed at reducing gender-based violence and improving mobility safety for women and girls. The five initiatives launched in 2023 and the eight launched in 2024 reinforced this momentum through targeted investments in community engagement, digital literacy and inclusive service delivery.

A significant number of projects reached completion in 2024 and 2025, when early cohorts of initiatives, particularly those focused on capacity-building, awareness campaigns and facility upgrades, matured, with seven projects completed in each year and a further consolidation of 25 projects in 2026. These completion cycles indicate

that short-term initiatives are evolving into more integrated longer-term programmes. Together, this portfolio highlights the GAM multidimensional approach to SDG 5.

4. Focus areas for smart and resilient development

(a) Gender-responsive governance and data-driven resilience

Smart and resilient cities rely on governance systems that are inclusive, evidence-based and responsive to shocks. Integrating gender equity into governance systems strengthens a city's ability to identify vulnerabilities, ensure inclusive participation, and improve adaptive decision-making under uncertainty.[20] AUO provides the core foundation for gender-disaggregated monitoring across services, neighbourhoods and sectors, collecting and validating raw data from multiple stakeholders and producing standardized indicators used by GAM for planning and decision-making.

The GAM digital transformation further strengthens gender-responsive governance. The full automation of 134 municipal services, reducing annual in-person visits from 18 million to 270,000, has expanded accessibility for women facing mobility, caregiving or safety constraints, and increased the continuity of municipal services during crises such as extreme weather or mobility restrictions. These capabilities have strengthened accountability and enabled GAM to institutionalize resilience-oriented processes across service delivery, emergency preparedness and community engagement.

Complementing these institutional advances, community-led and voluntary action has emerged as a critical vector for gender-responsive resilience, particularly in the water sector. Through the Water Wise Women Initiative, led by the Jordanian Hashemite Fund for Human Development (JOHUD) in partnership with GIZ and the Ministry of Water and Irrigation, women are trained as "change pioneers" in leak detection, plumbing, hygiene practices, rainwater harvesting and household water management. Leveraging community pairs and volunteer networks, participants have reached thousands of households and achieved household water consumption reductions of 30–40% in targeted communities, while also generating income through local plumbing services and the maintenance of public facilities.[21]

Government-led public campaigns reinforce these grassroots gains. The Ministry of Water and Irrigation's It's Up to You initiative trains female community educators and preachers to disseminate conservation messages across urban and peri-urban Amman, extending the reach of volunteer networks. In parallel, Amman's water service provider, *Miyahuna*, provides citizen-facing reporting mechanisms for leakage and theft, offering a complementary interface for volunteer-supported community monitoring.[22] Together, these digital, institutional and civic layers illustrate how gender-responsive governance in Amman increasingly operates as a multi-actor system, linking municipal capacity with women's agency at the household and neighbourhood levels.

By linking gender-responsive governance with digital tools and supported evidence, Amman is building a governance model aligned with global resilience principles that prioritize equity, adaptability and transparency in urban management. These systems have strengthened accountability and enabled GAM to institutionalize resilience-oriented processes across emergency preparedness, community engagement and service delivery, while the data infrastructure of AUO helps track

disparities and guide the planning required to close gender gaps in access to public services, infrastructure and safe mobility.

Seen through a "leave no one behind" lens, Amman's gender agenda operates across a population that is far from monolithic. It includes Jordanian women, refugee women from multiple national backgrounds and legal statuses, women with disabilities, women-headed households, and women at the intersection of more than one of these categories. Disaggregated data on this level is still a challenge in most cities, including Amman. Closing this gap is a concrete data priority for the next VLR cycle, and a precondition for translating Amman's gender-responsive governance into an agenda fully aligned with leaving no one behind.

(b) Inclusive economic participation and digital access for women

Women's economic participation remains one of the country's most persistent structural challenges and a key determinant of household resilience. National survey data show that female unemployment reached 30.7% in 2023 compared with 19.6% for men, while the female economic participation rate was only 14%, among the lowest globally.[23] These gaps reflect barriers related to job availability, care responsibilities, skills mismatch and restricted geographic mobility.

Digital transformation helps reduce several of these constraints. The GAM shift to online licensing, e-payments and home-based business permits has expanded access for women who face mobility or caregiving limitations, supporting alternative pathways to income generation. Global evidence confirms that closing digital gender gaps increases access to employment, financial tools and markets, strengthening women's resilience to economic shocks.

Labour-market data further highlight structural inequalities in job quality and economic opportunity. Women employed in the private sector earned JOD 503 per month on average in 2022, compared with JOD 561 for men, indicating a 10.3% wage gap.[24] In terms of employment structure, women's participation in entrepreneurial or leadership roles remains extremely limited: in 2023, only 4.2% of all paid employed women worked in the private sector while 95.6% were wage workers, and self-employed women and women employers together represented just 2.5% of all working females.[25] These patterns illustrate not only constrained access to higher-quality jobs but also limited pathways to financial independence and asset accumulation. These disparities underscore the importance of municipal measures that improve access to safe transport, reduce administrative burdens and expand digitally enabled work opportunities, thereby strengthening women's participation in Amman's economic activity.

Nonetheless, a significant share of economically active women in Amman operate informally, most visibly through home-based production, services and microenterprise. Informality is not a marginal phenomenon but the default entry point into economic activity for women constrained by caregiving responsibilities, mobility barriers or limited access to commercial premises. This makes the formalization pathway a decisive gender equality lever. The GAM home-based business licensing regime, combined with the automation of municipal e-services and targeted entrepreneurship support, creates a concrete route from informal activity into recognized, protected and growth-capable economic participation. Framed this way, the municipal regulatory environment becomes a direct instrument of decent work: it determines whether women's

economic activity is counted, protected and able to scale, or remains invisible and precarious. In doing so, it anchors SDG 5 to the decent-work ambitions of SDG 8, making the formalization of women's economic activity a shared priority across both goals and one of the most actionable levers available to the municipality in the near term.

(c) Safe, connected and equitable urban environments for women and girls

Safe and accessible public spaces determine whether women and girls can move freely, access services, work and participate in community life. UN-Women's global evidence shows that sexual harassment and violence in public spaces restrict women's freedom of movement, limit their economic and social opportunities, and reduce access to services, thus making urban safety an essential component of gender equality and urban resilience.[26]

Smart-city tools strengthen Amman's capacity to address these risks. Digital reporting channels, spatial analytics and real-time environmental data help GAM identify unsafe corridors, lighting gaps and mobility constraints that disproportionately affect women. Global guidance from UN-Habitat's Her City methodology emphasizes that design factors such as visibility, lighting, pedestrian continuity and maintenance strongly influence women's safety and their ability to use public spaces on equal terms.[27]

Climate impacts further compound these challenges. UN-Habitat's resilience research shows that women are disproportionately affected by climate-related disruptions, such as heat, flooding and degraded public space conditions, due to gendered mobility patterns, caregiving responsibilities, and unequal access to resources. Integrating climate-resilient design (shading, drainage and safe walking routes) with gender inclusive planning strengthens daily well-being and emergency readiness, ensuring that essential mobility and services remain accessible during crises.

A UNFPA study highlights the multifaceted barriers and socioeconomic factors influencing survivors' access to gender-based violence services and help-seeking behaviours.[28] The study recommends investing in integrated one-stop-shop centres and strengthening safe spaces that provide comprehensive medical, psychological, legal and shelter support under one roof, while ensuring confidentiality, accessibility and sustained support for women and girls.

(d) Integration

Across SDG 5, smartness and resilience act as mutually reinforcing frameworks. Smart systems, local data, digital service platforms, online licensing and reporting apps provide visibility, efficiency and inclusion. Resilience principles, including equity, continuity of operations, adaptive governance and spatial justice, ensure that systems protect vulnerable groups and sustain function during shocks.

Gender-responsive governance strengthens decent work and inclusive economic participation (SDG 8), particularly through the formalization of women's informal and home-based economic activity, safe and equitable mobility (SDG 11), accountable and transparent institutions (SDG 16), and community health and well-being (SDG 3). The link to SDG 8 is especially consequential in a labour market where women's participation remains among the lowest globally, advancing gender equality and promoting decent work are, in practice, the same agenda.

5. Policy recommendations and means of implementation for SDG 5

(a) Priority recommendation: women's safety and inclusive public space programme

Policy objective: consolidate safe corridor planning, street lighting upgrades, harassment reporting mechanisms, and gender-responsive transport design into a unified urban safety system that strengthens women's mobility, security and access to jobs and services, particularly in underserved areas.

Responsible institutions

- GAM Department of Traffic and Infrastructure, in coordination with the Department of Parks and Public Spaces.
- Ministry of Interior/Public Security Directorate.
- Ministry of Transport/Land Transport Regulatory Authority.

Supporting partners

- GAM Smart City Center.
- Ministry of Digital Economy and Entrepreneurship.
- Civil society organizations working on women's safety.
- Jordanian National Commission for Women.
- Telecommunications companies.

Implementation pathway

- **Short term:** conduct a gender safety audit of public spaces, transport corridors and pedestrian infrastructure across priority districts, using existing GAM smart city tools and data from the Public Security Directorate to map hotspots. Develop or adopt urban design guidelines that integrate gender-responsive safety criteria into street layout, lighting placement, pedestrian access and transit stop design. Establish the multi-channel reporting system (combining a dedicated hotline, in-app reporting and integration with existing platforms) with clear protocols linking citizen reports to public security response and GAM follow-up. Begin mandatory training for public transport staff members on handling harassment and violence cases.

- **Mid term:** roll out smart lighting and surveillance upgrades in priority corridors, beginning with the highest-risk areas identified in the short-term audit. Deploy gender-responsive design standards in new and upgraded transit stations and pedestrian pathways. Launch the digital safety ecosystem for women's transport (trip-tracking and family-sharing systems, driver and trip evaluation platforms, and in-app emergency reporting). This should be developed in partnership with ride-hailing operators and public transport providers rather than as a stand-alone municipal system. Actively recruit and train women as drivers and transport supervisors, creating safe working conditions as a prerequisite, to shift the gender composition of the transport workforce.

- **Long term:** embed gender safety performance metrics into GAM regular service monitoring cycle, ensuring that reporting data, incident trends and infrastructure coverage are tracked at the district level and published transparently. Integrate gender-responsive design criteria into municipal procurement standards and building permitting, so that all new public infrastructure projects are assessed against safety requirements. Enforce penalties for non-compliance (clear, well-publicized and severe sanctions) supported by sustained public awareness campaigns reaching all population segments. Establish a regular review cycle connecting safety data to investment prioritization, so that capital allocation responds to where gaps persist.

Indicators and targets

- **Outputs**
  - Districts with completed gender safety audits (target: priority districts in the short term, citywide in the mid term).
  - Public transport staff members trained on harassment response protocols.
  - Smart lighting and surveillance coverage in identified hotspot corridors.
  - Operational status of multi-channel reporting system.
- **Outcomes**
  - Number of reports received through the platform annually (as a proxy for trust and accessibility, expected to rise initially).
  - Share of reports resolved within a defined timeframe.
  - Women's reported sense of safety in public spaces and transport (measured through dedicated survey or integration with Amman is Listening).
  - Female ridership rates on public transport compared to baseline.

Financing route

The short term is primarily institutional, with safety audits, design guideline development and training programmes that can be financed through existing budgets supplemented by technical assistance from international organizations and bilateral gender programmes. In the mid term, smart infrastructure investments (lighting, surveillance and digital platforms) can be bundled with broader BRT and urban mobility investments already in the GAM pipeline, making them eligible for international financing institution (IFI) co-financing through international urban transport programmes. The digital safety platform for transport could attract private sector co-investment from ride-hailing and telecom operators. In the long term, enforcement and institutionalization costs are recurrent and should be integrated into the GAM operational budget as part of standard service delivery.

(b) Supporting recommendation: gender-responsive urban governance and data system

Lead: GAM AUO, in coordination with the Department of Statistics.

- **Key actions:** integrate gender-disaggregated indicators into the AUO monitoring framework, municipal budgeting processes, and service delivery platforms. Establish inter-institutional data-sharing agreements with the Department of Statistics and the National Commission for Women. Build a unified data infrastructure as the execution critically depends on coordination between institutions and a shared database, not parallel systems. Develop and publish a gender gap dashboard tracking mobility, infrastructure access, economic participation, and exposure to urban risks at the district level.
- **Key partners:** Department of Statistics; the National Commission for Women; the Ministry of Digital Economy and Entrepreneurship; and international partners.
- **Primary indicators:** number of gender-disaggregated indicators operational in AUO; municipal budget lines with gender-responsive tagging; and frequency of gender gap dashboard publication..
- **Financing:** primarily technical assistance and institutional capacity-building, financeable through existing international partnerships and bilateral gender programmes. Data infrastructure costs can be integrated into broader operational costs.

(c) Supporting recommendation: women's economic empowerment and care support platform

- **Lead:** GAM digital services, in partnership with the Ministry of Digital Economy and Entrepreneurship.
- **Key actions:** expand the GAM digital regulatory portal into a unified platform supporting women-led and home-based enterprises: licensing, compliance, and market linkages in a single interface. Scale childcare and care-economy infrastructure through targeted municipal investment and PPP mechanisms. Develop a joint implementation plan between GAM, the private sector, the Ministry of Social Development and the Ministry of Digital Economy and Entrepreneurship, including training for women employees on platform use and linking to digital finance tools. Promote flexible work arrangements aligned with Labor Regulation No. 44 of 2024.
- **Key partners:** Ministry of Social Development; Ministry of Labour; Ministry of Digital Economy and Entrepreneurship; telecommunications companies; private sector; and microfinance institutions.
- **Primary indicators:** number of women-led enterprises registered through the platform; women's labour force participation rate in Amman (tracked against national baseline); childcare facility coverage by district; and digital finance adoption rate among women-led enterprises.
- **Financing:** platform development can build on existing GAM digital infrastructure investments. Care-economy infrastructure (childcare facilities, community centres) is a candidate for PPP financing and IFI social sector lending. Technical assistance for digital literacy and enterprise support through bilateral development programmes and private sector corporate social responsibility partnerships.

C. SDG 7: Affordable and clean energy

1. Background

Clean, reliable and affordable energy is becoming one of the defining pillars of sustainable development worldwide. As economies electrify, cities expand and climate commitments tighten, the global energy system is shifting at a pace not seen in decades. Solar and wind power have become the most competitive sources of new electricity generation, storage technologies are rapidly maturing, and digital tools are transforming the way energy networks are monitored and managed. Yet this transformation remains unbalanced: regions with strong infrastructure and investment frameworks are accelerating towards low-carbon energy systems, while many others face rising demand, volatile energy prices, and persistent inequalities in access. Urban growth, heatwaves and changing consumption patterns are adding new pressures to already-strained grids, underscoring the need for resilient, diversified and efficient energy systems.

Momentum towards clean energy is steadily increasing in the Arab region as countries expand national solar programmes, strengthen energy-efficiency measures and introduce new green-mobility initiatives. Despite this progress, disparities remain. Electricity access has improved across many countries, yet an estimated 35 million to 40 million people still lack reliable supply, particularly in rural communities and conflict-affected areas where infrastructure damage and grid instability continue to hinder development. At the same time, renewable-energy generation has grown, with several countries advancing large solar and wind projects in recent years, although renewables still represent a relatively small share of total electricity production. Rapidly growing cities continue to face rising demand driven by urban expansion and increasing cooling needs, placing additional pressure on existing electricity networks. In this evolving landscape, innovative clean-energy solutions such as community-scale solar systems, waste-to-energy projects and emerging regional electricity-interconnection initiatives are creating new opportunities to strengthen energy security and support a more resilient and sustainable power system across the Arab region.

Cities now play a pivotal role in shaping the region's energy future. They are both major energy consumers and key engines of innovation. Municipal governments are investing in rooftop solar, modernizing street lighting, scaling smart-metering, and linking energy planning with mobility, housing and climate strategies. As temperatures rise and electricity consumption increases, efficiency standards, resilient infrastructure, and data-driven energy management are becoming essential urban tools.

Amman mirrors this dual reality of pressure and potential. The city's growing population, expanding mobility needs, and hotter summers have intensified electricity demand. At the same time, Amman has emerged as a national leader in clean-energy action, installing solar systems on public facilities, converting thousands of streetlights to LED, and embedding energy objectives into its Climate Action Plan, Green City Action Plan, and Resilience Strategy. Investments in the BRT system and early steps towards electric mobility further demonstrate how urban transport and energy efficiency can advance together. However, challenges persist, including grid constraints, financing barriers for rooftop solar, and unequal access to efficient cooling solutions.

As Amman advances towards a smarter and greener urban model, SDG 7 becomes an enabling force: improving energy security, reducing emissions, lowering municipal costs, and supporting a more inclusive and climate-resilient future for all residents.

2. National-local alignment: a shared vision for SDG 7

Jordanian progress towards SDG 7 is anchored in a strong national vision that links energy security, economic modernization and climate action. At the national level, the Government has advanced a comprehensive policy framework, including the Renewable Energy and Energy Efficiency Law, the National Energy Strategy 2020–2030, the Green Growth National Action Plan and an updated NDC, which together chart a pathway to increase renewable-energy generation, reduce dependency on fossil fuels, improve efficiency across sectors, and stabilize energy costs for households and businesses. These commitments emphasize the expansion of solar and wind power, the scaling of distributed generation through net-metering and wheeling systems, and the modernization of grid infrastructure to support growing demand and future electrification.

Amman translates this national ambition into local action through a wide portfolio of municipal initiatives. GAM integrates energy considerations into spatial planning, climate mitigation, urban mobility and digital governance. Solar installations now support the operation of public facilities, LED street-lighting programmes significantly reduce municipal energy expenditures, and energy-efficiency principles are embedded into building upgrades, waste-to-energy initiatives, and smart-city investments. The Climate Action Plan charts a clear pathway towards a low-carbon and energy-efficient city, while the Green City Action Plan complements national priorities by identifying local levers to cut emissions, strengthen resilience, and enhance urban liveability.

The alignment between national and local authorities is strengthened through coordinated reporting and shared strategic objectives. The Jordanian VNR and Amman's VLR reinforce one another, ensuring that local data contributes to national SDG assessments and that municipal actions directly advance national targets. Similarly, coordination between GAM, the Ministry of Energy and Mineral Resources, the Ministry of Environment, the Energy and Minerals Regulatory Commission and national financing entities, such as the Jordan Renewable Energy and Energy Efficiency Fund, ensures that policies, funding mechanisms, and regulations support local implementation and unlock opportunities for innovative municipal projects.

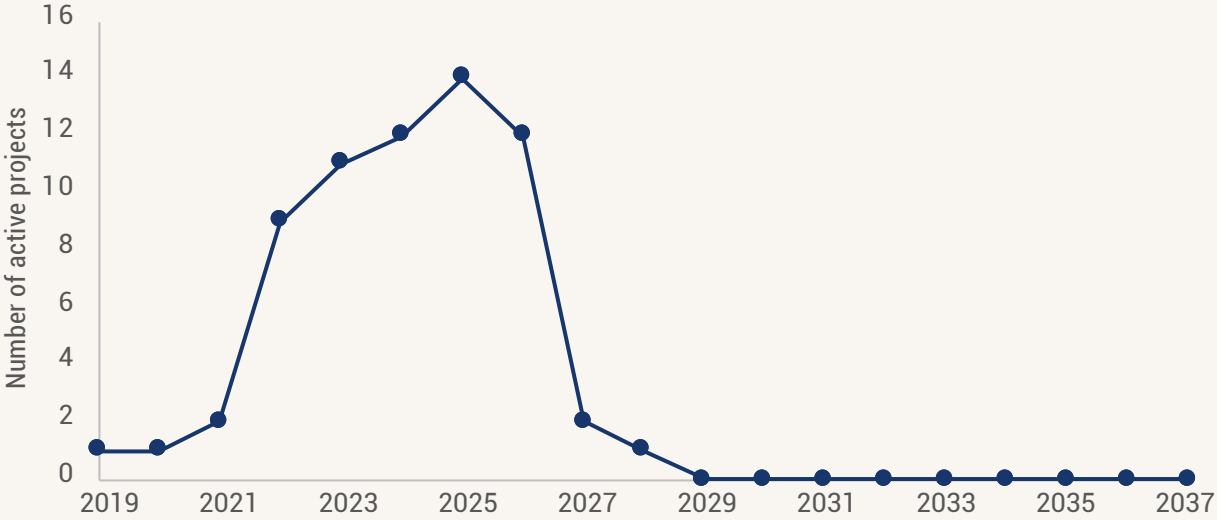
Energy-sector priorities also intersect with other national frameworks, including the EMV, which positions renewable energy and energy efficiency as core enablers of economic competitiveness, job creation, and improved quality of life. At the local level, Amman operationalizes these priorities through integrated transport planning (BRT expansion, electric mobility pilots), climate-resilient infrastructure upgrades and partnerships with academia, the private sector and development partners to advance renewable- and efficiency-focused projects.

Together, these national and local efforts form a coherent multilevel governance model for SDG 7, in which national reforms set the enabling environment, and municipalities like Amman drive implementation through localized solutions, smart technologies and community-centred planning. This coordinated approach accelerates the clean-energy transition, strengthens energy security, and positions Amman as a key contributor to the country's sustainable low-carbon future.

3. Project portfolio towards SDG 7 in Amman

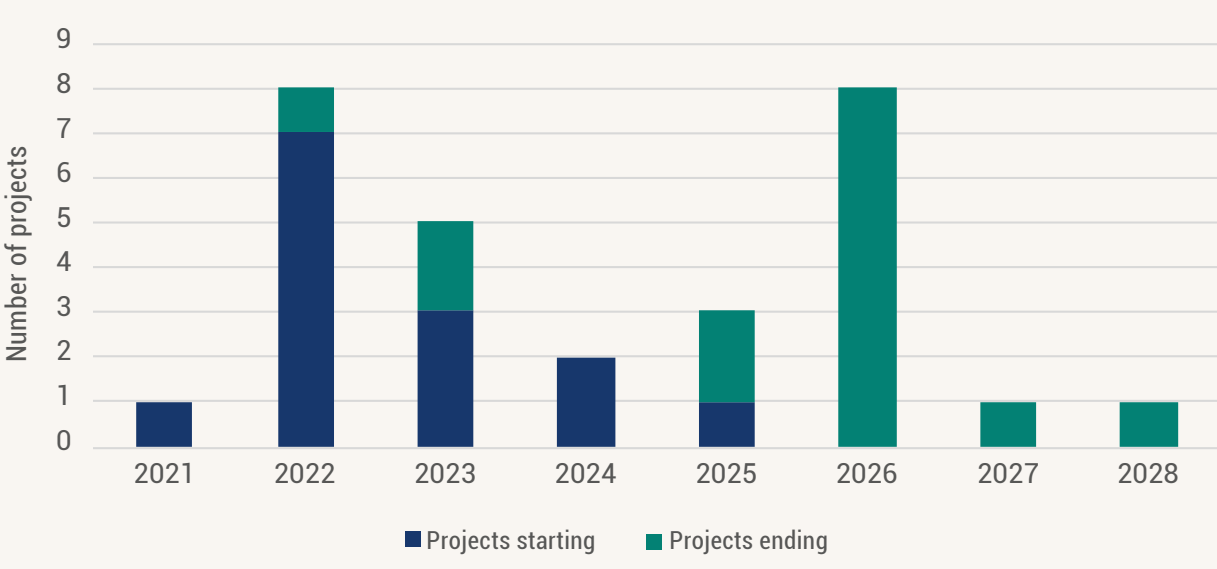
SDG 7 projects in Amman reflect a targeted clean-energy and urban-sustainability agenda led by the Districts and Environmental Affairs, Public Works, and Planning and Economic Development sectors. Key departments, including the Waste Management, Environmental Studies, Environmental Projects, Engineering and Fleet Directorates, oversee initiatives that strengthen the city's transition towards resource efficiency and renewable-energy generation. Much of the portfolio focuses on transforming waste into a strategic asset through mechanical and biological treatment plants, commercial and construction-waste recycling, new engineered landfill cells, and the expansion of biogas-based electricity production. Complementary efforts support energy efficiency and smart urban systems, such as upgrading street lighting

Figure 21. Active projects per year for SDG 7 in Amman



Source: Compiled by authors based on data provided by GAM.

Figure 22. Projects starting and ending per year for SDG 7 in Amman



Source: Compiled by authors based on data provided by GAM.

to LED, introducing EVs into the municipal fleet, deploying smart waste and traffic-monitoring technologies, and advancing sustainability standards in public buildings and parks. Together, these initiatives position Amman to reduce emissions, lower operating costs, and build a more resilient and circular urban energy system.

Project activity for SDG 7 follows a focused but steady growth trajectory, with most initiatives launched between 2022 and 2026, reflecting a concentrated municipal effort to modernize waste-to-energy systems, expand recycling, and improve energy efficiency. Activity peaks in 2025–2026, when up to 12 active SDG 7 project-years are recorded across the portfolio, signalling a shift from pilot interventions towards multi-year infrastructure programmes such as landfill cell construction, MBT facilities, and biogas expansion (figure 21). After 2026, activity gradually tapers as major projects enter operational phases, indicating a transition from capital-intensive development to system consolidation and performance optimization. The presence of projects extending to 2028–2029 demonstrates the long-term nature of energy and waste-management investments, while early groundwork from 2021–2022 underscores the GAM deliberate and phased approach to building a more resilient, circular and energy-efficient urban system (figure 22).

4. Focus areas for smart and resilient development

(a) Distributed clean energy and resilient municipal operations

Reliable and affordable energy is becoming a service-continuity issue for Amman, as electricity demand rises alongside heat stress and climate-related disruptions. The city's 2019 emissions inventory recorded 9.271 megatons of carbon dioxide equivalent ($MtCO_2e$), with stationary energy accounting for 4.53 $MtCO_2e$ and transport for 3.71 $MtCO_2e$, reinforcing why energy-system transformation sits at the core of Amman's long-term decarbonization pathway. The Climate Action Plan affirms this direction explicitly: the City of Amman will be carbon-neutral and climate-resilient by 2050 driven by a green and circular economy for the prosperity and well-being of all its citizens.

This transition is not only about mitigation. In Amman, floods and flash floods represented 29% of recorded extreme events between 1981 and 2020, and the 2019 flash flood alone caused losses exceeding JOD 9.1 million. Heatwaves now affect 70–80% of the population, increasing the likelihood of demand peaks and service disruption. Together, these risks strengthen the case for distributed systems that can sustain essential municipal operations under shock conditions.[29]

Within this context, GAM is positioned as an operational actor that can improve resilience through the management of municipal assets and services, even as electricity generation and tariff policy remain national responsibilities. The mandate of GAM under Law No. 18 of 2021, covering local services such as lighting, drainage, sanitation, public health and risk prevention, as well as coordination of disaster response, enables targeted investment in distributed renewables, smart energy management and backup solutions across mission-critical facilities.

Accordingly, the city is scaling rooftop solar photovoltaic (PV) across municipal buildings and transport depots to reduce reliance on the centralized grid and lower operating costs. This is reinforced by emerging digital energy-management functions linked to AUO, supporting more systematic monitoring of consumption patterns, earlier detection of anomalies, and better scheduling across public facilities. In parallel, Amman is accelerating its LED street-lighting transformation, replacing conventional luminaires with energy-efficient units and smart controls that improve

maintenance responsiveness, while enabling adaptive operation.

The Smart and Greener Amman programme further supports this direction by upgrading multifunctional smart lampposts that can host air-quality sensors, flood-monitoring devices and e-mobility charging points, helping integrate energy-saving investments with broader smart-city functions. To strengthen continuity during extreme events, the city is also prioritizing hybrid solar-battery systems and robust backup generation for high-risk and mission-critical facilities such as the Traffic Management Center, emergency response units, water-pumping stations and BRT depots. Taken together, these measures advance a practical SDG 7 pathway focused on improving municipal reliability, reducing emissions intensity and building a more distributed energy architecture that is fit for future climate realities.

Complementing these infrastructure investments, community engagement and volunteer-led mobilization have emerged as critical enablers of the national clean-energy transition. Since 2015, the Jordan Renewable Energy and Energy Efficiency Fund (JREEEF) has reached more than 2 million beneficiaries, delivering solar water heaters, PV systems and energy-efficient appliances to households, small and medium-sized enterprises (SMEs), schools and places of worship. Partnerships with volunteers, local banks and over 200 community-based organizations have been instrumental in outreach, household enrolment and post-installation behavioural guidance, translating national financing into on-the-ground uptake. These efforts have generated annual energy savings of 75.3 GWh and reduced carbon dioxide (CO_2) emissions by more than 97 kilotons, demonstrating how civic mobilization can amplify the reach and impact of municipal and national energy strategies.

(b) Circular and low-emission waste-energy systems

Municipal solid-waste management is one of Amman's most important operational systems, and a strategic lever for SDG 7 through energy recovery, methane reduction and efficiency gains. Amman generates approximately 2,500–3,000 tons/day of municipal solid waste, with an additional ~1,000 tons/day linked to refugee inflows. With ~99% collection coverage, the city operates one of the most extensive municipal waste systems in the region, making improvements in waste infrastructure and governance high-impact for both environmental performance and municipal finance.

A core priority is modernizing disposal and recovery systems so that waste streams are managed as resources rather than residual burdens. Al-Ghabawi sanitary landfill, the central facility serving Amman and surrounding areas, is being progressively modernized through engineered cells, stormwater drainage and leachate systems that respond to heightened rainfall variability and flood risks highlighted in climate assessments. Within this modernization pathway, methane capture and landfill-gas management are positioned as cost-effective mitigation actions, consistent with the Climate Action Plan's emphasis on a circular economy as a pillar of low-carbon and climate-resilient development.

In parallel, Amman is moving upstream to reduce landfill pressure and increase material recovery. A key advancement is the development of an MBT plant with a processing capacity of approximately 239 tons/day, designed to separate organics and recyclables and produce solid recovered fuel for industrial energy use. Transfer-station upgrades, such as the upgrade of the Al-Shaer facility, strengthen compaction, weighing and routing efficiency, while pilot programmes in select neighbourhoods support source segregation to improve recovery rates and reduce contamination.

Landfill-gas systems at Al-Ghabawi are undergoing expansion to increase methane capture and enable electricity or thermal energy utilization. These improvements reduce fugitive

methane emissions while generating local energy and offsetting operational electricity use in municipal facilities. Digitalization further strengthens performance through smart scales, route-optimization technologies, and data-driven monitoring within transfer stations and landfill operations, improving predictability, reducing diesel use and strengthening oversight. Collectively, these measures position waste-energy systems as a practical SDG 7 implementation channel that supports emissions reduction, improves operational efficiency, and advances circular economy outcomes aligned with Amman's climate-neutrality commitments.

(c) Efficient, climate-ready, and electrified urban systems

Managing energy demand is a central SDG 7 priority in Amman because the city's growth and intensifying heat conditions are increasing cooling needs and placing added pressure on buildings and mobility systems. Stationary energy remains the largest contributor to citywide emissions, reinforcing the importance of strengthening energy performance across the built environment and public infrastructure. Heatwaves already affect 70–80% of residents, and climate projections anticipate further increases in frequency and duration, making efficient, climate-ready urban systems essential to public welfare and service continuity.

A cornerstone of this approach is improving energy efficiency in municipal buildings through retrofits, insulation upgrades, efficient heating, ventilation, and air conditioning (HVAC) systems, and digital building-management systems that track consumption, identify anomalies, and optimize operating schedules. These measures reduce municipal energy expenditure, while strengthening reliability during peak demand and heat-related grid stress, reflecting priorities consistently reinforced across the Climate Action Plan and the Green City Action Plan.

Climate readiness is also being advanced through public-realm measures that reduce heat exposure and improve stormwater management, particularly in flood-prone districts. The expansion of shading, tree canopy, reflective surfaces, and water-sensitive urban design (sustainable urban drainage systems (SuDS)) contributes to thermal comfort and reduces vulnerability during extreme heat, while strengthening drainage performance under intense rainfall and supporting safer, more resilient public spaces.

At the same time, Amman is laying the groundwork for electrified urban systems and lower-emission mobility pathways, anchored in its BRT investments. Digital traffic management, EV-ready infrastructure planning, and smart-lamppost corridors capable of hosting e-mobility components support a gradual shift towards cleaner fleets and more energy-efficient service delivery. Efficiency measures in public infrastructure, most notably the city's LED street-lighting transformation, complement this pathway by reducing system-wide electricity demand and improving the reliability of key urban services. Together, these efforts frame SDG 7 delivery as a citywide modernization agenda that reduces demand growth, strengthens heat resilience, and prepares municipal systems for a progressively lower-emission future.

Private-sector and corporate volunteering add a further layer to this modernization agenda. Equiti Group's Smart Lighting Community Initiative in Shmeisani illustrates how private actors can mobilize volunteer and technical teams to deliver safer, more energy-efficient streets in partnership with the municipality.[30] In parallel, the GAM large-scale LED and solar street-lighting retrofit continues to reduce electricity costs and advance environmental objectives as part of broader citizen-focused campaigns.[31] Together, these examples highlight how municipal leadership, corporate engagement and community participation can converge around a shared efficiency agenda, extending the reach of public investment, while reinforcing Amman's SDG 7 trajectory.

5. Policy recommendations and means of implementation for SDG 7

(a) Priority recommendation: circular waste-energy and methane reduction system

Policy objective: consolidate landfill-gas capture, organic diversion, material recovery, and solid recovered fuel pathways into one circular waste-energy system that converts Amman's high collection coverage into measurable energy and emissions gains, reducing fugitive methane and generating stable local energy value from waste streams.

Responsible institutions

- GAM Environment and Waste Management sectors.
- Amman Vision.
- Ministry of Energy and Mineral Resources.

Supporting partners

- Ministry of Agriculture.
- Ministry of Local Administration.
- Ministry of Environment.
- Energy and Minerals Regulatory Commission.
- Private sector.

Implementation pathway

- **Short term:** map existing waste streams, recovery rates, and energy capture across current GAM operations and Amman Vision processing infrastructure to establish a baseline. Define the institutional framework that unifies currently fragmented waste-to-energy activities into a single programme with clear performance targets. Activate recycling banks and smart waste management in cooperation with Amman Vision, as proposed in the consultation.
- **Mid term:** expand landfill-gas capture and organic diversion capacity based on baseline findings. Establish guaranteed recovery routes and off-take agreements for solid recovered fuel and recyclable materials. Integrate waste-energy performance metrics into the Climate Action Plan reporting and Carbon Disclosure Project (CDP) emissions tracking, ensuring gains in this sector are visible in the city's overall decarbonization trajectory.
- **Long term:** develop higher-value recovery pathways and attract private investment in co-located processing and manufacturing at waste sites. Link waste-energy outputs to the broader municipal energy strategy, including potential connections to district cooling or industrial users. Position the system for climate finance by documenting verified methane reductions.

Indicators and targets

- **Outputs**
  - Quantity of waste reprocessed and recycled annually (against baseline).
  - Amount of energy produced from waste streams.
  - Number of operational recycling banks and smart collection points.

- **Outcomes**
  - Measured reduction in fugitive methane emissions from landfill operations.
  - Share of municipal waste diverted from landfill.
  - Revenue or cost savings generated from recovered materials and energy.

Financing route

The short term is operational and can be financed through existing waste management budgets and technical assistance. Mid-term infrastructure investments are strong candidates for IFI lending, given the quantifiable emissions reduction and revenue generation potential (the World Bank and EBRD both have active waste and climate portfolios in Jordan). In the long term, private investment can be attracted through performance-based contracts and off-take agreements, with verified methane reductions opening access to carbon credit markets and climate funds.

(b) Supporting recommendation: efficient and electrified urban infrastructure programme

- **Lead:** GAM Public Works and Infrastructure sectors, in coordination with the Smart City Center.
- **Key actions:** complete the citywide shift to LED street lighting with smart controls. Upgrade municipal buildings with efficient cooling, insulation, and digital energy management systems linked to performance dashboards that track consumption as a financial and environmental indicator. Develop a phased plan for EV-ready infrastructure across municipal fleets and public transport.
- **Key partners:** National Electricity Company; Ministry of Energy; Ministry of Digital Economy; GAM Information Technology (IT) Directorate.
- **Primary indicators:** percentage of street lighting converted to LED with smart controls; energy consumption per municipal building (tracked via dashboards); number of municipal facilities with operational energy management systems; and EV-readiness of fleet infrastructure.
- **Financing:** LED conversion and building upgrades generate measurable cost savings that can justify upfront investment through energy performance contracts or IFI lending. EV infrastructure can be phased into broader transport investments.

(c) Supporting recommendation: distributed clean energy and resilient municipal operations

- **Lead:** GAM in coordination with the Ministry of Energy and Mineral Resources.
- **Key actions:** simplify permitting and standardize technical guidelines for rooftop solar and battery storage on municipal facilities. Widen incentive and financing pathways, building on existing tax frameworks. Target deployment of critical municipal services to strengthen operational continuity under climate shocks.
- **Key partners:** Ministry of Industry and Trade; Ministry of Finance; Chambers of Commerce and Industry; Standards and Metrology; General Customs.
- **Primary indicators:** number of municipal facilities with operational solar and storage systems; locally registered trademarks in renewable energy equipment; projects receiving tax exemptions; reduction in municipal energy expenditure.
- **Financing:** existing tax incentive frameworks provide a foundation. Solar deployment on municipal buildings can be structured through energy service company models requiring minimal upfront capital. Battery storage investments are increasingly eligible for climate resilience funding.

D. SDG 9: Industry, innovation and infrastructure

1. Background

Across the world, SDG 9 is being shaped by simultaneous disruptions and opportunities. Global manufacturing continues to evolve under the pressures of technological change, supply chain volatility, and uneven industrial growth between regions. While many developing economies still struggle to expand manufacturing value added, medium- and high-tech industries have shown remarkable resilience, now accounting for nearly half of global production. At the same time, Industry 4.0 adoption is accelerating: investments in automation, AI-driven operations, and smart manufacturing are redefining competitiveness, reducing downtime, and optimizing production efficiency. Global research and development spending has reached unprecedented levels, patent activity is at an all-time high, and countries are increasingly investing in sustainable, digital and climate-resilient infrastructure, indicating that innovation-led industrialization is becoming a core pathway for future growth.

In the Arab region, industrialization patterns remain deeply uneven, with some countries maintaining diversified manufacturing sectors and others dependent on hydrocarbons or constrained by conflict. At the same time, several economies are making visible progress: Saudi Arabia and the United Arab Emirates have substantially scaled research and development investment and international patenting, and countries such as Egypt, Morocco and Tunisia continue to develop competitive manufacturing niches. The region is also emerging as a global hotspot for renewable energy and green hydrogen, with large-scale solar and wind projects driving energy diversification and offering new industrial opportunities. These developments support a broader trend towards economic transformation, where digital industries, advanced manufacturing, and green technologies increasingly complement traditional sectors.

Despite persistent structural challenges (including SME financing gaps, fragmented regional markets, and infrastructure damage in conflict-affected areas), the region is also advancing promising solutions. New financing instruments, including blended finance and Islamic finance platforms, are expanding the capital available for SMEs and industrial upgrading. Startup ecosystems are maturing, with rising investor participation and sector diversification, particularly in fintech, logistics and renewable energy. Countries are increasingly adopting circular economy practices, sustainable construction, and clean mobility initiatives as they navigate green and digital transitions. Together, these developments illustrate a region that is beginning to reposition itself towards more innovative, diversified, and resilient models of industrial development.

2. National-local alignment: a shared vision for SDG 9

Progress towards SDG 9 in Jordan is driven by a coordinated national-local approach to industrial modernization, digital transformation and infrastructure development. National ministries define enabling frameworks for innovation and connectivity, while GAM translates them into spatial, technological and service systems that support economic productivity and urban resilience.

At the national level, SDG 9 commands the broadest policy alignment of any Goal under review, 35 of 70 national strategies directly address industry, innovation or infrastructure, making it the de facto organizing principle of the country's development agenda. The EMV sets the overarching direction, but the depth of alignment extends far beyond a single flagship: digital transformation, cybersecurity, AI, e-commerce, ICT, vocational training, export competitiveness, financial inclusion and entrepreneurship development are each supported by dedicated national strategies. This density of policy coverage reflects a deliberate choice to treat innovation-ready infrastructure not as a stand-alone sector, but as the connective tissue linking economic, educational and technological ambitions. JNUP and the Government Indicative Executive Programme reinforce this by embedding digital connectivity, sustainable mobility, and productive urban systems into spatial and fiscal planning.

Amman translates this exceptionally dense national policy framework into a coherent urban agenda. Through its Resilience Strategy, Climate Action Plan and Green City Action Plan, the city embeds long-term infrastructure upgrades into a broader vision for a low-carbon, well-connected and economically competitive capital. These frameworks guide investments in public transport, energy-efficient systems, waste infrastructure, and climate-smart spatial planning. Amman's Smart City Roadmap and Digital Transformation Strategy accelerate technology adoption across mobility, energy, environmental management and public services, operationalizing at the city level the same innovation ecosystem that national strategies seek to build across the economy. Supported by AUO and aligned with national green growth programmes, GAM integrates physical infrastructure with digital systems, enabling more productive, inclusive and future-ready urban development.

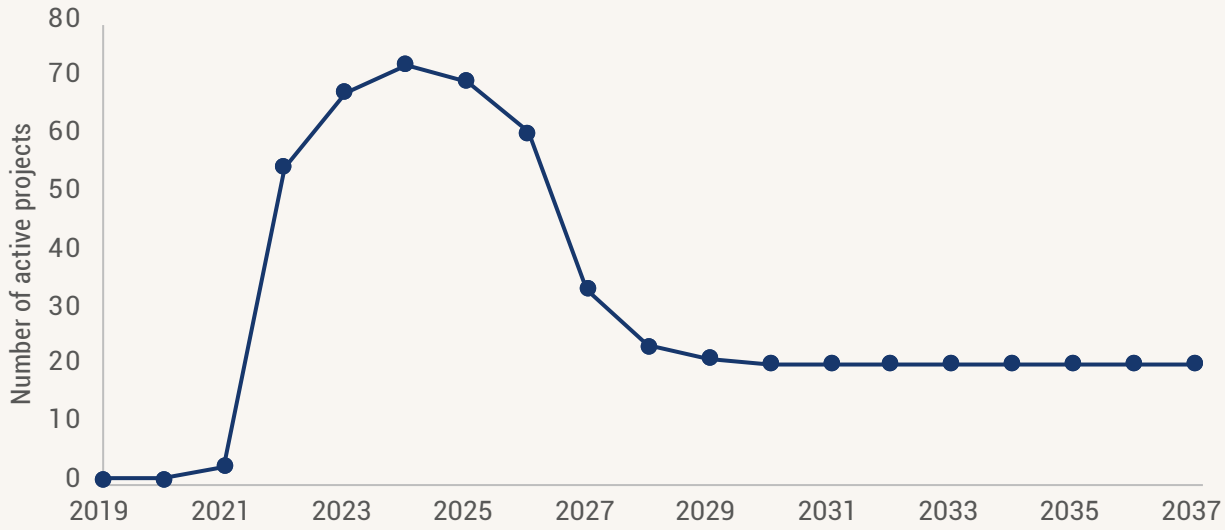
Policy coherence between levels is reinforced structurally. Legal reforms, including the Local Administration Law and the GAM Law, strengthen municipal mandates, ensuring local planning directly supports national competitiveness objectives. The breadth of national alignment, spanning half of all sectoral strategies, gives Amman an unusually strong enabling environment for SDG 9 localization, while the city's VLR process ensures that local delivery evidence feeds back into national reporting and planning cycles.

3. Project portfolio towards SDG 9 in Amman

SDG 9 projects in Amman are implemented across a wide institutional landscape, with strong involvement of departments such as the Roads Department, the Public Transport Department and the Engineering Department. Other important actors for key projects are the Organization Department, Land Acquisition, Waste Management and multiple environmental units, alongside coordination with national agencies involved in traffic and emergency management. These initiatives are distributed across major sectors including the public services sector, the planning and economic development sector, the districts and environmental affairs sector, the environment and municipalities sector, and the public transport and construction infrastructure directorate, reflecting the cross-sectoral nature of infrastructure, mobility and innovation investments in Amman.

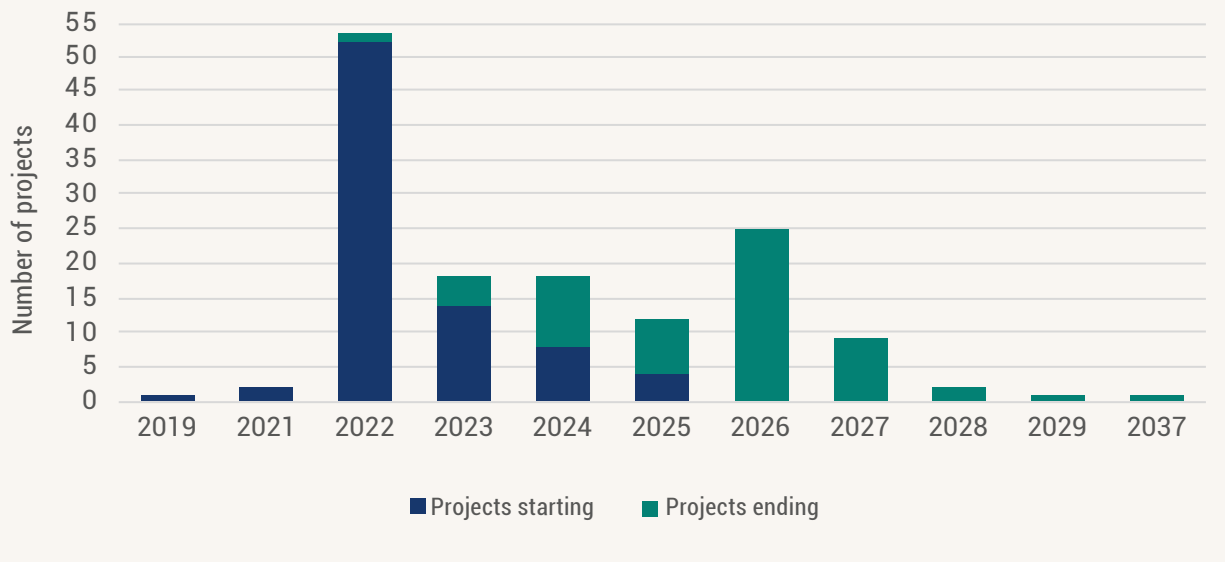
Project activity expanded rapidly after 2021, rising from only three active initiatives to 45 in 2022 and reaching a peak of 53–54 projects in 2023–2024. This surge reflects a period of intense municipal investment in infrastructure, mobility, digitalization and spatial planning. After 2025, activity gradually tapered as major works move into completion, declining to 41 projects in 2026 and falling sharply to 14 by 2027 (figure 23). From 2028 onwards, the portfolio stabilizes at one to four ongoing

Figure 23. Active projects per year for SDG 9 in Amman



Source: Compiled by authors based on data provided by GAM.

Figure 24. Projects starting and ending per year for SDG 9 in Amman



Source: Compiled by authors based on data provided by GAM.

initiatives per year, indicating the conclusion of large infrastructure cycles and a shift towards steady, long-term implementation. A prolonged tail of closures extending to 2037 reflects the multi-year nature of transport, planning and environmental infrastructure projects launched during the investment peak of the early 2020s (figure 24).

The GAM portfolio demonstrates a systems-based approach to infrastructure, mobility and urban resilience, with citywide efforts to modernize critical infrastructure through coordinated investments in roads, drainage systems, transport nodes and flood-resilient assets. Major works (such as the construction of culverts across Yarmouk

Street and Shafa Badran, the development of Raghadan Station, the creation of new construction-waste landfills, and the expansion of Al-Ghabawi's sixth and seventh cells) reflect a strategic approach to strengthening urban systems and safeguarding service continuity. Simultaneously, GAM is advancing next-generation water-management solutions through smart urban water management pilots, SuDS rollouts, and nature-based interventions at high-risk flood sites identified in collaboration with UN-Habitat. Together, these projects show how Amman integrates traditional infrastructure upgrades with climate-adaptive design to deliver resilient, future-proof urban systems aligned with SDG 9.

The GAM approach also prioritizes digital transformation, innovation and inclusive economic development as core enablers of modern infrastructure. Through the expansion of smart mobility systems, digital traffic management and data governance reforms, and the development of citywide GIS and monitoring platforms, Amman is building the technological backbone required for efficient service delivery and evidence-based planning. At the same time, initiatives promoting home-based licensing, urban innovation, youth engagement and circular-economy pilots demonstrate how infrastructure investments are complemented by measures that strengthen local entrepreneurship, expand economic participation, and support green, innovation-driven growth. Together, these efforts show how Amman links physical infrastructure upgrades with digital systems and economic inclusion.

4. Focus areas for smart and resilient development

(a) Logistics efficiency and industrial development

Amman's smart city infrastructure, including real-time traffic monitoring through the Traffic Management Center, adaptive signal control and integrated data platforms, provides the digital backbone needed to optimize freight routing and logistics coordination, transforming congestion management from reactive intervention into predictive, data-driven urban logistics governance.

Urban congestion costs Amman's economy an estimated JOD 1.5 billion annually,[32] a burden falling heavily on commercial operations dependent on reliable delivery and distribution. The GAM Strategic Plan 2022–2026 frame freight efficiency as an economic competitiveness issue, not merely a traffic management challenge.

The Al-Ghabawi Development Corridor represents Amman's primary opportunity for freight-oriented industrial growth. The 2,100-hectare site (15 km from the city centre) offers separation from residential areas for activities generating noise, emissions or heavy vehicle traffic. The circular economy approach provides a powerful framework, where the biogas facility and future materials recovery can supply co-located manufacturing with energy and secondary inputs, reducing both disposal costs and raw material expenses. Realizing this potential requires coordinated investment in road access, utilities, and land-use planning that transforms isolated facilities into a coherent industrial zone.

The public transport transformation (detailed under SDG 11) indirectly benefits freight by reducing private vehicle volumes on arterial roads. The BRT network is projected to increase the use of public transportation from 13% to 20%, reducing 85 million vehicle-kilometres annually, and therefore easing congestion on corridors shared by commercial traffic.[33] However, dedicated freight strategies, such as off-peak delivery windows, designated loading zones and logistics consolidation, remain opportunities for future development.

Regional connectivity shapes market access. The Amman-Zarqa corridor comprises much of the country's industrial activity; coordination between municipalities on transport and utilities affects competitiveness across this combined economic region. Labour mobility improvements through BRT integration enable workers to access employment throughout the metropolitan market, expanding the effective talent pool for enterprises in both cities. Expanding effective labour-market reach is itself a decent work outcome (SDG 8), linking transport investment directly to employment equity and access.

(b) Business environment and regulatory efficiency

Enterprise formation depends on regulatory conditions as much as physical infrastructure. GAM directly controls permits, licenses and inspections that determine transaction costs for firms, making municipal governance a lever for economic competitiveness.

The Smart City Roadmap's automation of 134 e-services has transformed regulatory compliance. Business licenses, construction permits and operational approvals previously requiring multiple visits and weeks of processing can now be completed online in days. This 98% reduction in physical transactions directly affects firm profitability and willingness to formalize. The home-based business licensing pathway is particularly consequential: by enabling micro-enterprise operators to work legally from residential premises, it opens a formalization route for the segment of Amman's economy where women's labour is most concentrated. Against a national backdrop in which female labour force participation remains among the lowest worldwide and female unemployment reaches 30.7%, a significant share of economically active women operate informally from home. Municipal licensing is therefore not a regulatory convenience but a gateway from informality into recognized, protected economic activity, linking the SDG 9 regulatory agenda directly to the decent-work objectives of SDG 8 and the gender equality commitments of SDG 5.

The digitalization of municipal services exemplifies how Amman's smartness agenda directly strengthens economic resilience: by reducing dependence on physical bureaucratic processes, the city's regulatory infrastructure continues functioning during disruptions (pandemic restrictions, extreme weather events or security incidents), ensuring that business formation and compliance are not hostage to conditions affecting in-person access.

Construction and development approvals affect real estate investment directly. The GAM Strategic Plan targets streamlined permitting that reduces approval timelines while maintaining safety oversight. The challenge is distinguishing legitimate review from procedural delay: the former protects public interest while the latter imposes unnecessary cost.

Institutional credibility supports investor confidence. The GAM ISO 37106 certification for smart city management and movement towards accrual-based accounting signal governance quality that reduces perceived risk. AVID anchors this shift by providing a dedicated vehicle for structuring PPPs, discussed in detail below.

Manufacturing value added per capita, a core SDG 9 indicator, faces a declining trend in Jordan, mainly due to high production costs and shortage of skilled workers, among other issues, reflecting structural challenges in the national industrial sector that extend beyond municipal authority.[34] However, the regulatory environment GAM controls can support manufacturing competitiveness at the margin: efficient permitting, reliable utilities and accessible industrial land all affect location decisions for firms weighing investment in Amman against alternatives.

(c) Public-private partnerships as a delivery engine

Public-private partnerships are not a financing footnote in the Jordanian development model; they are its structural backbone. The EMV is explicit on this point: of the JOD 41.4 billion required to deliver the Vision by 2033, roughly 73% (JOD 30.3 billion) is expected to come from private investment and PPPs, compared with only 27% from government sources. The Vision repeatedly frames "real public-private partnerships" as a stepping stone to its delivery, and names them as instruments across the sectors most relevant to SDG 9: manufacturing, transport, energy and digital government. For Amman, this reframes the question from whether to pursue PPPs to how fast the municipal delivery environment can mature to absorb them at scale.

GAM is already building that environment. AVID provides the institutional anchor, shifting private capital mobilization from ad hoc negotiation into a repeatable, professionally managed pipeline. This matters because the bottleneck in PPP delivery is rarely investor appetite, but the quality of project preparation, the clarity of risk allocation, and the credibility of the municipal counterpart. The governance upgrades documented above directly address the factors international investors weigh most heavily: predictability, fiduciary clarity and institutional maturity. Together, they begin to assemble the conditions under which a credible pipeline becomes possible.

The sectoral fit with SDG 9 is immediate. The Al-Ghabawi Corridor, smart mobility and BRT expansion, waste-to-resource infrastructure, distributed energy, and the next generation of digital public services are all investment-ready domains where the municipality holds the mandate and the private sector holds the capital, technology and operational capacity. Each is also a domain where the EMV has signalled national appetite for PPP deployment, creating vertical alignment that de-risks the local transaction. Rather than treating partnerships as one-off deals, Amman's agenda points towards a programmatic pipeline, a sequenced portfolio where early bankable projects build the track record needed to unlock larger, more complex arrangements over time.

The resilience and smartness lenses sharpen this further. Resilient infrastructure and people-centred smart systems typically carry higher upfront costs and longer payback horizons than conventional assets, which is precisely where blended finance, concessional layering, and well-structured PPPs add the most value. Used deliberately, partnerships allow Amman to absorb innovation and climate risk that would otherwise sit on the municipal balance sheet, while holding private delivery to public standards of inclusion, data governance and service continuity.

(d) Innovation ecosystem and digital adoption

Amman's smart city platforms, from electronic payment systems to open data services, function as shared digital public goods that lower the barrier to technology adoption across the enterprise spectrum, positioning the municipality not merely as a regulator of innovation but as an enabler whose digital infrastructure becomes the substrate on which private-sector innovation builds.

This enabling role extends beyond digital infrastructure into community-embedded learning and volunteer-driven talent pipelines. The Zaha Cultural Center network is a State-affiliated entity established pursuant to paragraph (A) of article 35 of the GAM Law No. 18 of 2021, giving it a formal municipal mandate to deliver cultural, educational and youth development services across the city. Operating as a constellation of localized innovation hubs, it delivers science, technology, engineering and mathematics (STEM), robotics, digital

literacy and creativity programmes for children and young people, and narrows geographic gaps in access to informal education. Volunteers underpin much of this work, supporting instruction, robotics coaching, cultural programming and youth mentorship, while Zaha's robotics teams regularly compete in national and international arenas such as the First Lego League, illustrating how public institutions, educators, private technology partners and volunteers can converge to nurture the next generation of innovators. Anchored in statutory mandate rather than ad hoc programming, these initiatives directly link community-level learning to national innovation pathways, reinforcing SDG 9 from the ground up.

Volunteerism also intersects with Amman's mobility modernization agenda. The digitalization of public transport, through BRT and City Bus smart-ticketing, real-time tracking and GIS-enabled service management, creates new entry points for civic engagement, including user education for older passengers, outreach through the Vision City Bus app, and mobility ambassadors supporting behavioural shifts from private car use towards public transport. Together, these community-embedded layers demonstrate how Amman's innovation ecosystem is not confined to infrastructure and enterprise, but is actively sustained by civic participation that translates municipal investment into lived benefit.

Long-term competitiveness depends on innovation capacity. Amman's ecosystem combines university research, startup entrepreneurship and technology adoption by established firms, though linkages between these elements remain underdeveloped.

Patent applications stand at 0.14 per 100,000 population, trailing global innovation leaders.[35] The University of Jordan and other institutions generate research output, but commercialization pathways, such as technology transfer, proof-of-concept funding and industry partnerships, remain weak. The role of GAM is limited but includes enabling conditions: innovation districts, flexible zoning for technology enterprises, and streamlined licensing for knowledge-intensive firms.

The LevelUP Accelerator and similar initiatives address market failures in startup finance, providing mentorship, workspace and investor access that improve early-stage venture survival. Amman has achieved regional visibility in fintech, e-commerce and software services, though most ventures serve local markets rather than achieving global scale. This ecosystem is reinforced by a maturing national recognition architecture, anchored by the Queen Rania Center for Entrepreneurship and its flagship Queen Rania National Entrepreneurship Competition, and complemented by partnerships such as the Queen Rania National Entrepreneurship Prize-Orange Corners Jordan, which together signal a deliberate shift from subsistence self-employment towards aspirational, growth-oriented venture creation, with Amman as the primary urban node where these pathways converge.

The decent-work implications are direct. The EMV projects that its high-value industries and future services pillars alone will generate over 700,000 jobs by 2033, the majority landing in Amman's metropolitan labour market. Translating these projections into quality employment, rather than output figures alone, depends on the same enabling conditions that define SDG 9: a functioning innovation ecosystem, accessible digital infrastructure, and regulatory pathways that allow new ventures to formalize and scale. In this sense, Amman's SDG 9 agenda is also the city's most consequential lever for SDG 8, anchoring the decent-work and inclusive-growth ambitions of the 2030 Agenda to the infrastructure and innovation investments already under way.

Digital adoption by established enterprises offers nearer-term productivity gains. The 99% mobile broadband coverage[36] provides foundation infrastructure, though 3.9% fixed broadband penetration limits bandwidth-intensive applications.[37] GAM smart city investments create platforms, electronic payments, data services and digital identity that enable private-sector technology adoption. For small enterprises, affordable connectivity and digital literacy are prerequisites; firms that cannot access digital tools fall behind competitors who can.

(e) Infrastructure resilience and business continuity

The integration of early warning systems, real-time monitoring and emergency coordination into a unified resilience architecture means that Amman's approach to business continuity is shifting from post-disaster recovery towards anticipatory risk management – a hallmark of resilient urban governance where infrastructure systems are designed not only to perform under normal conditions but to maintain critical economic functions under stress.

Reliable infrastructure is a precondition for economic activity. The 2019 flash floods caused JOD 7.1 million in direct commercial damage.[38] Enterprises in flood-prone areas faced inventory destruction, equipment damage and lost revenue; costs that fell disproportionately on smaller firms lacking insurance or reserves.

The Resilience Strategy and Climate Action Plan frame risk reduction as economic protection. The Captain Rain early warning system provides advance notice enabling protective action: securing inventory, adjusting deliveries and relocating vulnerable assets. This warning capacity, integrated with the Tla' Al-Ali Emergency Center's 24/7 operations, transforms flood risk from unpredictable shock to manageable contingency. Drainage infrastructure investments at 120 SuDS sites reduce hazard exposure in commercial districts identified through vulnerability mapping.[39]

Energy reliability affects industrial operations directly. Grid disruptions halt production, spoil temperature-sensitive products, and damage equipment. While national electricity infrastructure lies outside GAM control, municipal investments in distributed generation contribute to supply diversity.

Digital infrastructure increasingly underpins business operations. The Traffic Management Center, municipal e-services, and emergency coordination depend on communications systems that must function during crises. GAM investments in redundancy, backup power and cybersecurity protect infrastructure that private enterprises now rely upon daily. As operations digitalize, connectivity failures become operational failures, making telecommunications resilience a shared concern across public and private sectors.

(f) Integration

Taken together, smartness and resilience function as complementary governance logics across Amman's SDG 9 agenda: smart systems generate the data, connectivity and automation that make infrastructure perform efficiently, while resilience thinking ensures those same systems withstand shocks, making the two lenses inseparable in any credible strategy for sustainable industrial development.

Amman's SDG 9 progress emerges from infrastructure serving economic competitiveness: logistics efficiency depends on transport networks (SDG 11); digital business environment builds on governance platforms (SDG 16); energy reliability connects to renewable transition (SDG 7); and flood resilience requires drainage and early warning (SDG 13). The infrastructure enabling industrial development is the same infrastructure supporting sustainable mobility, climate adaptation and effective governance.

5. Policy recommendations and means of implementation for SDG 9

(a) Priority recommendation: climate-resilient infrastructure protection

Policy objective: establish a unified business continuity programme integrating flood early warning, drainage investments and digital infrastructure protection, building on the Jordanian national cybersecurity strategy to safeguard critical urban systems and shield commercial assets from climate and systems disruptions.

Responsible institutions

- GAM Sustainable Development and Resilience Unit, in coordination with the Smart City Center.
- NCSCM.
- Ministry of Digital Economy and Entrepreneurship.

Supporting partners

- GAM Public Works sector.
- GAM IT Directorate.
- Ministry of Environment.
- Ministry of Local Administration.
- Private sector.

Implementation pathway

- **Short term:** map critical urban infrastructure and commercial assets by vulnerability type (flood exposure, digital dependency and service continuity risk) across Amman's districts. Define business continuity protocols for municipal operations, applying business process re-engineering to make infrastructure-related licensing and services fully digital. Align the programme design with the Jordanian national cybersecurity strategy to ensure municipal digital protection measures are interoperable with national systems.
- **Mid term:** invest in priority drainage and flood mitigation infrastructure based on the vulnerability mapping, coordinated with the climate risk data. Strengthen digital infrastructure protection across critical municipal systems and develop redundancy protocols for service continuity during disruptions. Engage the private sector, particularly commercial property owners and insurers, in business continuity planning, with a focus on fortifying commercial assets through insurance mechanisms, as proposed in the consultation.
- **Long term:** embed climate resilience criteria into infrastructure investment decisions and municipal asset management. Establish a regular stress-testing cycle for critical urban systems against climate and digital disruption scenarios. Connect infrastructure resilience performance to the broader urban intelligence system, enabling data-driven prioritization of future investments.

Indicators and targets

- **Outputs**
  - Critical infrastructure assets mapped by vulnerability type.
  - Municipal services with operational business continuity protocols.
  - Infrastructure-related licensing services digitized.
- **Outcomes**
  - Reduction in service disruption duration from flood and climate events.
  - Commercial asset losses from climate events compared to baseline.
  - Municipal systems uptime during disruption events.

Financing route

The short term is primarily institutional. Vulnerability mapping and protocol development can be financed through existing budgets and technical assistance. In the mid term, drainage and flood mitigation investments are strong candidates for IFI climate adaptation lending, and can be bundled with broader urban infrastructure programmes. Digital infrastructure protection can leverage national cybersecurity investments and private sector co-financing. In the long term, recurrent costs should be integrated into GAM asset management and operational budgets.

(b) Supporting recommendation: Al-Ghabawi circular industrial corridor

- **Lead:** GAM, in coordination with the Ministry of Industry and Trade.
- **Key actions:** develop a strategic plan for transforming the Al-Ghabawi waste site into a planned circular industrial corridor, identifying anchor tenants and infrastructure requirements. Design freight and logistics connectivity to support co-located manufacturing. Target medium-high and high-technology manufacturing activities that increase skilled employment, moving beyond low-value resource recovery.
- **Key partners:** Ministry of Environment; Ministry of Energy; Amman Vision; private sector industrial investors; Jordan Investment Commission; and Amman Chambers of Commerce and Industry.
- **Primary indicators:** number of co-located industrial tenants; share of medium and high-technology (MHT) manufacturing activities; skilled employment generated; volume of recovered materials and energy consumed by corridor tenants.
- **Financing:** the corridor concept requires a phased investment approach: initial infrastructure (freight, utilities, site preparation) through public investment or IFI lending, with private sector co-investment attracted through industrial symbiosis incentives and competitive operating conditions. PPP frameworks could be applied here.

(c) Supporting recommendation: SME competitiveness and productivity upgrade programme

- **Lead:** GAM economic development functions, in coordination with the Ministry of Digital Economy and Entrepreneurship.

- **Key actions:** develop a city-level programme that goes beyond licensing to support SME productivity, business development services, AI and digital technology adoption aligned with the Jordanian national AI strategy, access to finance and market linkages. Add incentives for companies applying green building and energy efficiency standards, as proposed in the consultation. Simplify processes and reduce bureaucratic time for investors and citizens through business process re-engineering.
- **Key partners:** Ministry of Industry and Trade; Chambers of Commerce; Jordan Enterprise Development Corporation; private sector accelerators and technology providers; and microfinance institutions.
- **Primary indicators:** number of SMEs accessing programme services; SME adoption rate of digital and AI tools; number of firms receiving green building or energy efficiency incentives; and reduction in average licensing and compliance processing time.
- **Financing:** programme delivery costs can be shared between GAM and national SME support institutions. Digital adoption and productivity components may attract bilateral development programme funding and private sector partnerships. Green building incentives can be structured as budget-neutral through fee adjustments.

E. SDG 11: Sustainable cities and communities

1. Background

Rapid urbanization is reshaping demographic, economic and environmental realities worldwide, placing SDG 11 at the centre of the sustainability agenda. In 2025, cities already host more than 58% of the global population and will approach 70% by 2050, with growth concentrated in low- and middle-income regions. This expansion coincides with mounting climate risks, housing shortages, air pollution and service deficits: over 1.1 billion people live in informal settlements, urban heat exposure affects 1.7 billion, and an estimated 96,000 new housing units are needed daily to meet global demand. Yet cities are also leading innovation: expanding public transport, adopting clean mobility, and deploying digital twins and AI-enabled planning tools.

The Arab region mirrors these global shifts but at accelerated speed. Nearly 60% of its population is already urban, set to reach around 70% by 2050 (driven by youthful demographics and concentrated in the Mashreq and Gulf subregions). Cities face intense pressures: more than 81 million people live in inadequate housing, and nearly 12 million refugees and displaced people, most settling in urban areas, place extraordinary strain on infrastructure, services and municipal budgets. Water scarcity, climate-amplified droughts and floods, and high dependence on transboundary water sources further amplify risk. At the same time, Arab cities are investing in ambitious transformations: world-class public transport systems, large-scale slum upgrading, expanding green and climate-resilient planning, and some of the world's most advanced smart-city and digital-governance initiatives.

Municipal and territorial systems determine whether these opportunities translate into

tangible improvements. Many cities continue to operate with outdated building codes, fragmented zoning and limited land-value capture, slowing progress towards compact, climate-smart and transit-oriented growth. Climate impacts are driving expanded use of nature-based solutions, cooling strategies and circular economy initiatives, though adaptation finance remains insufficient across the region. Governance capacity is a decisive constraint: limited decentralization, weak metropolitan coordination, and fiscal pressures hinder integrated planning and service delivery, particularly in contexts hosting large refugee populations.

The urban transition under way is both the defining sustainability challenge and the strongest catalyst for change in the Arab region. Cities generate the majority of emissions yet are proving that development can decouple from carbon through compact planning, clean mobility and efficient infrastructure. Achieving SDG 11 will demand accelerated action on housing, mobility, basic services, climate adaptation, heritage and inclusive governance. Municipalities remain at the frontline of this agenda, where challenges and opportunities converge. Amman, shaped by these regional transitions and advancing its own climate-smart and people-centred urban strategies, is positioned to play a leading role in translating SDG 11 into tangible local outcomes.

2. National-local alignment: a shared vision for SDG 11

Jordanian progress on SDG 11 is anchored in a governance model where national direction and local delivery are tightly interlinked, with Amman at the centre of the country's urban trajectory. As one of the most urbanized nations globally, Jordanian national SDG 11 outcomes depend heavily on GAM performance, hosting over 40% of the population and functioning as the country's economic and administrative core. This concentration elevates city-level issues such as housing, mobility, public space and climate resilience into national priorities, making Amman a decisive arena for sustainable urban development.

At the national level, 13 national strategies directly address SDG 11, the third-highest alignment among the Goals under review, after SDG 9 and SDG 16. What distinguishes this coverage is its cross-sectoral character: urban sustainability is not confined to a single urban policy document but is embedded across transport, water, disaster risk reduction, tourism, population, culture and climate planning. The 2024 JNUP provides the first unified framework for integrated and resilient urban development, but it operates within a broader ecosystem where the EMV frames liveable cities as growth drivers, the National Water Strategy and Disaster Risk Reduction Strategy address urban resource security, and strategic plans for transport and the Jordan Valley connect spatial planning to infrastructure delivery. Legal reforms, notably the Local Administration Law and the GAM Law, reinforce this architecture by strengthening municipal mandates and embedding climate resilience, participatory planning, and spatial management within local government responsibilities.

GAM translates this multi-layered national framework into a consolidated urban agenda that positions Amman as a resilient, modern and sustainable capital. Its strategic framework directly references national priorities and the SDGs, ensuring coherence across planning, mobility, environment and governance. Long-term spatial planning, climate strategies and digital transformation efforts mirror national ambitions around compact growth, improved liveability, data-driven governance, and a more equitable distribution of services, particularly between East and West Amman. This alignment ensures that local planning actively reinforces the country's broader development pathway rather than operating in parallel to it.

Institutional coordination strengthens this vertical coherence. The simultaneous presentation of the Jordanian VNR and Amman's VLR at both the 2022 and 2026 High-level Political Forums has set a regional precedent for integrated national-local monitoring. Additionally, shared data platforms such as the Jordan Development Portal and AUO harmonize evidence across government levels. The fact that 13 national strategies touch SDG 11 gives Amman an enabling environment of unusual breadth, but it also underscores the city's responsibility as the primary arena where national urban aspirations are tested against the realities of service delivery, spatial equity and climate exposure.

3. Project portfolio towards SDG 11 in Amman

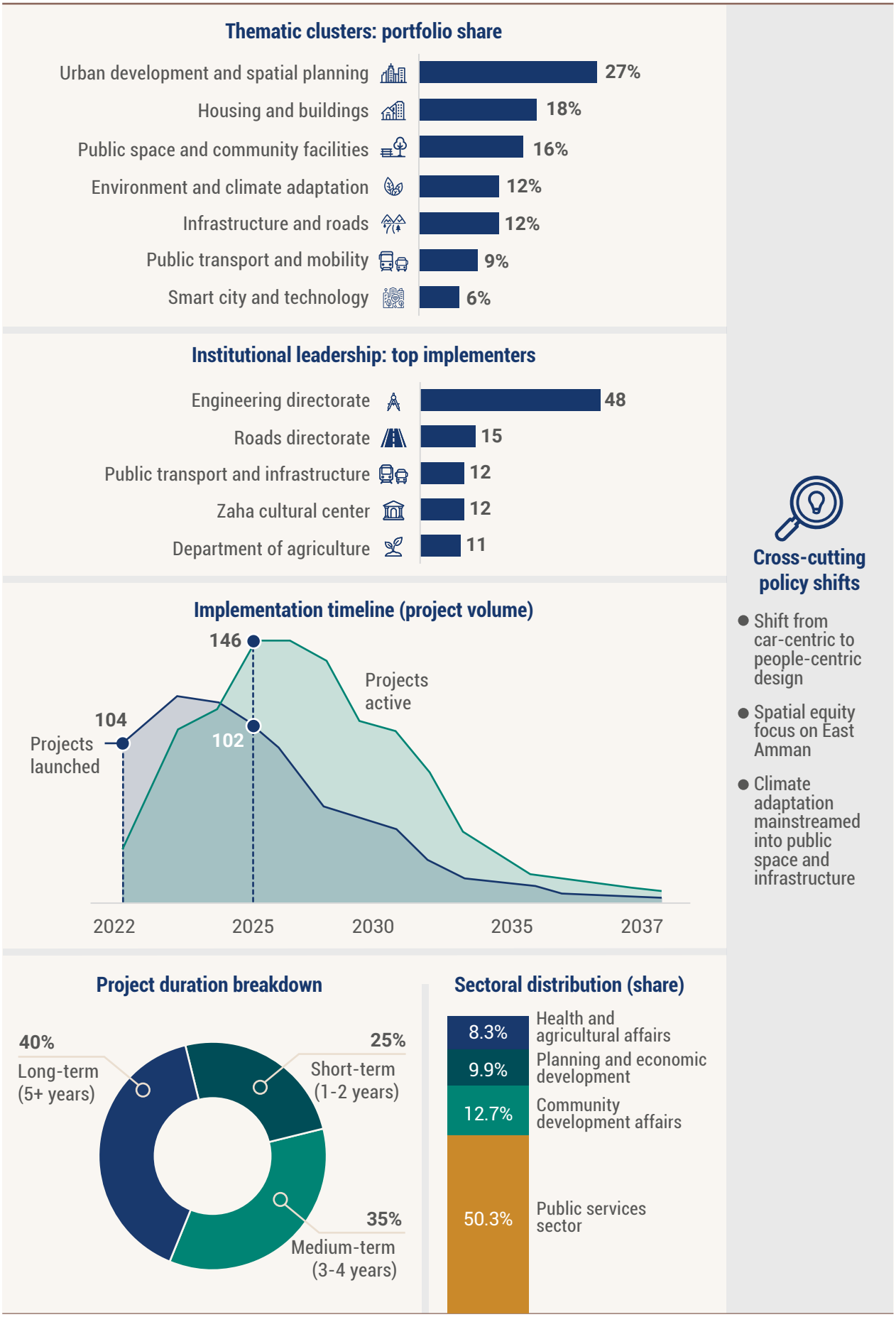
Amman's SDG 11 portfolio is large, long-term and infrastructure-driven, with more than 180 active projects spanning urban development, housing, public space, mobility, environmental management and smart city systems. Implementation is led by the Engineering, Roads and Public Transport Directorates, but also draws on community, cultural, agricultural and planning entities (including the Zaha Cultural Center and the Department of Agriculture), illustrating that sustainable cities are treated as a cross-municipal responsibility. Most initiatives sit within the public services sector, complemented by community development, planning and economic development, and health and agricultural affairs, reflecting a deliberate effort to link physical investments with social inclusion and environmental stewardship.

Amman's SDG 11 portfolio (figure 25) organizes into six interconnected thematic clusters that reveal a comprehensive urban development model. Urban development and spatial planning and housing and buildings define the city's physical structure and guide its long-term growth. Public space and community facilities strengthen neighbourhood liveability, safety and social cohesion. Infrastructure and roads and public transport and mobility modernize the systems that support safe and accessible movement. Environment and climate adaptation drives waste management reform, blue-green infrastructure and climate resilience. Together, these clusters demonstrate a multidimensional interpretation of SDG 11 that integrates mobility, land use, environmental management, public space and community well-being.

Project activity follows a clear investment cycle. After a rapid expansion beginning in 2022 (when more than half of all projects were launched), the portfolio reaches peak implementation in 2025 with 146 concurrent initiatives. This surge reflects a coordinated push to modernize Amman's urban fabric across mobility, public space, environmental systems and neighbourhood upgrading, likely aligned with national SDG commitments and the GAM strategic planning horizon. From 2025 onwards, the focus gradually shifted from expansion to consolidation as large infrastructure and regeneration projects moved into multi-year implementation. Long-duration initiatives extending to 2037 (including major transport and area-development works) create a stable operational tail, signalling that SDG 11 delivery in Amman is structured around sustained, phased transformation rather than short-term interventions.

A defining feature of the portfolio is the move from isolated projects to an integrated urban-systems agenda. Investments in roads, intersections, tunnels and stormwater networks are reinforced by smart asset-management tools and continuous safety and maintenance programmes, strengthening resilience to climate extremes. Mobility transformation is a central pillar, combining BRT and City Bus expansion, dedicated bus corridors, electric fleet upgrades, smart ticketing and tracking systems,

Figure 25. SDG 11 project portfolio summary



Source: Compiled by authors based on data provided by GAM.

and PPP-based operations to shift the city away from car dependence. LED street-lighting upgrades and digital fleet monitoring further embed efficiency, reliability and data-driven management across core infrastructure systems. In parallel, Amman is overhauling its waste and environmental management architecture through recycling strategies, construction-waste landfills, PPP models for sorting and energy recovery, biogas-to-electricity generation, and the expansion of Ghabawi landfill cells. Blue-green infrastructure (pond rehabilitation, greywater reuse, stormwater upgrades, reforestation and desertification control) anchors climate adaptation within everyday operations and enhances the city's environmental resilience.

At the same time, Amman is investing heavily in people-centred, inclusive public spaces and neighbourhood environments. A wide network of metropolitan, district and neighbourhood parks is being expanded or rehabilitated, alongside upgrades to accessibility, lighting, safety, vegetation cover and universal design. Streets, sidewalks, pedestrian bridges and stairways are being redesigned to prioritize walking, cycling, universal access, and child- and disability-friendly mobility. Heritage-sensitive design, protection of historic trees, creation of bird habitats and improved shading, seating and play areas all contribute to safer, more liveable neighbourhoods and a stronger sense of place.

Volunteerism and civic participation sit at the heart of this inclusive city agenda. Launched in partnership with UNDP, the Amman is Listening platform strengthens the social resilience dimension of SDG 11 by opening crisis-responsive communication channels and participatory governance mechanisms, with residents and civic networks trained as community liaisons to channel input on urban services.[40] Alongside this digital-civic interface, GAM flagship citywide campaigns such as Amman is Our Home, Amman is Clean by its People and Together for a Cleaner City, mobilize thousands of grassroots volunteers from universities, businesses, schools and neighbourhood committees to safeguard shared spaces, reduce littering and reinforce environmental stewardship, cultivating a culture of shared accountability across communities.[41]

These civic efforts are reinforced by long-term environmental infrastructure investments. The Ghabawi waste-to-energy system captures methane and generates 4.6–4.8 MW of electricity, reducing landfill emissions while contributing to the city's clean-energy mix.[42] Volunteer-supported recycling awareness, community waste sorting, and school-based climate education programmes complement these hard-infrastructure gains, linking household behaviour to citywide environmental outcomes and demonstrating how Amman's SDG 11 pathway blends physical upgrades, institutional platforms and civic mobilization into a coherent resilience agenda.

Lastly, Amman complements physical investments with a robust layer of social, cultural and educational programmes that strengthen community capabilities and urban citizenship. Through the Zaha Cultural Center network and related community facilities, GAM advances youth and women's empowerment, entrepreneurship, STEM and robotics education, cultural participation, and inclusion of persons with disabilities. Climate academies for children, urban agriculture initiatives, neighbourhood stewardship committees, and volunteer programmes broaden engagement in environmental action and social cohesion. These efforts are supported by institutional strengthening, including staff training, programme accreditation, monitoring and evaluation systems and digital tools, ensuring that SDG 11 in Amman is not only about transforming space, but also about building the knowledge, culture and collective capacity needed for a sustainable, inclusive city.

4. Focus areas for smart and resilient development

(a) Spatial equity and urban form

Resilience requires that the city's most vulnerable populations are not also its least served. Smart spatial analytics enable Amman to target infrastructure investment precisely where disparities are greatest, turning equity from aspiration into measurable governance practice.

Amman's defining challenge is the persistent divide between East and West. Eastern districts exhibit higher population density, older housing stock, steeper terrain, less green space, and longer travel times to employment and services. Western areas enjoy lower density, newer infrastructure, better environmental quality and proximity to economic centres.

This spatial divide intersects with Amman's role as one of the largest refugee-hosting capitals worldwide. Alongside its Jordanian population, the city is home to Syrian, Iraqi, Yemeni, Sudanese and Palestinian refugees, the majority residing in urban neighbourhoods rather than camps and concentrated disproportionately in the same eastern districts where infrastructure and service gaps are greatest.

The GAM Strategic Plan 2022–2026 and Amman Resilience Strategy explicitly target this divide. The Amman Strategic Development Plan provides a framework for coordinated investment in infrastructure, services and public space across disadvantaged districts.[43] The ILCA project engages residents in redesigning neighbourhood environments, with particular attention to women, young people and persons with disabilities whose mobility constraints make local conditions especially consequential.

Urban growth patterns determine whether inequality deepens or narrows. Leapfrog development (where new construction jumps beyond existing built-up areas) has characterized 78% of Amman's recent expansion, creating sprawl that strains infrastructure networks and increases travel distances.[44]

At the national level, the Ministry of Local Administration approved the Land-Use Planning Regulation for 2026 and the updated national land-use map, built on approximately 360,000 soil samples and currently comprising 52 data layers. This regulatory foundation strengthens efforts to limit unplanned urban expansion and protect agricultural land, providing the national framework within which Amman's local spatial planning operates.

Housing affordability intersects with spatial equity. Lower-income households concentrate in East Amman partly because housing costs are lower, but this affordability reflects inferior location, services and environmental quality. The GAM Strategic Plan's housing objectives seek to expand affordable options in well-connected locations, though municipal tools for housing policy remain limited compared to national frameworks.

Updated data confirms measurable progress on greening. By 2025, per-capita green space in Amman reached 4.3 m² per resident up from the 3.22 m² baseline cited earlier, advancing towards the 5 m² target set by the Amman Green City Plan 2026. The city now counts 138 neighbourhood parks (totalling approximately 957,000 m²) alongside the 16 larger public recreational parks distributed across 11 districts, which together encompass some 8,328 dunums (≈8.3 million m²). The GAM inauguration of Al-Jundi Park and Forest, a 350-dunum site planted with 17,500 climate-appropriate trees and equipped with solar-powered lighting and a modern irrigation network, and the second-phase rehabilitation of the Pepsi Pond that converted 85 dunums of a former environmental liability into a forested landscape with 350 trees and sustainable irrigation, illustrate how green-space expansion is being paired with climate adaptation and circular land-recovery objectives.

(b) Public transport transformation

A city dependent on a single mobility mode is structurally fragile. Amman's BRT deployment is both a smartness intervention (with real-time data, adaptive signals, and integrated platforms) and a resilience investment that builds redundancy into the transport system.

Amman is undertaking a comprehensive spatial and operational transformation to address rapid urbanization, climate vulnerability and socioeconomic disparities. Guided by the GAM Strategic Plan 2022–2026 and the Amman Climate Action Plan, the city has committed to a 40% reduction in greenhouse gas (GHG) emissions by 2030 and carbon neutrality by 2050. This transition prioritizes a modal shift from private vehicles to the BRT network, projected to reduce 85 million vehicle-kilometres annually.

Amman's mobility system is undergoing its most significant transformation in decades. Private vehicle dependence, with 1.8 million daily car trips generating JOD 1.5 billion in annual congestion costs,[45] has proven economically, environmentally and socially unsustainable.

The BRT network represents the centrepiece of this transformation. The system operates 151 new buses on dedicated corridors with pre-board fare collection, real-time passenger information, and level boarding for accessibility. Design capacity targets 150,000 daily passengers, a modal shift that would reduce private vehicle travel by an estimated 85 million kilometres annually.[46] BRT has served around 18 million passengers in 2024, also providing dedicated spaces for children and wheelchair users, and accessibility for visually impaired passengers.

Integration with existing transport makes the network function as a system rather than isolated corridor. Feeder bus routes connect neighbourhoods to BRT stations, fare integration enables seamless transfers, and real-time information through the Amman Bus app and station displays reduces wait uncertainty. The Traffic Management Center,[47] operating 150 closed-circuit television (CCTV) cameras and 165 connected signals, provides adaptive signal priority that maintains service reliability.

Station area development extends impact beyond transport. Within 500-metre catchments, GAM is rehabilitating sidewalks, improving crossings, enhancing lighting, and creating public spaces that make walking to stations safe and comfortable.[48] These walkability investments address the "last mile" challenge that determines whether residents can practically access the network. For women (48% of whom report regular harassment in public spaces),[49] station area improvements include design features enhancing visibility and security.

Fleet modernization complements infrastructure investment. Electronic payment systems, GPS tracking and CCTV on all vehicles improve both operational efficiency and passenger security. The transition towards lower-emission vehicles aligns with Climate Action Plan targets, though full electrification awaits charging infrastructure development.

Ridership trends validate the investment. Combined BRT and Amman Bus patronage grew from roughly 6.1 million passengers in 2021 to over 35.4 million in 2025 – a nearly sixfold increase in four years. BRT routes within Amman carried 16.1 million passengers in 2025, while the Amman-Zarqa intercity corridor, operational since 2024, added a further 7.9 million, demonstrating strong latent demand for reliable high-capacity services beyond city boundaries. The Amman Bus network contributed an additional 11.4 million riders. Digital adoption reinforces system uptake: the BRT mobile application has surpassed 321,000 downloads, supporting real-time information, trip planning and fare management. On the institutional side, GAM has deepened PPPs by integrating more than 200 medium-capacity

buses (coasters) into intelligent transport systems, including electronic tracking, CCTV and cashless payment, improving regulation and service quality across the wider network.

Job accessibility provides a measurable outcome. Currently only 18% of Amman's jobs are reachable by public transport within 60 minutes,[50] a figure reflecting both network coverage and service frequency. The BRT system and feeder integration aim to substantially improve this ratio, expanding labour market access, particularly for residents in peripheral and eastern districts who lack private vehicles.

(c) Public space, heritage and neighbourhood quality

Public space functions as critical social and environmental infrastructure: it sustains community cohesion during crises, mitigates urban heat, and manages stormwater. Investing in the public realm is central to Amman's smartness and resilience agendas.

Quality of life depends not only on housing and transport but on the public realm: streets, parks, plazas and cultural facilities that enable community life. The Amman Resilience Strategy identifies public space as critical infrastructure for social cohesion, physical activity and climate adaptation.

The historic core requires particular attention. Downtown Amman concentrates heritage assets, commercial activity and cultural institutions, but faces challenges of congestion, building deterioration, and competition from newer commercial districts. The Rainbow Street rehabilitation and ongoing downtown revitalization efforts seek to maintain the area's vitality while protecting heritage character.

Amman's heritage efforts are part of a broader national programme. Six cultural heritage sites were rehabilitated in Irbid and Mafraq, generating 1,305 short-term employment opportunities, while the inscription of Umm Al-Jimal as the seventh World Heritage Site in Jordan in July 2024 reinforced the link between cultural preservation, tourism and local economic resilience. Road safety measures were also implemented in 28 municipalities and new parks and playgrounds established in communities such as Kafr Asad and Hawfa Al-Wastiyah, confirming that neighbourhood-level public space improvements are advancing across the country alongside Amman's own investments.

The Zaha Cultural Center network provides distributed social infrastructure across Amman's geography. Seven centres (in Al-Qweismeh, Ras Al-Ain, Abu Alanda, Badr, Marka, Sweileh and Tariq) offer programming spanning arts, education, family counselling and disability services. Explicit siting in underserved areas addresses the spatial equity objectives that physical infrastructure alone cannot achieve. The centres function as community anchors: trusted access points connecting residents to municipal services and to each other.

Accessibility for persons with disabilities remains incompletely addressed. Amman's hilly topography creates inherent challenges, steep grades and extensive staircases characterize many neighbourhoods. The scale of the gap has been documented for nearly a decade: a 2017 civil society shadow report to the United Nations Committee on the Rights of Persons with Disabilities, drawing on GAM statistics, found that streets, parks, hotels and other premises adapted to the needs of persons with disabilities did not exceed 6% at best, with only 29 main streets in the capital adapted at that time. This baseline establishes both the magnitude of the retrofit challenge and the imperative for sustained, multi-year action. The GAM Strategic Plan commits to universal design principles in new public space development, while retrofit programmes gradually improve accessibility in existing areas. BRT stations incorporate level boarding, tactile guidance and audio announcements, establishing accessibility standards that should extend across the public realm.

(d) Data-driven spatial planning

Smart and resilient governance begins with the capacity to see the city as spatially disaggregated data reveals it. AUO and spatial data infrastructure enable the anticipatory, evidence-driven planning that distinguishes resilient cities from reactive ones.

Effective urban management requires spatial intelligence. AUO consolidates data across municipal departments, tracking indicators on land use, service coverage, environmental quality and social conditions at the neighbourhood level.

The City Prosperity Index[51] assessment, conducted with UN-Habitat, benchmarks Amman against international standards across productivity, infrastructure, quality of life, equity and governance dimensions. This diagnostic identifies priority investment areas and tracks progress over time.

Planning capacity extends to scenario analysis and predictive modelling. The forthcoming Urban Resilience Research Centre[52] will apply these capabilities to anticipate development pressures, infrastructure needs and climate risks, enabling proactive planning rather than reactive response to urban change.

Spatial profiles have been developed for Amman alongside Irbid, Mafraq and Karak, applying a shared methodology that follows UMF indicators endorsed by the United Nations Statistical Commission. This shared methodological backbone enables SDG indicators to be calculated at the local level for the first time across multiple Jordanian cities, with results that are internationally comparable and aligned with global urban monitoring standards. Climate-resilient master plans were also developed for Irbid and Mafraq, comprising 47 investment actions across 10 implementation packages. Together, these experiences confirm that UMF-aligned data-driven local planning is already operational across Jordan, with Amman contributing to a broader national pattern of evidence-based urban governance.

Digital connectivity underpins the data ecosystem. Jordan recorded over 8 million mobile phone subscriptions in 2024, with most Subscriber Identity Module (SIM) cards bundling Internet data, a shift that has progressively substituted fixed broadband (down to approximately 484,000 fixed Internet subscriptions in 2024). This mobile-first connectivity pattern is significant for urban governance: it expands the potential reach of citizen-facing digital services, including the BRT app, e-payment platforms and participatory planning tools, while highlighting the need to ensure equitable access across income groups and geographies.

At the national level, SDG 11 indicator coverage stands at 8 out of 16 indicators (50%), reflecting the persistent data gaps that characterize urban monitoring across the region. To address this, the VNR has proposed 11 new proxy indicators including a walkability index, a “playful city” indicator, neighbourhood belonging, urban equity, urban vulnerability, and coverage of nature-based solutions. Amman's QoL Dashboard and AUO already track several of these metrics, positioning the city to contribute directly to this expanded national indicator framework and to help close the SDG 11 data gap from the local level upwards.

(e) Integration

Smartness and resilience converge in SDG 11 more than in any other Goal: the transport, public space and data systems that make Amman sustainable must be intelligent enough to optimize daily performance and robust enough to withstand disruption.

Amman's SDG 11 progress provides foundations that other Goals build upon: transport transformation delivers emission reductions (SDG 13), health co-benefits (SDG 3) and economic efficiency (SDG 9); spatial equity addresses gender dimensions of urban access (SDG 5); public space supports climate adaptation (SDG 13) and community well-being (SDG 3); and data infrastructure enables evidence-based governance (SDG 16).

5. Policy recommendations and means of implementation for SDG 11

(a) Priority recommendation: sustainable mobility system

Policy objective: expand BRT into a complete mobility system by integrating pedestrian-friendly last-mile connections, including shaded sidewalks, safe crossings and accessible pathways linking transit stops to key destinations within a 15-minute walking radius, alongside feeder services to peripheral districts and gender-responsive safety measures to increase job accessibility beyond the current baseline.

Responsible institutions

- GAM Transport Directorate, in coordination with the Planning and Urban Development sectors.
- Ministry of Transport/Land Transport Regulatory Commission.
- GAM Smart City Center/IT Directorate.

Supporting partners

- Ministry of Public Works and Housing.
- Ministry of Local Administration.
- Ministry of Environment.
- Ministry of Interior, including the Traffic Department and Public Security Directorate.
- Private sector transport operators.
- Civil society and community organizations.

Implementation pathway

- **Short term:** develop neighbourhood-level planning standards that align commercial space allocation with expected residential densities, ensuring each neighbourhood is served within a daily walking radius for essential needs. Mobility planning must be embedded in neighbourhood-level land use, not treated as a stand-alone transport exercise. Adopt urban design guidelines for sidewalks, pedestrian pathways and transit station surroundings, enforceable through regulations and permitting. Regularly update a mapping exercise of existing informal transport modes (coaster buses, ride-hailing, shared vehicles) to understand current coverage and identify integration opportunities with the BRT network. Embed gender-responsive safety criteria into all transport design standards from the outset.
- **Mid term:** roll out pedestrian infrastructure upgrades in priority corridors (i.e., shaded sidewalks, safe crossings, and accessible pathways) connecting BRT stations to key destinations. Establish local feeder lines for areas beyond the 15-minute walking threshold, with schedules coordinated with BRT timetables. Move beyond compliance-driven formalization of coaster buses and ride-hailing, towards an incentive-based integration model. Options to test include revenue-sharing arrangements that route a portion of integrated-ticketing revenue to participating operators; access to subsidized vehicle renewal financing conditional on joining the integrated network;

priority road access (dedicated lanes, signal priority, designated stops) for compliant operators; and a simplified digital licensing pathway that reduces transaction costs of formalization. The objective is to make integration commercially attractive rather than regulatorily mandatory, recognizing informal operators as a network asset rather than a problem to be displaced. Deploy the smart monitoring system for Amman's transport network through cooperation between the Transport Directorate, the IT Directorate and the Smart Cities Directorate, enabling real-time performance tracking and adaptive service management.

- **Long term:** extend BRT feeder coverage to all peripheral districts, progressively closing the job accessibility gap. Link mobility performance data to the GAM capital budgeting process, ensuring investment follows evidence on where access gaps persist. Improve transport accessibility metrics, enabling district-level tracking of the 15-minute access standard. Pursue a measurable improvement in resident satisfaction as the primary outcome indicator, as proposed by multiple consultation respondents.

Indicators and targets

- **Outputs**
  - Urban design guidelines adopted and enforced through permitting.
  - BRT feeder lines operational and coordinated with trunk timetables.
  - Informal transport modes formally integrated into the network.
  - Smart monitoring system operational.
- **Outcomes**
  - Job accessibility rate (baseline: 18%, target to be defined based on phased network expansion).
  - Resident satisfaction with public transport and pedestrian infrastructure.
  - Female ridership rates on public transport (linked to SDG 5).
  - Share of population within 15-minute walking access to essential services.

Financing route

The short term is primarily institutional; planning standards, design guidelines and transport mapping can be financed through existing budgets and technical assistance. In the mid term, pedestrian infrastructure and feeder line investments represent the core capital requirement and are strong candidates for IFI urban transport lending (World Bank, EBRD and AFD), all active in Amman's transport sector. Gender-responsive design components can be co-financed through dedicated gender and inclusion funding windows within these programmes. In the long term, system expansion and monitoring should be integrated into the recurrent GAM transport operations budget, with the smart monitoring system potentially attracting technology partnerships.

(b) Supporting recommendation: East Amman compact development programme

— **Lead:** GAM Planning and Urban Development sectors.

- **Key actions:** redirect urban growth towards underserved eastern districts through BRT-oriented densification, green space investments and participatory neighbourhood upgrading. The consultation was clear that this must be situated within a new comprehensive master plan for the city, not pursued as a stand-alone initiative. Develop mixed-use zoning regulations near transport corridors. Pilot compact development in selected neighbourhoods before scaling, establishing BRT stations within 400–800 metre catchment areas and testing supportive zoning that enables safe, mixed-use housing close to services. Design incentive mechanisms for private land transfer to enable compact development, while safeguarding against community displacement through innovative economic activation and deliberate youth engagement.
- **Key partners:** Ministry of Public Works and Housing; Ministry of Local Administration; Ministry of Transport; Department of Lands and Survey; local communities; private landowners and real estate developers; international organizations; Housing and Urban Development Corporation.
- **Primary indicators:** share of new development occurring within BRT catchment areas; leapfrog sprawl rate (baseline: 78%); green space per capita in eastern districts; and resident satisfaction in pilot neighbourhoods.
- **Financing:** BRT-oriented densification creates land value that can be partially captured to finance public infrastructure. IFI urban development lending is well-suited to this type of investment. Participatory neighbourhood upgrading can attract bilateral development and social inclusion funding.

(c) Supporting recommendation: urban intelligence system

- **Lead:** GAM (AUO), the GIS Department, and the Sustainable Development and Resilience Unit under a unified governance structure.
- **Key actions:** integrate AUO, MSDI and the Resilience Research Centre into a unified urban intelligence system with open data protocols. The consultation's central message was that governance must come first, clearly defining who is responsible for the centre, who manages data publication and updating, and who holds decision-making authority. Enable evidence-driven municipal decisions on capital investment, zoning, and service delivery at the neighbourhood level. Provide public access to urban performance data for transparency and civic engagement. Develop a neighbourhood atlas or urban profiles for each district as a foundational output, as specifically proposed in the consultation. Institutionalize urban and social impact assessments before major capital projects.
- **Key partners:** relevant line ministries (with data sharing protocols and sensitivity analyses governed bilaterally given the varied classification status of urban data across sectors); the Department of Statistics as the national statistical authority; the Ministry of Interior as the owner of the Tanmiah local development planning platform; and universities and research centres.
- **Primary indicators:** number of datasets integrated under unified governance; neighbourhood profiles published; share of capital projects with completed urban impact assessments; and public data portal usage.
- **Financing:** data governance and institutional coordination can be financed through existing budgets. Platform development and data infrastructure are candidates for IFI digital governance lending and technical assistance from UN-Habitat and smart city programmes.

F. SDG 13: Climate action

1. Background

Climate change now defines the global risk landscape, with 2024 marking the first full year above the 1.5°C threshold and the past decade the warmest in recorded history. Rising emissions, reaching 57.7 gigatons of carbon dioxide equivalent ($GtCO_2e$) in 2024, continue to drive record heatwaves, costly disasters, and growing risks of triggering irreversible climate tipping points. At the same time, the global response architecture is intensifying: renewable energy experienced unprecedented growth, carbon pricing instruments expanded, and multilateral climate finance reached new highs. These advances indicate that the transition towards low-carbon, climate-resilient development is accelerating worldwide, creating new pathways for cities and countries to align with 1.5°C trajectories despite the widening ambition gap.

Across the Arab region, climate vulnerability is rapidly escalating due to extreme heat, chronic water scarcity, desertification and climate-related displacement. Record-breaking temperatures, collapsing water systems and intensifying droughts demonstrate how quickly climate impacts are converging with existing socioeconomic and geopolitical stresses. Yet the region is also emerging as a centre of climate innovation: Gulf countries have launched a historic scale-up of renewable energy, announced major green hydrogen developments, and invested in large-scale greening and land-restoration programmes. These shifts signal the beginning of a regional transition as countries seek to diversify their economies, reduce exposure to climate risks, and position themselves within emerging low-carbon global markets.

Cities sit at the heart of this climate reality, both disproportionately exposed to risks and uniquely positioned to drive solutions. Urban areas account for nearly 70% of global CO_2 emissions, while heat island effects, flood exposure and infrastructure vulnerabilities are intensifying across rapidly expanding cities in the region. In response, cities worldwide are adopting new planning tools, including climate action plans, GHG inventories, risk assessments, climate budgeting and digital platforms for real-time monitoring. Investments in nature-based solutions, climate-resilient infrastructure and early-warning systems are demonstrating strong returns, while global city networks continue to show that local action can advance mitigation and adaptation even when national progress remains uneven.

Despite these advances, significant gaps remain, particularly around adaptation finance, access to climate funding, and the capacity of cities to convert climate commitments into bankable, implementation-ready projects. Arab countries face long-standing barriers in articulating financial needs and accessing climate finance, while urban governments often lack the technical and institutional resources needed to respond at the required scale. Nonetheless, emerging global and regional frameworks, expanding multilateral development bank (MDB) commitments and the growing use of local SDG tools such as VLRs are helping cities strengthen their climate governance and investment pipelines. This evolving landscape provides a foundation for cities like Amman to align their climate priorities with global trends, regional challenges and the opportunities shaping the next decade of climate action.

2. National-local alignment: a shared vision for SDG 13

The Jordanian approach to SDG 13 is fundamentally national-local in nature:

climate risks are concentrated in cities, and solutions depend on coordinated action between central Government and municipalities. Jordan is among the world's most climate-vulnerable countries, facing severe water scarcity, rising temperatures and multi-hazard risks, while Amman alone concentrates around 40% of the population and a third of national GHG emissions. This makes Amman the primary arena where national climate ambitions are translated into concrete mitigation and adaptation outcomes.

At the national level, Jordan has built a climate policy architecture of considerable depth and cross-sectoral reach. Thirteen national strategies directly address SDG 13, covering not only dedicated climate instruments but also water, agriculture, food security, biodiversity, health, energy, disaster risk reduction and green finance. This breadth is the defining feature: climate is not siloed within environmental policy but mainstreamed across the sectors that determine the country's actual vulnerability. Successive NDCs have raised the 2030 mitigation target from 14% to 31%, with NDC 3.0 under preparation to embed a net-zero trajectory and stronger urban components. The Climate Change Policy 2022–2050 and Climate Change Bylaw provide the overarching governance framework, while strategies spanning water security, agricultural resilience, food systems, health-sector adaptation and biodiversity protection ensure that climate action is integrated at the point of impact. The National Green Growth Executive Plan, the Green Hydrogen Strategy and the Green Project Classification further connect mitigation to industrial policy and financial markets. The end-to-end digital monitoring, reporting and verification (MRV) system and the growing portfolio of Green Climate Fund (GCF), Global Environment Facility (GEF), Adaptation Fund and MDB-supported projects create the financial and regulatory envelope within which Amman's climate plans are designed and implemented.

Within this framework, GAM acts as the operational arm of national climate policy at the urban scale. The updated GAM Law No. 18 of 2021 grants Amman a special mandate for sustainability, climate mitigation, and resilience, operationalized through the Amman Climate Action Plan, the Resilience Strategy, and the Green City Action Plan. The Climate Action Plan, updated in 2024, aligns with the Jordanian NDCs and Climate Change Policy by committing the city to carbon neutrality by 2050 and defining sectoral mitigation pathways in energy, buildings, transport and waste. The Resilience Strategy and the Green City Action Plan translate the cross-sectoral logic of the national framework into concrete projects, BRT expansion, solar PV on municipal assets, landfill gas utilization, circular economy pilots, blue-green infrastructure and flood-risk reduction, bridging national strategies on water, disaster risk reduction, green growth and air quality with place-specific urban interventions.

National-local alignment is increasingly structured around explicit multilevel governance and shared reporting. National laws and strategies establish vertical linkages between ministries and GAM, while Amman's Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC)-compliant emissions inventory and climate risk assessments feed into national MRV systems and NDC implementation. Climate finance accessed at national level is channelled into city-level investments, with Amman serving as a key delivery platform for projects on water resilience, low-carbon transport, green public spaces and neighbourhood-level adaptation, benefiting both vulnerable Jordanians and refugee communities. The density of national policy alignment, 13 strategies touching climate across nearly every development sector, gives Amman an enabling framework that few cities in the region can match. The articulation between the Jordanian VNR and Amman's VLR reinforces this coherence, positioning Amman not only as an implementer but as

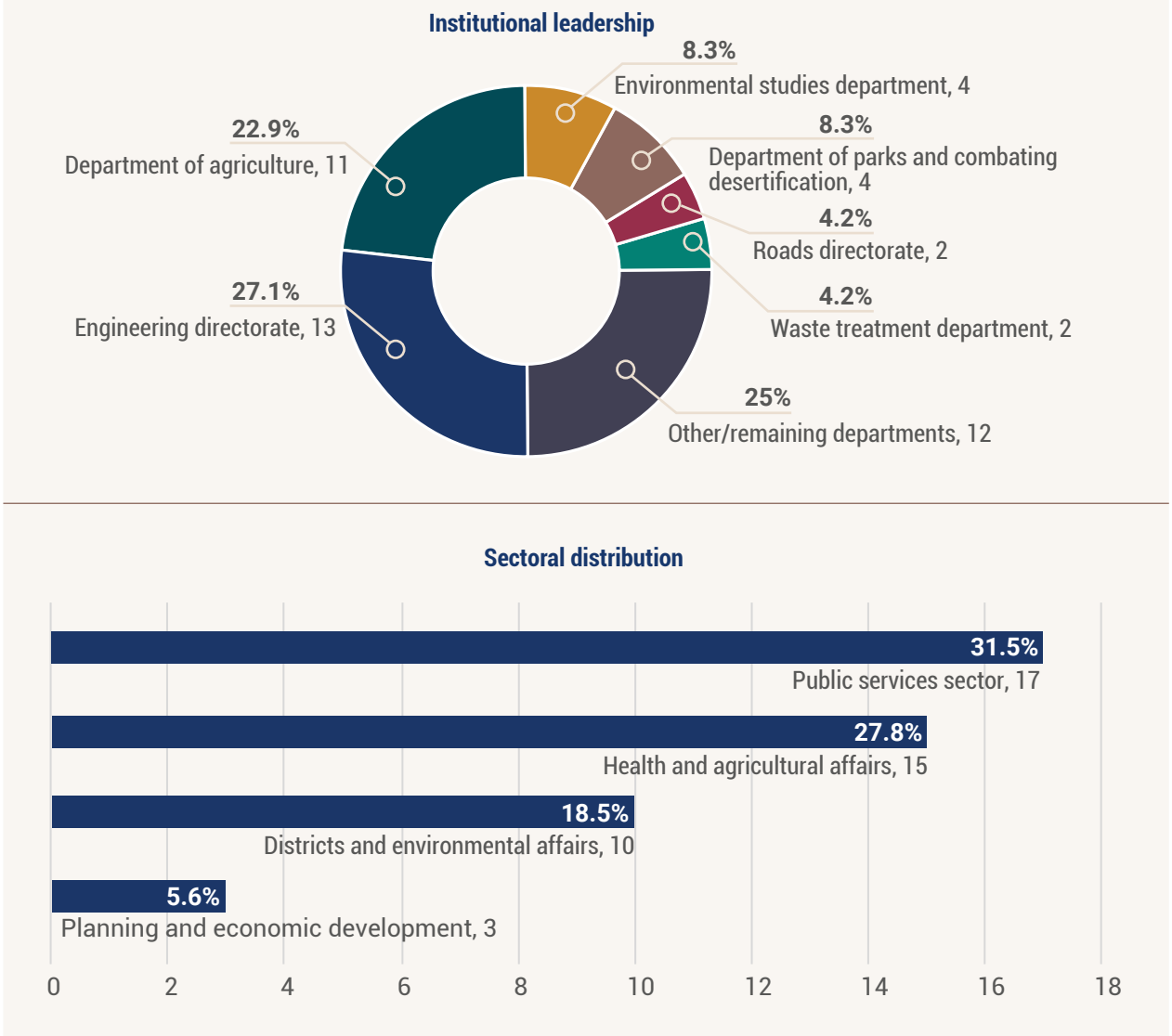
a strategic partner in shaping the country's long-term climate transition.

3. Project portfolio towards SDG 13 in Amman

Amman's climate action portfolio under SDG 13 reflects a broad, cross-sectoral effort involving 48 projects distributed across engineering, agriculture, environmental studies, parks and desertification control, and waste-treatment directorates (figure 26). Projects span the public services sector, health and agricultural affairs, districts and environmental affairs, and planning and economic development, underscoring that climate action touches infrastructure, environmental management, public services, mobility, and land stewardship. This institutional distribution highlights the degree to which the Climate Action Plan, the Green City Action Plan and the Resilience Strategy are being operationalized across the municipality rather than confined to a single unit.

A thematic review shows three dominant clusters shaping Amman's climate agenda. Waste management and circularity form

Figure 26.Projects governance overview



Source: Compiled by authors based on data provided by GAM.

the largest group, covering source sorting, recycling frameworks, landfill upgrades and biogas production. Urban greening and forestry represent a second major focus, with projects on tree preservation, park rehabilitation, desertification control and ecosystem restoration acting as frontline heat-mitigation and environmental-health measures. A third cluster encompasses adaptation and risk-reduction initiatives including flood early-warning systems, hydrological studies and targeted resilience works. These are complemented by smaller but important initiatives in water efficiency, greywater reuse, and climate awareness. Collectively, the portfolio is strongly oriented towards resilience and environmental improvement, with mitigation-specific projects still limited in number.

Project activity accelerated sharply beginning in 2022, when 27 initiatives were launched, and peaked in 2025 with 39 simultaneous projects. Nearly 80% of projects remain ongoing, reflecting the multi-year nature of climate investments. The average project spans 3.9 years, with nearly 40% extending beyond five years, particularly in waste management, ecosystem restoration and flood-management infrastructure. A handful of short-term initiatives deliver quick operational improvements and awareness outcomes, while longer-term commitments extend to 2037, led by a flagship waste-treatment facility. This trajectory demonstrates sustained rather than episodic climate investment.

Amman's move towards a coordinated climate-resilience architecture is visible across multiple SDG 13 projects that strengthen the city's ability to anticipate, manage and respond to climate risks. The planned Emergency and Crisis Management Center will integrate real-time monitoring of transport operations, drainage networks and environmental conditions, while linking the GAM systems with national crisis centres. Complementary initiatives, such as updated crisis-management plans, hydrological studies and flood-hotspot mapping, support clearer mandates, scenario planning and targeted deployment of early-warning devices. The Smart Urban Water Management project extends this approach by introducing nature-based retention systems at high-risk flood sites identified with UN-Habitat. Together, these investments demonstrate the emergence of a proactive, data-enabled risk-management system.

Waste and resource management form a second major pillar of Amman's climate portfolio, marking a shift towards circular and climate-smart systems. Strategic frameworks for municipal and commercial recycling, combined with MBT facilities, composting pilots and upgraded engineered cells at Al Ghabawi, modernize the city's waste infrastructure and reduce environmental impacts. The expansion of biogas-to-electricity generation adds clear mitigation value by converting methane into usable energy. PPP-based waste projects, supported by smart sensor technologies, strengthen operational efficiency and financial sustainability, while citywide awareness programmes promote behavioural change. Although many of these initiatives fall under environmental management rather than formal mitigation, they hold substantial unquantified emissions-reduction potential.

Urban nature and blue-green infrastructure constitute another defining feature of Amman's SDG 13 implementation. Large-scale development and rehabilitation of parks, such as Queen Noor Park, Al-Mahatta, Jubeiha and multiple neighbourhood projects, embed shading, vegetation, drainage improvements and water-harvesting systems into public spaces, reducing heat stress and improving microclimates. Desertification-control efforts and expanded nurseries support long-term ecological restoration, while ecological safe zones, greywater reuse, community gardens and wetland features enhance biodiversity and provide social

and recreational benefits. These projects demonstrate how landscape restoration and public-space improvements are functioning as climate-adaptation tools, particularly in underserved parts of the city.

Taken together, Amman's SDG 13 portfolio reveals a climate agenda shaped by vulnerability realities, institutional coordination and strong donor partnerships. Waste and circularity anchor municipal climate action, while nature-based solutions serve as primary adaptation instruments for addressing heat, stormwater and land degradation. The portfolio's strong focus on adaptation reflects the city's exposure to floods, heat and water scarcity, but also highlights a need to expand renewable-energy and emissions-reduction initiatives. The alignment of project peaks with SDG 11 implementation signals increasingly integrated municipal planning, supported by sustained collaboration with German development cooperation, multilateral banks and national agencies. Overall, the portfolio shows a city advancing towards long-term resilience and environmental restoration, with significant potential to grow its mitigation footprint in the coming years.

4. Focus areas for smart and resilient development

(a) Climate risk profile and hazard management

Amman's climate hazards, including flash floods, extreme heat and drought, are intensifying in frequency and severity, making reactive emergency response insufficient. Smart integration of real-time monitoring, early warning systems, and predictive data transforms crisis management from post-event recovery into anticipatory, sensor-driven resilience governance.

Amman faces converging climate hazards that demand integrated response. Flash floods pose the most acute risk, particularly in the Downtown "Sail" corridor and wadi channels where intense precipitation rapidly overwhelms drainage infrastructure.[53]

Thermal stress compounds flood risk. Average summer surface temperatures rose 1.8°C between 2013 and 2021, reaching 46.8°C. The urban heat island effect is spatially unequal: East Amman records temperatures up to 11°C higher than western districts during peak summer conditions, reflecting dramatic differences in building density, vegetation cover, and green space access.[54] Drought conditions, accounting for 13% of reported hazard events, elevate fire risks at the urban-wildland interface.[55]

GAM Law No. 18 of 2021 places explicit responsibility on GAM for climate resilience and mitigation. This aligns local efforts with the National Disaster Risk Reduction Strategy that identifies flash floods and extreme temperatures as top risks after seismic hazards.

The Smart City Roadmap, launched in February 2024, identifies resilience and crisis management as strategic priorities, advancing towards a unified platform integrating real-time data from the Traffic Monitoring Platform, environmental sensors, and fleet tracking systems. Business continuity protocols ensure that essential services (waste collection, drainage maintenance) remain operational during climate shocks, with coordination mechanisms linking to NCSCM.

Flood early warning constitutes strategy 2 of the Climate Action Plan, targeting full coverage of vulnerable communities by 2030. The UN-Habitat Flash Flood Resilience project has identified 120 sites suitable for physical flood control measures through detailed hazard mapping.[56]

Infrastructure hardening complements early warning. GAM maintains the Saqf Al-Sail culvert beneath downtown with new flow interceptors preventing blockages during heavy rains. The GAM Strategic Plan prioritizes

drainage upgrades at identified hotspots: King Abdullah II Street (JOD 1 million for pipe and box culverts), Wadi Al-Tay Phase II, Shafa Badran drainage extension, and targeted interventions at Yarmouk Street and the Race Club area. Slope protection through stone and concrete retaining walls (JOD 1.75 million allocated) addresses erosion and landslide risks during extreme weather.[57]

Climate projections[58] indicate increasing frequency and intensity of extreme precipitation, requiring continuous infrastructure expansion. Full Smart City Strategy implementation will integrate currently fragmented monitoring systems, while climate risk data will inform development restrictions in high-risk flood zones under the Amman Strategic Master Plan 2060.

(b) Decarbonization pathways

Without intervention, Amman's emissions trajectory is incompatible with national and global climate commitments. Smart infrastructure (route-optimized waste fleets, LED conversion at scale and BRT modal shift) provides the operational mechanisms through which decarbonization targets translate into measurable reductions.

Amman's emissions profile is dominated by three sectors: stationary energy (primarily buildings) at 48.9%, transport at 40%, and waste at 9.9%.[59] Without intervention, emissions would double by 2030 and approach 16.4 million tons by 2050; incompatible with the country's NDCs, raising the 2030 reduction target from 14% to 31%.[60] The Climate Action Plan commits Amman to 40% reduction by 2030 and carbon neutrality by 2050.[61]

Circular waste economy: the waste sector offers high-impact mitigation through methane reduction. The MBT plant (239 tons/day initial capacity)[62] stabilizes organic waste, extracts recyclables, and produces compost and solid recovered fuel, diverting material that would otherwise generate methane in landfills.

The waste sorting at source project drives household separation behaviour.[63] Al-Ghabawi landfill modernization includes engineered cells 6 and 7 with proper liner systems and leachate management. Targeted engagement with hotels, shopping malls and restaurants establishes separate organic waste streams feeding the MBT facility.

Waste-to-energy: the Al-Ghabawi Biogas Project transforms an emission source into renewable energy by capturing methane (more potent than CO_2 in the long term) and combusting it for electricity. A sensor-equipped fleet of 170 waste collection vehicles enables route optimization reducing transport emissions.[64]

Low-carbon mobility: transport sector transformation centres on modal shift from private vehicles to mass transit. The BRT system projects 85 million kilometres of annual private vehicle displacement, substantial fossil fuel consumption and emissions reduction.

Energy efficiency: the UNDP-supported sustainable urban development and resource efficiency project replaces over 100,000 street lights with LED technology, achieving approximately 50% reduction in public lighting energy consumption, one of the largest municipal electricity demand sources.[65]

Progress faces constraints from the absence of a formal GHG inventory with consistent time-series data, limiting precise impact quantification. Private vehicle ownership growth of 8–10% annually threatens to offset transit gains.[66] GAM is developing a GPC-compliant emissions inventory integrating with national MRV systems for rigorous tracking towards 2030 and 2050 targets.

(c) Urban cooling and nature-based adaptation

The 11°C temperature gap between East and West Amman is both a climate vulnerability and a spatial equity challenge. Nature-based

solutions, including micro-forests, blue-green infrastructure and greywater-fed urban greening, deliver resilience co-benefits across cooling, stormwater management and community well-being simultaneously.

Heat intensification is spatially unequal. Dense eastern neighbourhoods have less than half the green area within walking distance (4.6 hectares) compared with western districts (14.1 hectares), driving the 11°C temperature disparity.[67] Addressing thermal inequality requires strategic pivot towards nature-based solutions providing cooling, stormwater management, and quality-of-life benefits simultaneously constrained by extreme water scarcity.

The GAM Strategic Plan targets per-capita green space increase from 3.22 to 5 square metres by 2026, expanding total green cover from 1.6% to 2.5% of municipal area, and requiring approximately 7,300 dunums of new green land.[68] Six municipal nurseries produce 900,000 seedlings annually supporting planting programmes. Components include 500 dunums for gardens and urban planting plus desertification control targeting 1,000 dunums annually in peripheral areas.[69]

Targeted interventions address spatial equity. The Urban Micro-Lungs project (funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented with GIZ) uses the Miyawaki method to establish dense, multi-layered native forests in East Amman providing rapid cooling within years rather than decades.[70] Park rehabilitation maximizes cooling function: King Abdullah II Parks (construction packages 4 and 5), three-phase Jubeiha Park rehabilitation, and Queen Noor Park development spanning 29 dunums in Al-Muqabalain. Green City Action Plan model neighbourhood rehabilitations in Jabal Al-Hussein and Marka[71] integrate green infrastructure through tree-lined streets, permeable surfaces and pocket parks.

Blue-green integration transforms environmental liabilities into adaptation assets. The Russeifa Lagoon rehabilitation converts a polluted industrial legacy site into an Eco-Park with constructed wetlands providing remediation, green space, and flood buffering. The Al-Zohour Green Triangle combines underground stormwater storage with bio-retention areas filtering runoff while supporting vegetation. Greywater reuse systems connect municipal facilities to neighbourhood gardens, maintaining vegetation without drawing potable supplies.[72]

Sustaining green infrastructure requires community ownership. The Children's Climate Academy, developed with the Mayors Migration Council, equips the next generation, including refugee young people, with environmental knowledge. Zaha Cultural Centers drive behavioural change through environmental campaigns and the Distinguished Garden Award, mobilizing neighbourhood committees to maintain public green spaces.

(d) Integration

Climate action is not a stand-alone sector but the environmental stress test determining whether Amman's infrastructure, mobility and governance investments prove durable. SDG 13 is where smartness and resilience converge most urgently: the same data systems, adaptive infrastructure, and institutional coordination required for climate response underpin progress across every other Goal.

SDG 13 provides the climate frame within which other development outcomes unfold: decarbonization pathways deliver air quality improvements (SDG 3) and transport efficiency (SDG 9, SDG 11); flood resilience protects economic assets and infrastructure investments across all sectors; and nature-based adaptation addresses spatial equity (SDG 11) while building community engagement (SDG 16). Climate action is not a stand-alone sector but the environmental foundation determining whether development gains prove durable or are eroded by intensifying hazards and rising temperatures.

5. Policy recommendations and means of implementation for SDG 13

(a) Priority recommendation: multi-hazard climate risk management system

Policy objective: consolidate flood, heat and drought response into a unified system operated through the Tla' Al-Ali Emergency Center with district-level preparedness across all 22 districts, supported by climate risk modelling and forecasting capabilities that inform long-term land use, infrastructure investment and service continuity planning.

Responsible institutions

- Sustainable Development and Amman Resilience Unit.
- GIS Department; AUO; Tla' Al-Ali Emergency Center.

Supporting partners

- NCSCM.
- Meteorological Department.
- Ministry of Environment.
- Royal Scientific Society.
- Civil Defence/Public Security Directorates.
- Universities and research centres.

Implementation pathway

- **Short term:** establish the inter-departmental governance structure between the Sustainable Development Unit, GIS Department and AOU, with agreed data-sharing protocols and decision-making authority. The system must be jointly governed, not housed exclusively within the Emergency Center. Conduct climate risk mapping for all 22 districts with the Royal Scientific Society as technical partner. Integrate climate change risks into the GAM Institutional Risk Register. Define the data integration architecture connecting meteorological, hydrological, environmental and urban datasets, ensuring interoperability with the NCSCM national systems from the outset.
- **Mid term:** deploy the unified digital monitoring platform with live outputs at the Tla' Al-Ali Emergency Center, built in partnership with the Smart City Center and IT Directorate. Activate district-level preparedness across all 22 districts, local contact points, trained response teams, defined activation triggers and communication channels reaching vulnerable communities. Launch capacity-building programmes for GAM staff and district teams, with a deliberate focus on youth. Begin piloting predictive climate risk models with university partners.
- **Long term:** embed climate risk outputs into land-use planning, infrastructure investment prioritization, and building code enforcement, shifting the system from reactive emergency response to proactive urban governance. Institutionalize climate risk screening as a prerequisite for major capital projects. Connect system outputs to GAM capital budgeting and the climate finance pipeline.

Indicators and targets

- **Outputs**
  - Districts with completed climate risk maps and activated preparedness plans (target: 22/22 by end of year 2).
  - Unified digital monitoring platform operational (target: live by end of year 2).
  - Climate risk layer integrated into Institutional Risk Register (target: year 1).
  - GAM staff and district personnel trained in climate risk response protocols.
- **Outcomes**
  - Response time by hazard type compared with baseline.
  - Documented reduction in damage and service disruption from climate events.
  - Share of major capital projects undergoing climate risk screening (target: 100% by year 4).

Financing route

The short term is largely financeable through existing budgets and technical assistance. The mid term, including digital platform, sensors and training, is a strong candidate for IFI lending or dedicated climate adaptation funding (GCF and Adaptation Fund), given Amman's exposure profile. In the long term, the financing can be structured through public-private partnerships and international research funding, with the climate finance pipeline identifying packaging options for climate fund eligibility.

(b) Supporting recommendation: integrated decarbonisation programme

- **Lead:** Sustainable Development and Amman Resilience Unit (GAM), anchored in Amman's Climate Action Plan.
- **Key actions:** develop a unified emissions management framework linked to the city's carbon inventory and CDP reporting. Expand low-carbon transport infrastructure. Integrate energy efficiency and low-carbon standards into municipal procurement, building codes (with the Royal Scientific Society as technical partner), and the new urban planning system. Establish MRV protocols linked to the Ministry of Environment as UNFCCC focal point, drawing on the country's existing MRV experience.
- **Key partners:** GAM environment, transport, energy, waste, and procurement departments; Amman Vision; Ministry of Environment; Ministry of Energy (including the Decarbonization in Buildings initiative); Energy and Minerals Regulatory Commission; and the Royal Scientific Society.
- **Primary indicators:** GPC-compliant citywide emissions trajectory against 40% target; sectoral emissions by source; and municipal policies with embedded low-carbon criteria.
- **Financing:** CDP alignment positions Amman for green bond issuance and climate fund access. Technical assistance through city networks, international organizations or bilateral programmes.

(c) Supporting recommendation: green-blue network and cooling plan

- **Lead:** GAM Agriculture and Environment Sector, with Planning and Engineering Sectors.
- **Key actions:** introduce green corridors in the comprehensive master plan, prioritizing East Amman's highest thermal exposure districts. Expand drought-resistant tree planting with measurable annual canopy targets. Mandate water-smart irrigation for all new public green spaces. Launch an incentive system (fee reductions, expedited permitting) for green roofs, reflective surfaces, and water-efficient landscaping, aligned with the Ministry of Energy's Decarbonization in Buildings initiative.
- **Key partners:** Ministry of Water and Irrigation; Ministry of Agriculture; Ministry of Local Administration; universities; and private sector (developers, landscaping).
- **Primary indicators:** licensed green rooftop area; green areas afforested with measured temperature differential; rainwater harvesting installations; East-West thermal disparity trend.
- **Financing:** incentive system can be structured as budget-neutral. Capital investments in green corridors eligible for climate adaptation funding via the climate finance pipeline.

G. SDG 16: Peace, justice and strong institutions

1. Background

Progress towards SDG 16 remains one of the most off-track areas of the 2030 Agenda, as global indicators on violence, justice, and institutional effectiveness continue to stagnate or regress. Homicide rates have declined only marginally since 2015, civilian casualties in armed conflicts have surged, and gender-based lethal violence shows no meaningful improvement. Rule-of-law erosion has persisted for seven consecutive years, while access to justice remains limited for millions of people due to underreporting, lengthy pre-trial detention, and chronic prison overcrowding. Yet this challenging landscape also features signs of resilience: anti-corruption enforcement has strengthened in many jurisdictions, e-government systems are expanding rapidly, and new digital public-sector tools are improving transparency, accountability and citizen engagement.

Across the Arab region, SDG 16 challenges are amplified by protracted conflicts, large-scale displacement, institutional fragility and socioeconomic pressures that strain State capacity. Libya, the Sudan, the Syrian Arab Republic and Yemen continue to experience some of the world's most severe governance and rule-of-law breakdowns, while displacement crises have reached historic levels. Governance effectiveness remains the region's most acute institutional gap, with public sector performance, corruption, and trust deficits hindering service delivery and recovery. At the same time, several Arab States are advancing notable governance reforms

through digitalization, anti-corruption authorities and improvements in public-sector performance, offering emerging models of institutional modernization.

Within this context, cities have become frontline actors for SDG 16 implementation, as safety, justice, inclusion and institutional performance are increasingly shaped at the municipal level. Urban authorities worldwide are adopting community-based safety strategies, crime-prevention programmes and safer-public-space initiatives, while city-led approaches to refugee inclusion and social cohesion continue to expand. Digital governance is transforming local service delivery through open-data platforms, single-window portals, participatory budgeting, and online dispute-resolution tools that improve equity and reduce petty corruption. These innovations highlight how municipal institutions are becoming key drivers of public trust and local peace even when national trajectories are uneven. This is increasingly important in the digital age, where cities also need to strengthen resilience to disinformation, harmful content and online threats, while fostering social cohesion and reinforcing the social fabric through trusted information and informed civic participation. These global and regional dynamics define the governance environment in which Arab cities, and Amman in particular, operate. Persistent fragility, climate-security risks, youth unemployment and rising service demands create complex pressures on local institutions. Community safety, violence prevention, equitable access to justice, and inclusive governance are therefore as central to Amman's SDG 16 agenda as institutional modernization and fiscal reform. As Jordan pursues national governance and justice-sector reforms, and as Amman continues modernizing municipal systems while strengthening the social fabric of an increasingly diverse city, SDG 16 offers a lens to understand how cities can build peaceful, just and effective urban governance in a rapidly changing regional landscape.

2. National-local alignment: a shared vision for SDG 16

The Jordanian approach to SDG 16 is increasingly structured as a multilevel governance agenda in which national reforms set the framework for local institutional performance. At the centre is a consolidated SDG machinery: the National Higher Committee for Sustainable Development, chaired by the Ministry of Planning and International Cooperation, aligns national plans such as the Government Indicative Executive Programme with the 2030 Agenda, while 16 SDG task forces, including SDG 16 led by the National Centre for Human Rights, bring together government institutions, private sector, civil society and development partners around implementation and monitoring. In parallel, the Local Administration Law No. 22 of 2021 expands the financial and administrative autonomy of municipalities and explicitly positions local governments as development actors. This architecture recognizes that most SDG targets, including those on peace, justice and strong institutions, depend on local institutions' ability to deliver fair, transparent and responsive services.

Equally important for SDG 16 localization are the national frameworks governing community safety, social cohesion and access to justice. The Justice Center for Legal Aid establishes reference standards for violence prevention and equitable access to justice that extend to the local level. At the same time, government-led planning frameworks for the refugee and resilience response, most recently the Jordan Response Plan for the Syria Crisis, with a new government-led strategic planning process now under way, have shaped how central Government, municipalities and international partners align around the governance dimensions of large-scale displacement. Amman, which absorbs the largest share of the refugee population, operates at the intersection of

these frameworks: GAM responsibilities for public space management, service delivery and community engagement place it in a frontline role, not only for institutional governance but for the everyday practices of inclusion, safety and intercommunal coexistence that determine whether diverse urban populations experience the city as peaceful and just.

Within this national frame, integrity, justice and digital governance reforms define the standards and tools through which municipalities are expected to operate. The National Strategy on Integrity and Countering Corruption 2017–2025 strengthened mandates for the Integrity and Anti-Corruption Commission, and the country's long-standing commitment to the Open Government Initiative collectively set expectations on transparency, accountability and access to information that apply equally to central ministries and GAM. Justice and human-rights reforms, including the Comprehensive National Human Rights Plan, remote trial systems and targeted measures for women, persons with disabilities and other vulnerable groups, establish reference norms for fair procedures and non-discrimination in service provision.

Amman operates inside this architecture with a special mandate that makes it a primary localizer of SDG 16. The GAM mandate is embedded with governance quality, accountability and institutional capacity as core objectives alongside sectoral outcomes. The Sustainable Development and Amman Resilience Unit, AUO and the development of a centralized GIS and smart-city platforms translate national priorities on transparency, performance management and evidence-based policymaking into concrete municipal systems. In practice, Amman becomes the urban-scale arm of the country's governance reforms, testing how digital tools, performance indicators and institutional values such as integrity and fairness can be applied in day-to-day city management.

National-local alignment around SDG 16 is increasingly visible in shared processes, joint reporting and coordinated responses to complex challenges. The 2022 Amman VLR feeds city-level evidence on governance, participation and access to services into national SDG reporting (the 2022 VNR) while using the same principles of inclusivity, transparency and ownership. Large multi-stakeholder consultations for the VLR, Green City Action Plan and GAM Strategic Plan complement national participatory processes and give practical local expression to commitments on public engagement and leaving no one behind, including refugee-hosting communities. AOU builds on partnerships and data-sharing protocols established with different entities, such as the Department of Statistics and relevant ministries, to report on various indicators and contribute to different initiatives and projects, including the QoL initiative. This integration enables governance and service-delivery analysis at a granularity and thematic focus tailored to Amman's planning needs, while ensuring alignment with national statistical frameworks. Through these mechanisms, Amman is not only implementing national SDG 16 priorities, it is also generating lessons on digital governance, integrity, citizen participation and institutional resilience that can inform future reforms across the country's wider municipal system.

3. Project portfolio towards SDG 16 in Amman

Jordanian progress on SDG 16 reflects a governance model where national institutional reform and municipal modernization advance in parallel and reinforce one another. With 19 national strategies directly addressing peace, justice and strong institutions, SDG 16 commands the second broadest policy alignment of any Goal under review. This coverage extends well beyond traditional justice and security instruments: strategies on public sector modernization, cybersecurity, human

rights, juvenile justice, women's rights, disability inclusion, disaster risk management, statistical development, and media and information literacy all embed institutional strengthening as a core objective. The cross-sectoral character of this alignment signals that Jordan treats effective governance not as a stand-alone goal but as the enabling condition for delivery across the entire development agenda. The Public Sector Modernization Roadmap and the EMV set the overarching direction, while dedicated strategies on social protection, drug control, refugee response and data systems ensure that institutional accountability reaches vulnerable populations and crisis contexts alike.

Amman's SDG 16 portfolio mirrors this national logic at the municipal scale, concentrating on the modernization of governance systems, institutional performance, and the financial and administrative backbone of the municipality. The 54 mapped projects are anchored largely in the Finance and Administration Sector, Human Resources and the Directorate of Institutional Performance Development, confirming that SDG 16 is delivered primarily through internal reform rather than sector-specific services. The Chief Financial Officer leads the largest share of initiatives, many in partnership with the World Bank, focused on fiscal management, revenue optimization and long-term sustainability. Amman Vision Company drives commercial investments, while the Human Resources Department and the Institutional Performance Development Directorate lead workforce transformation and quality management reforms. Together, this distribution positions SDG 16 as an agenda centred on transforming the systems and capabilities that underpin effective, transparent and accountable municipal governance.

This institutional strengthening agenda is also reflected in Media and Information Literacy (MIL) capacity-building implemented by the United Nations Educational, Scientific and Cultural Organization (UNESCO), in partnership with the Jordan Media Institute, for 35 GAM staff from different departments. As the lead United Nations agency championing MIL globally, UNESCO promotes it as a practical response to disinformation, harmful content and hate speech, while strengthening public access to reliable information and informed civic participation. In Amman, the training focused on integrating MIL competencies into city services and developing practical work plans for departmental action, including in parks, museums, libraries, transport, media, city planning, entertainment and sports. In line with SDG 16.10, this contributes to more transparent and inclusive communication, more informed and rights-conscious decision-making, and stronger social cohesion and peace at the local level. UNESCO identifies MIL as a keyway to help people engage critically with information, navigate the online environment safely, and counter disinformation and hate speech. UNESCO also notes that the Second National MIL Strategy for 2026–2029 was launched under the patronage of Princess Rym Ali.[73]

A thematic review (figure 27) reveals digital transformation as the dominant driver of institutional strengthening at both levels. Nationally, strategies on digital transformation, cybersecurity, participation and statistical development create the standards and regulatory environment for open, data-driven government. Locally, nearly two thirds of Amman's SDG 16 initiatives focus on IT systems, automation, GIS and integrated databases, replacing fragmented, paper-based processes with unified digital platforms that enhance transparency, auditability and responsiveness. Governance and institutional development reforms form a second major cluster, covering performance management, organizational restructuring, and quality assurance systems that embed clearer standards and stronger accountability. A third cluster focuses on human resources transformation, including workforce planning, training, job classification and innovation

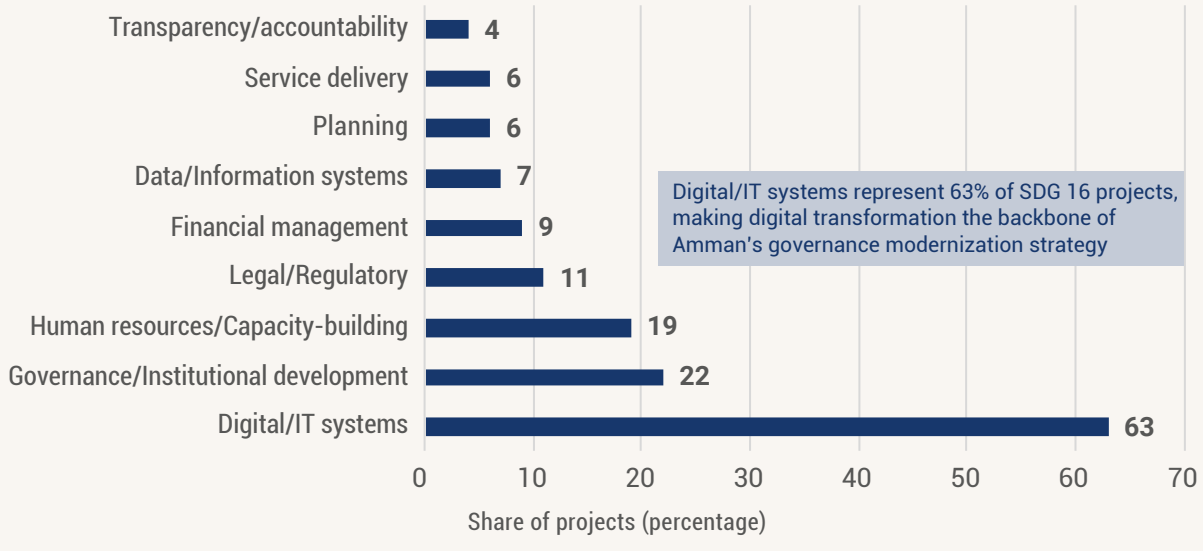
programmes that build institutional capacity from within. Complementary legal, regulatory, financial management and service delivery initiatives reinforce the transition towards more transparent, efficient and resilient administration.

The alignment between 18 national strategies and Amman's 54 local initiatives reveals a coherent, mutually reinforcing governance modernization programme. National frameworks establish the institutional standards, legal mandates and digital infrastructure that municipal reform depends on; Amman, in turn, generates the operational evidence and implementation lessons that inform the next generation of national policy. This vertical coherence, rooted in digitalization, fiscal discipline and organizational excellence, positions SDG 16 as the institutional foundation on which all other SDG commitments ultimately depend.

Project timelines show a reform trajectory marked by rapid modernization cycles and tightly sequenced institutional upgrades. Between 2019 and 2023, Amman implemented a core set of financial reforms (accrual accounting, debt and cash management, long-term financial planning and credit rating) that established the fiscal foundation for subsequent digital and organizational transformation. Institutional modernization accelerates in 2022 with 26 new projects and peaks early in 2023 with 37 simultaneous initiatives, reflecting the concentrated roll-out of digital systems, human resources reforms and quality-management tools. A total of 61% of projects remain ongoing, with an average duration of 3.3 years, the shortest among the SDGs analysed. This includes the highest share of short-term projects (41%) and a limited set of long-horizon initiatives such as the seven-year accounting transition. The overall pattern illustrates a governance agenda built on rapid reform cycles and continuous process optimization rather than long-term infrastructure delivery.

Across the portfolio, Amman is shifting from fragmented administrative controls to integrated, data-based governance. Unified construction inspection systems and GIS-based violation mapping replace dispersed oversight with a consolidated

Figure 27. Portfolio thematic analysis for SDG 16 (Percentage)



Source: Compiled by authors based on data provided by GAM.

digital backbone linking regional control units, permitting and field inspections. Electronic tracking of dumpers and mud disposal (developed with the Traffic Department) addresses a key driver of winter flooding by enforcing legal dumping and reducing pressure on stormwater networks. CCTV surveillance, digital legal-case management, and new data-governance frameworks strengthen institutional integrity, protect municipal assets and improve compliance. These tools collectively move GAM towards a proactive risk-management model where violations, unsafe works, and legal exposures are monitored in real time and resolved through evidence-driven enforcement.

The portfolio's financial-governance initiatives signal a structural shift towards international-standard public finance. Transitioning to accrual accounting, supported by International Public Sector Accounting Standards (IPSAS)-aligned loan recording, loan reclassification and an updated repayment plan, establishes a full municipal balance sheet and clarifies the fiscal position of GAM. Cash management reforms, electronic payments, daily cash-flow ceilings, treasury integration and weekly International Bank Account Number (IBAN) transfers, strengthen liquidity control and reduce fiscal risk. Asset-valuation and classification projects modernize the municipal asset register and support investment planning. These reforms underpin the long-term financial plan to 2050 and Amman's credit-rating initiative, enabling the city to secure preferential financing. Revenue-diversification efforts through Amman Vision Company (including Motor City, Abdali parking, the Banks District, the new slaughterhouse, and the Mini Box Park) further reinforce fiscal sustainability. Together, these initiatives embed financial discipline, commercial revenue and enhanced creditworthiness at the core of strong municipal governance.

Amman is also investing heavily in institutional capacity and organizational culture. Workforce planning, organizational restructuring and job-classification systems provide the human resources architecture for merit-based recruitment, mobility and training. Transforming the Princess Iman Centre into a regional training hub (supported by specialized accounting, audit and innovation courses) builds the skills required to operate modern financial and digital systems. Quality- and innovation-driven initiatives, including the Total Quality Management System handbook aligned with ISO standards, the internal audit methodology, excellence incubator, innovation newsletter, digital suggestion portal and dedicated innovation lab, institutionalize continuous improvement and encourage problem-solving across departments. At the strategic level, the Smart Amman City Strategy, the forthcoming ISO 37106 Kite Mark accreditation, partner-management platforms, and contractor-evaluation systems align municipal modernization with global governance and smart-city standards.

Taken together, Amman's SDG 16 portfolio demonstrates a decisive shift towards building strong, transparent and capable institutions through digital infrastructure, fiscal discipline and organizational renewal. Digital systems form the backbone of reform, while sequenced financial-management improvements create a stable foundation for broader transformation. Short project cycles and a high degree of internal leadership indicate an agile reform model driven by municipal ownership. Meanwhile, investment in innovation, excellence and workforce development reflects the emergence of a long-term institutional culture aligned with global best practices. Overall, SDG 16 functions as the governance engine of Amman's wider sustainable-development trajectory, enabling more accountable, effective and resilient municipal action across all other SDGs.

4. Focus areas for smart and resilient development

(a) Urban safety and enforcement

Urban safety encompasses both the institutional capacity to enforce regulations and the broader conditions (physical, social and perceptual) under which residents feel secure in their daily lives. SDG 16.1 calls for significant reductions in all forms of violence and related death rates, while SDG 16.3 emphasizes equal access to justice. Amman's approach to this dual mandate combines data-driven enforcement of construction, environmental and traffic regulations with community-oriented safety strategies that address violence prevention, gender-based safety and inclusive public space design.

Effective enforcement requires moving from periodic inspection to continuous, data-driven oversight. Amman's integration of GPS tracking, GIS violation databases, machine-learning surveillance and real-time traffic monitoring creates a smart enforcement architecture that simultaneously strengthens urban safety and builds resilience against flood risk, unauthorized construction in hazard zones and environmental degradation.

Amman's enforcement landscape addresses interconnected challenges: unauthorized construction distorting planning frameworks, random debris dumping degrading environmental quality, and traffic conditions threatening public safety. GAM Law No. 18 of 2021 empowers GAM to monitor construction, prevent encroachments, and take precautionary measures protecting individuals and properties.

The Construction Control Department manages a unified inspection system preventing unauthorized construction, monitoring excavations deeper than three meters that risk landslides, and ensuring compliance with building licenses. Between 2018 and 2021, GAM processed 29,459 work permits and 27,869 building licenses;[74] volumes underscoring the regulatory oversight scale required in a rapidly growing metropolitan area. A centralized database standardizes inspection procedures and supports evidence-based decision-making, creating institutional memory for enforcement patterns.

Environmental enforcement operates through electronic tracking of waste transport. GPS-based monitoring (operated with the Traffic Department) ensures construction debris reaches Al-Ghabawi rather than being illegally dumped in wadis where it exacerbates flood risk. A GIS-based violation database classifies infractions by type and location, enabling targeted interventions in chronic problem areas and informing amendments to zoning regulations. Integration of violation data with flood hazard mapping supports climate-resilient enforcement, ensuring construction in high-risk zones receives heightened scrutiny.

Urban surveillance infrastructure creates an integrated platform for safety, traffic enforcement and crisis response. The Traffic Management Center monitors through 150 CCTV cameras and 165 connected traffic signals, providing real-time transmission to decision-makers and first responders. Phased expansion extends coverage to district offices, facilities and public gardens across outer Amman. An Intelligent Monitoring System uses machine learning to identify vehicles and license plates, automatically detecting violations such as speeding and red-light running. Public space security is reinforced through rangers and police in major parks including Al Shabab, Zahran and Al Hussein.

Legal system efficiency supports enforcement effectiveness. The Legal Affairs Directorate automates case management through a digital platform tracking all lawsuits involving the municipality, whether as plaintiff enforcing regulations

or defendant responding to claims. The Control and Internal Audit Unit operates across the organizational structure, auditing supplies, inventories and procurement procedures while aligning methodology with government-wide best practices. Staff development targets 30 auditors for professional certifications including Certified Internal Auditor.

(b) Fiscal governance and institutional accountability

Financial resilience, defined as the capacity to absorb shocks, service debt and fund long-term adaptation, is as critical as physical infrastructure resilience. The GAM transition to accrual accounting, long-term financial planning to 2050, and digital asset management systems represent the smart fiscal governance required to sustain climate adaptation and infrastructure investment across economic cycles.

GAM holds distinctive administrative status with significant financial autonomy, generating approximately 88% of revenue from own-source streams including property taxes, professional licensing fees and investment returns.[75] This exceptional self-reliance reduces vulnerability to transfer volatility and external fiscal shocks. Yet autonomy carries responsibility: GAM faces challenges from accumulated debt servicing, operating deficits during downturns, and the imperative to restore trust between municipal government and citizens.

Fiscal modernization centres on transition from cash-basis to accrual accounting aligned with IPSAS. Cash accounting obscures long-term liabilities, asset depreciation and true financial position; and accrual methodology recognizes revenues when earned and expenses when incurred, revealing pension obligations, infrastructure maintenance backlogs, and asset values informing capital planning. World Bank technical assistance supports the multi-year transition involving comprehensive staff retraining and system upgrades.

Debt and cash management strategies institutionalize prudent fiscal practices. The Directorate of Finance manages financial risk and controls budget deficit trajectories. World Bank creditworthiness assessments identify pathways to formal credit ratings, a milestone that would open capital market access at preferential rates while signalling institutional credibility to bilateral donors and multilateral climate funds.

Asset management addresses stewardship of the GAM substantial portfolio: more than 4,000 land parcels and nearly 1,000 buildings with estimated value of JOD 2.2 billion.[76] An integrated asset management system combines lifecycle maintenance planning, condition monitoring and replacement scheduling, optimizing asset quality and extending useful life through preventive rather than reactive maintenance. Electronic tracking of vehicles, machinery and equipment links physical assets to digital registers supporting utilization analysis and accurate depreciation calculations.

Revenue diversification proceeds through AVID, a company established in 2018 to mobilize private investment and professionally manage public land assets. AVID has attracted investments totalling JOD 305 million, projecting annual revenue of JOD 2.5 million through 2033 from land leases; income continuing regardless of economic cycles.[77] The portfolio spans Motor City (automotive sales), the new Al-Maslakh slaughterhouse (food processing), the Banks District (smart offices), and developments at Abdali, Mini Box Park and Sweileh Commercial Complex.

(c) Data governance and smart city systems

Smart governance is ultimately a data governance challenge: the quality of

municipal decisions depends on the quality, integration and accessibility of the information systems underlying them. Amman's unified Smart City Platform, AUO and international certification framework provide the institutional intelligence architecture through which resilience planning, service delivery and cross-sectoral coordination become evidence-driven rather than assumption-based.

Digital transformation provides the intelligence backbone for evidence-based governance. By 2021, GAM had automated 84.66% of operations, a digitization rate demonstrating technical capability while creating data streams for informed urban management.[78] The Smart City Strategy, launched in February 2024, establishes governance architecture replacing siloed departmental initiatives with coordinated transformation.

The Smart City Platform integrates diverse verticals, smart mobility with real-time traffic monitoring, smart environment covering waste and water management, and smart resilience enabling digital crisis coordination. By ingesting data from municipal projects while connecting to external stakeholders (ministries, Public Security, utility companies, private partners), the platform creates comprehensive situational awareness.

International certification validates governance against global benchmarks. GAM achieved ISO 37106:2021 accreditation, the international standard for smart city strategies addressing sustainability and resilience requirements. This assessment positions Amman for formal Kite Mark accreditation from the British Standards Institution.

The Observatory aligns local indicators with national frameworks, such as the UMF, supplying disaggregated city-level data for the Jordanian VNR while producing the VLR pioneered in the Arab region. In the preparation of the 2026 VNR, the Ministry of Planning and International Cooperation actively drew on Amman's VLR data to complement national reporting and expand indicator availability at the subnational level, a concrete instance of local monitoring feeding upwards into national reporting that the VLR-VNR coordination architecture is designed to enable.

GIS provide spatial backbone for planning and resilience. GIS infrastructure integrates sources from the Department of Lands and Survey, the Royal Geographic Center, utility companies and the Department of Statistics. Flood hazard mapping identifies intervention priorities based on spatial vulnerability analysis. Infrastructure asset mapping supports rapid damage assessment, enabling prioritized restoration when disasters occur.

(d) Inclusive participation and responsive service delivery

Resilient cities depend on social trust; the willingness of residents to cooperate with authorities during crises and contribute to collective solutions. Amman's participatory platforms, from the Bloomberg-awarded Amman is Listening to real-time service feedback channels, build that trust by making governance visibly responsive, closing the loop between citizen input and municipal action. In a city where over one-third of residents are non-Jordanian nationals, including large Syrian, Iraqi and other refugee communities, the inclusiveness of these mechanisms is not merely a governance-quality indicator but a precondition for the social cohesion on which urban peace depends.

Citizen engagement operates through multi-channel mechanisms moving beyond ad hoc interactions towards systematic listening. The unified call centre centralizes inquiries and complaints across all service

areas, generating data on service gaps and resident priorities. Complementary systems through the Zahran mobile application and social media presence enable real-time response to emerging concerns.

The Oasis of Creativity and Innovation portal enables citizens and employees to submit improvement suggestions directly to decision makers. The Amman is Listening platform, winner of the Bloomberg Global Mayors Challenge, establishes participatory infrastructure combining interactive maps with reporting capabilities functioning during both routine conditions and crisis events.[79] Citizens identify needs, report conditions and track municipal responses, creating feedback loops that surface problems faster than administrative monitoring alone while building trust, thereby enabling cooperation during emergencies.

Refugee inclusion in municipal governance represents one of Amman's most distinctive contributions to SDG 16. Unlike many cities globally where displaced populations remain administratively invisible, Amman has moved towards service delivery models that do not condition access on nationality. Municipal services (waste collection, road maintenance, public space provision and emergency response) are delivered on a territorial basis to all residents regardless of legal status. GAM coordination with UNHCR, international development organizations and national authorities ensures that municipal planning accounts for the full resident population, not only citizens.

Workforce governance sustains responsive service through systematic human capital investment. The Human Resources Directorate develops annual plans analysing departmental tasks, identifying gaps and surpluses, and redistributing staff to match evolving demands. The Regional Training Center,[80] connected to the Al Hussein Cultural Center complex, conducts over 50 courses and workshops annually, spreading quality management culture. Organizational restructuring established the Institutional Performance Development Directorate and the Organizational Excellence Department[81] as dedicated capacity for continuous improvement.

Total quality management systems adopted across directorates institutionalize continuous improvement, validated by GAM receipt of the Seal of Excellence in the King Abdullah II Award for Excellence in Government Performance and Transparency. Individual performance evaluation links career advancement to demonstrated results, while contractor and supplier evaluation ensures external partners meet municipal quality standards.

(e) Integration

SDG 16 is where smartness becomes institutional and resilience becomes governance: the fiscal systems, data platforms, enforcement tools and participatory mechanisms examined here are not a separate development domain but the enabling infrastructure determining whether every other SDG investment in Amman delivers its intended outcomes.

SDG 16 provides the governance foundations enabling all other development outcomes: fiscal management determines investment capacity for infrastructure (SDGs 9 and 11) and climate action (SDG 13); enforcement systems protect public health (SDG 3) and urban quality (SDG 11); data infrastructure enables evidence-based planning across all sectors; and participatory platforms build the social trust that makes collective action possible during crises. Strong institutions are not a separate development domain but the enabling condition determining whether sectoral investments achieve their intended outcomes.

5. Policy recommendations and means of implementation for SDG 16

(a) Priority recommendation: urban safety and compliance platform

Policy objective: integrate construction inspection, waste tracking, violation mapping, traffic surveillance and legal case management into a unified digital platform connecting detection through enforcement to legal resolution.

Responsible institutions

- GAM Digital Transformation Department, in coordination with the Inspection and Control Department.
- GAM Environment and Health Sector.
- GAM Traffic Directorate.
- GAM Legal Department.
- Department of Statistics with integration into existing national platforms, including the Jordan Data Portal and the Ministry of Interior's Tanmiah local development planning platform, to avoid duplicative infrastructure.

Supporting partners

- Ministry of Digital Economy and Entrepreneurship.
- Ministry of Interior.
- Universities and local technology companies.

Implementation pathway

- **Short term:** map existing detection, inspection and enforcement workflows across all relevant GAM departments to identify fragmentation points and data gaps. The consultation recommended a phased approach, beginning with a pilot covering a limited number of violation types such as waste or public safety infractions before expanding. Define the platform architecture and data integration requirements, building on GAM existing digital infrastructure rather than starting from scratch. Activate the GAM code of ethics and strengthen integrity and transparency systems as the institutional foundation for credible enforcement.
- **Mid term:** launch the pilot platform covering priority violation categories, connecting detection to enforcement to legal resolution in a single workflow. Expand progressively to additional categories based on pilot learning. Develop data analytics and violation mapping capabilities, leveraging university and tech company partnerships, to enable predictive enforcement and resource allocation. Integrate platform outputs with GAM performance monitoring systems so that compliance trends are visible to management.
- **Long term:** extend the platform to cover the full spectrum of urban safety and compliance functions. Connect enforcement data for district-level performance tracking. Link citizen reporting through the Amman is Listening platform to the compliance workflow, so that citizen-flagged issues enter the same detection-to-resolution pipeline. Embed compliance performance into GAM service quality standards and public reporting.

Indicators and targets

- **Outputs**
  - Violation categories integrated into the unified platform.
  - Average case resolution time from detection to legal closure.
  - GAM departments connected to the platform workflow.
- **Outcomes**
  - Reduction in repeat violations by category.
  - Share of detected violations reaching legal resolution within defined timeframes.
  - Compliance rates by violation type and district, tracked over time.

Financing route

The short term is institutional; workflow mapping, platform design and ethics activation can be financed through existing budgets. In the mid term, platform development can build on existing GAM digital infrastructure investments and may attract technical assistance from digital governance programmes (World Bank GovTech and bilateral e-government support). University and tech company partnerships can reduce development costs while building local capacity. In the long term, operational costs should be integrated into the recurrent GAM budget as part of standard enforcement operations.

(b) Supporting recommendation: climate-SDG investment readiness architecture

- **Lead:** GAM financial sector, in coordination with the Sustainable Development and Resilience Unit and the Institutional Performance Development Directorate.
- **Key actions:** accelerate the transition to accrual accounting, creditworthiness assessment and systematic asset management as a coordinated package aligned with the Public Sector Modernization Roadmap. Prepare a pipeline of climate and green projects aligned with Amman's Climate Plan and Smart City Strategy. Enhance data-sharing protocols between GAM and relevant line ministries to ensure fiscal and service delivery data flows across institutional boundaries. Position Amman for green bonds, climate funds, and PPP financing by building the institutional and financial credibility required by international investors and funds.
- **Key partners:** Ministry of Finance; Ministry of Planning and International Cooperation; Ministry of Environment; international development finance institutions (World Bank and EBRD); and international urban networks.
- **Primary indicators:** number of climate or sustainable projects that are investment-ready; volume of climate finance mobilized; creditworthiness assessment completed; accrual accounting transition milestones achieved.
- **Financing:** the investment readiness architecture is itself a financing enabler, the costs of institutional reform (accounting, asset management, project preparation) are modest relative to the capital they unlock. Technical assistance from IFIs and bilateral programmes can support the transition. Once operational, the architecture should generate a self-sustaining pipeline of bankable projects.

(c) Supporting recommendation: citizen accountability system

- **Lead:** GAM ICT Directorate, in coordination with customer service, planning and finance departments.
- **Key actions:** expand the Amman is Listening *(Baladiyyat)* platform from a feedback channel into a measurable accountability system that publishes district-level service performance and connects citizen-reported data to planning and budgeting decisions. Develop a public dashboard displaying municipal service performance indicators at the district level. Establish a transparent feedback loop showing how citizen inputs translate into municipal action, closing the gap between reporting and response that erodes public trust.
- **Key partners:** GAM districts sector; civil society organizations; media; and international transparency and governance partners.
- **Primary indicators:** number of citizen reports received annually through the platform; share of reports resolved within a defined timeframe; documented improvements in citizen satisfaction scores; and number of participatory budgeting decisions informed by citizen-reported data.
- **Financing:** platform enhancement costs are modest and can build on existing digital infrastructure. The accountability system's primary cost is institutional, dedicating staff time to data analysis, dashboard maintenance and closing feedback loops. This should be treated as a core operational function, not a project.

H. SDG 17: Partnerships for the Goals

1. Background

Global progress on SDG 17 is increasingly constrained by a structural financing and partnership deficit. The global SDG investment gap now exceeds $4 trillion annually, while many developing economies face rising debt service, weak domestic resource mobilization and volatile private capital flows. Official Development Assistance (ODA) remains below agreed commitments and is stretched across competing priorities, although concessional lending and blended-finance models are expanding. Current international reform efforts (financial architecture changes, digital public infrastructure and strengthened tax cooperation) reflect an urgent need to shift from fragmented initiatives to more predictable, effectiveness-oriented partnerships.

In the Arab region, these pressures are magnified by uneven fiscal capacity, debt stress and limited regional integration. Many countries operate with tax-to-GDP ratios below global norms, while subsidy reforms, rising borrowing costs and macroeconomic vulnerabilities constrain investment in social and climate priorities. ESCWA estimates that SDG financing needs remain exceptionally high, particularly in oil-importing, conflict-affected and refugee-hosting countries. Initiatives around cross-border corridors,

renewable energy and digital economy cooperation signal emerging opportunities, but data gaps, fragmentation and uneven institutional capacity continue to slow collective progress.

Cities have become central operators of SDG 17, yet their mandates often exceed their financial and institutional means. Subnational governments account for nearly 40% of public investment worldwide but remain heavily dependent on central transfers and often lack access to long-term capital markets, diversified revenue instruments and strong project-preparation pipelines. VLRs and local SDG observatories increasingly function as platforms for aligning stakeholders, improving data governance and enabling cities to participate more actively in regional and global policy dialogues.

These dynamics shape the environment in which Amman must advance SDG 17. Jordan faces tight fiscal space, rising social and climate-related expenditure needs and strong reliance on external financing, making partnerships essential for urban infrastructure, resilience and digital transformation. Amman's ability to mobilize resources, engage regional and international partners, and strengthen its data and digital governance systems is therefore a core determinant of its SDG delivery. The present section examines how Amman positions itself within this ecosystem and how partnerships, financing and data can accelerate its transition towards a more resilient, inclusive and sustainable urban model.

2. National-local alignment: a shared vision for SDG 17

SDG 17 governance is anchored in a multilevel architecture led by the Ministry of Planning and International Cooperation and the National Higher Committee for Sustainable Development, which aligns national strategies with the 2030 Agenda. Ten national strategies directly address SDG 17, but their significance lies less in number than in strategic positioning: they include the EMV and its executive programmes, the financial inclusion and export strategies that govern resource mobilization, the statistical development strategy that underpins data-driven accountability, and the refugee response frameworks that structure the country's largest international partnerships. SDG 17 alignment, in other words, is concentrated in the strategies that define how Jordan finances, measures and internationalizes its entire development agenda. The SDG task force system, including the dedicated SDG 17 task force, brings ministries, private sector, civil society and international partners into a single coordination platform that formally positions municipalities as partners in planning, reporting and resource mobilization rather than as downstream executors.

National financing and partnership policies set the enabling conditions for municipal action. As a major ODA recipient and long-standing reform partner of the International Monetary Fund, the World Bank and the European Union, Jordan negotiates the macro-level financing envelopes and policy reforms that shape fiscal space for cities. The Investment and PPP Laws define the rules for private capital mobilization across government levels, while central oversight of municipal borrowing ensures consistency with national debt sustainability objectives. Within this framework, the financial autonomy of GAM and its ability to attract donor and IFI financing operate inside nationally determined priorities, making city-led projects part of a broader national effort to expand investment while maintaining fiscal discipline.

National data and digital systems structure how partnerships function across levels. The Department of Statistics and the Jordan Development Portal provide the national backbone for SDG monitoring, standardizing methodologies, indicators and reporting.

Digital governance reforms in e-procurement, transparency initiatives and open data policies set expectations for how information flows across institutions. AUO mirrors this architecture at city level, aligning local indicators with national frameworks and supplying disaggregated data for national reporting and donor-funded programmes. Collaboration between the Department of Statistics, the Jordan Development Portal and AUO is expected to improve interoperability and create more consistent national to local data flows, though capacity gaps in municipal analytics and disaggregation persist.

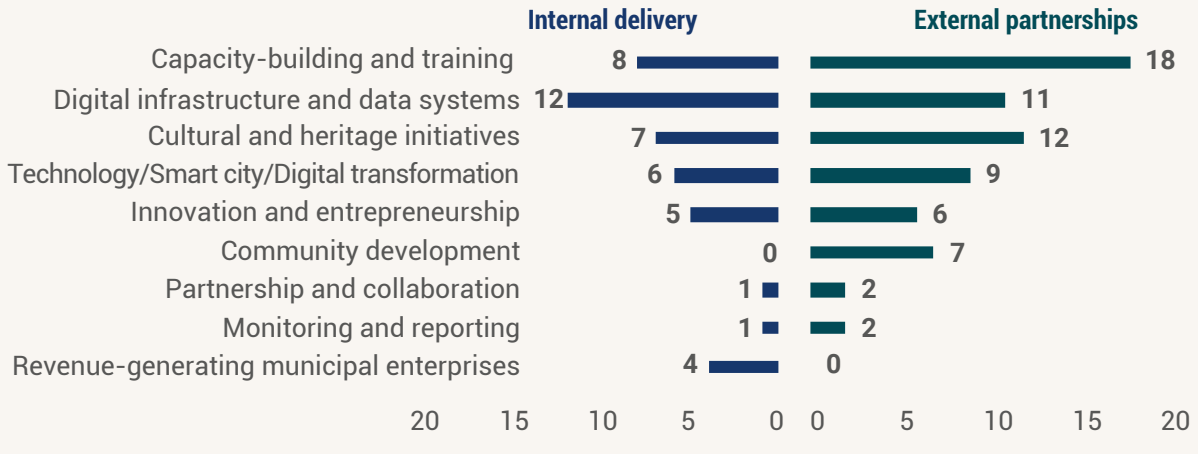
Amman's first VLR formalized this multilevel partnership model by linking the city directly to the Jordanian VNR process. The joint submission created a structured feedback channel between local evidence and national SDG decision-making, reinforcing policy coherence and shared ownership of SDG 17. The Sustainable Development and Amman Resilience Unit coordinates GAM alignment with national priorities and manages engagement with donors, United Nations agencies and global networks. That 10 national strategies converge on partnerships, finance and data governance gives Amman an institutional scaffolding that enables the city to function not merely as a localizer of SDG 17 but as an active contributor to the architecture through which Jordan mobilizes resources, builds evidence and sustains international credibility for the 2030 Agenda as a whole.

3. Project portfolio towards SDG 17 in Amman

Amman's SDG 17 portfolio contains 111 projects spanning most municipal sectors. Core enabling functions lead the agenda: the IT Department (19 projects) builds the digital backbone; Zaha Cultural Center (12 projects) embeds partnerships in social and youth services; and the Executive Director for Financial Affairs (9 projects) manages IFI-linked financial reforms. The Financial and Administrative Sector, Community Development Sector, and IT Department account for more than half of all projects, confirming that partnerships are treated as a cross-institutional operating model rather than a single programme. Around 40% of initiatives are implemented internally, signalling strong municipal capacity, while 60% involve national ministries, international organizations, civil society and private partners.

Thematically, the portfolio clusters around four main pillars. Capacity-building (26 projects) targets municipal staff,

Figure 28. Balance between internal municipal delivery and external partnerships across SDG 17 thematic clusters



Source: Compiled by authors based on data provided by GAM.

youth and communities, investing in skills, employability and institutional readiness. Digital infrastructure and data systems (23 projects), including smart-city platforms, enterprise resource planning roll-outs, GIS, archiving and e-payment, position technology as the enabler of multilevel coordination and monitoring. Cultural and heritage initiatives (19 projects) link SDG 17 to social cohesion and city identity through reading programmes, cultural exchanges and public art. Complementary clusters in innovation and entrepreneurship, community development and municipal enterprises (such as Vision Amman's commercial projects) show a partnership ecosystem that combines social programming, economic development and systemic digital transformation. Multi-stakeholder coordination is sophisticated: nearly one-third of projects involve multiple partners, often five to eight institutions, reflecting advanced collaboration management.

The temporal profile (figure 28) points to SDG 17 as a long-horizon enabling agenda. A sharp surge in 2022 marks the scaling up of partnerships, followed by a peak in 2024 with 81 projects active simultaneously (the highest volume across all SDGs) as digital systems, community programmes, financial reforms and innovation initiatives advance in parallel. About 75% of projects remain ongoing, with timelines extending to 2037. An average duration of 3.6 years and a balanced mix of short, medium and long projects reveal a layered strategy: rapid capacity and service interventions, medium-term infrastructure and systems roll-outs, and long-term partnerships with IFIs and donors that anchor fiscal and institutional reforms.

Project content shows how SDG 17 is reshaping municipal systems rather than simply multiplying cooperation agreements. Partnership-based programmes at Zaha Center create a social infrastructure of youth innovation, entrepreneurship, early-childhood support, disability inclusion and family counselling that no single department could deliver alone. Cultural festivals, heritage corridors, reading initiatives and international exchanges use partnerships with artists, associations, ministries and embassies to strengthen identity and global engagement. In parallel, smart-city platforms, GIS basemaps, archiving, committee automation, unified contact centres and interactive public maps knit operations together through shared data and interoperable tools, while World Bank-supported financial reforms (accrual accounting, cash and debt management, asset valuation, dashboard reporting and long-term financial planning) reinforce municipal creditworthiness and fiscal stability.

At the institutional level, the portfolio shows SDG 17 driving lasting capability development. Zaha's accredited training programmes, ISO-aligned educational services, monitoring and evaluation systems and staff-capacity initiatives signal a professionalization of community services. Municipal workforce reforms – job classification, manpower planning, restructuring, excellence incubators, innovation roadmaps and total-quality management – embed partnership-driven change inside core governance functions. Innovation programmes on AI, entrepreneurship, business intelligence and digital skills prepare staff for a more technology-intensive service model, while contractor-evaluation systems, agreement-management platforms and liaison databases modernize how GAM governs its partnerships. Revenue-oriented municipal enterprises, from the slaughterhouse and Motor City to mixed-use commercial complexes and popular markets, illustrate how partnerships also underpin Amman's investment and economic-development strategy. Overall, SDG 17 emerges as the enabling architecture of Amman's sustainable-development model, consolidating digital, financial, social and organizational transformations into a coherent, partnership-driven system.

4. Focus areas for smart and resilient development

(a) Fiscal foundations for partnership

Financial resilience is a precondition for credible partnership: municipalities that cannot absorb fiscal shocks or demonstrate transparent financial management struggle to attract and sustain international collaboration. GAM fiscal modernization and pursuit of a formal credit rating represent smart governance investments that unlock access to climate finance, development capital and institutional partnerships at preferential terms.

GAM holds distinctive financial autonomy among Arab municipalities, generating approximately 88% of revenue from own-source streams, property taxes, professional licensing fees and investment returns.[82] This self-reliance reduces dependence on central government transfers while enabling direct engagement with international partners. Yet the COVID-19 pandemic exposed vulnerabilities: revenues decreased by JOD 31.3 million between March and May 2020, producing a JOD 45 million deficit representing 15% of total 2021 revenues.[83]

The GAM response combines fiscal modernization (detailed in SDG 16) with strategic international financial institution partnerships that bring both capital and expertise. Multi-year collaborations with the World Bank, AFD and EBRD extend beyond project financing to institutional capacity-building, creating lasting improvements in financial management.[84]

The transition to accrual accounting (supported by World Bank technical assistance) carries strategic significance for partnerships: transparent, standards-compliant financial reporting is the gateway to creditworthiness assessments, preferential borrowing terms, and access to international climate and development finance. GAM explicitly prioritizes achieving a formal credit rating from international agencies, positioning the municipality for GCF, GEF and MDB financing windows that require demonstrated financial management capacity.

Revenue diversification through AVID generates predictable income streams (JOD 2.5 million annually through 2033 from land leases)[85] that continue regardless of economic cycles, reducing fiscal volatility that might otherwise constrain partnership commitments. This commercial capacity also creates co-investment opportunities with private sector partners seeking structured municipal collaboration.

(b) International partnerships and humanitarian-development linkages

Amman's dual identity as a rapidly growing capital and major refugee-hosting city demands partnerships that bridge humanitarian response and long-term urban development. The diversity of bilateral, multilateral and United Nations partnerships creates built-in redundancy, a hallmark of resilient governance, ensuring that development momentum is not dependent on any single funding source or institutional relationship.

Amman's partnership ecosystem reflects its distinctive context as a major refugee-hosting city where humanitarian and development agendas converge. The Jordan Response Plan provided the government-led planning and financing framework that directed support to both refugees and host communities; by aligning humanitarian and resilience priorities within a single national plan, it helped translate potentially competing needs into integrated programming that strengthens urban systems for all residents. Complementing this, the Jordan Compact institutionalizes frameworks through which

international support flows to municipalities delivering services in refugee-hosting areas, positioning GAM as a development partner implementing solutions with relevance beyond Jordanian borders.

Bilateral and multilateral partnerships demonstrate this integration in practice. The International Rescue Committee collaborates on inclusive resilience plans, extending benefits explicitly to displaced populations alongside host communities. GIZ supports youth and women empowerment programmes, building economic participation among populations facing labour market barriers. The European Bank for Reconstruction and Development partnered on the Amman Green City Action Plan, bringing climate finance expertise to municipal environmental strategy. BMZ funds the Urban Micro-Lungs initiative creating dense native forests in heat-stressed neighbourhoods. UN-Habitat supports flash flood resilience mapping and the VLR process. ESCWA and UN-Habitat provide technical assistance for SDG monitoring. The South Korean partnership builds institutional capacity for green growth and climate change planning.

These partnerships operate across multiple modalities: direct project financing, technical assistance building municipal capabilities, knowledge transfer through embedded advisors, and policy dialogue shaping national frameworks affecting local implementation. The diversity creates redundancy, if any single partnership faces constraints, others continue advancing development objectives.

(c) City networks and peer learning

Resilient cities do not develop solutions in isolation; they accelerate adaptation by importing tested approaches and exporting their own innovations through structured peer exchange. Amman's membership in C40, United Cities and Local Governments (UCLG) and the 100 Resilient Cities Network provides continuous access to global practice on climate action, migration governance and smart urbanism beyond the lifecycle of any individual project.

Global city networks enable horizontal knowledge exchange that accelerates solution development and imports tested approaches while exporting Amman's innovations. Network membership positions the municipality within communities of practice addressing shared challenges, thereby creating continuous learning opportunities independent of specific project cycles.

Through the 100 Resilient Cities Network, Amman participated in exchanges with Athens, Los Angeles and other cities addressing migrant integration, importing frameworks for inclusive urban governance while contributing lessons from hosting one of the world's largest urban refugee populations. The Resilience Strategy itself emerged from this network engagement, embedding resilience thinking across municipal operations.

C40 Cities membership connects Amman to climate action innovations from metropolitan areas worldwide, providing access to technical resources, peer review of climate plans and platforms for showcasing municipal initiatives. The Students Reinventing Cities competition with C40 engages university teams designing implementable climate solutions for specific Amman sites, building local capacity while generating actionable proposals.

UCLG positions Amman within the global municipal movement advocating for local government recognition in international frameworks. The Mayors Migration Council collaboration supported the development of the Climate Academy for children, explicitly including refugee youth in climate education programming, demonstrating how network membership generates concrete initiatives beyond advocacy.

(d) Community partnership platforms

The social infrastructure built through routine community engagement (trust, institutional familiarity and accessible local presence) is precisely the infrastructure that proves critical during crises. Zaha Cultural Centers, family counselling services and participatory platforms like Amman is Listening, function as smart, distributed partnership nodes that translate institutional commitments into resident-level resilience.

Effective partnerships require infrastructure translating institutional commitments into programming reaching residents. Zaha Cultural Center operates as the GAM primary platform for community engagement, with seven branches distributed across districts ensuring accessible local presence. The centre offers 75 different free training programmes targeting children, youth, women and persons with disabilities. Programme partnerships demonstrate the collaborative model: the Arab Robotics Association supports STEM initiatives; the Vocational Training Corporation and Agricultural Credit Corporation partner on the Zaha Entrepreneurship Platform preparing young people for labour market entry; the Royal Film Commission collaborates on family programming; and the International Rescue Committee supports staff capacity development, ensuring that quality matches private sector alternatives.

Family counselling centres provide psychosocial support, strengthening household resilience to stresses that might otherwise cascade into crises. This social infrastructure builds community trust proving invaluable when crises require coordinated response, as residents accessing Zaha programmes during routine periods develop institutional relationships that enable cooperation during emergencies.

Underpinning this social infrastructure is a structured, multi-stakeholder volunteer ecosystem that illustrates Amman's practical implementation of SDG 17. At its core, the Nahno National Engagement and Volunteering Platform, jointly operated by the Crown Prince Foundation, UNICEF and the Ministry of Youth serves as the country's central mechanism for unifying volunteer opportunities across public institutions, non-governmental organizations (NGOs), private companies and municipal programmes.[86] With over 43,000 registered young people, hundreds of partner entities and millions of logged service hours nationally, Nahno formalizes volunteer pathways, accredits participation and aligns civic engagement with national development priorities, providing the digital backbone that connects Amman's civic energy to institutional channels.

Civil society organizations add substantial operational capacity on top of this backbone. Tkiyet Um Ali has mobilized tens of thousands of volunteers and corporate partners since 2003 for large-scale food parcel packing, distribution and seasonal meal service, while corporate partners such as Bank ABC and TotalEnergies Jordan regularly deploy employee volunteers during Ramadan and emergency response periods.[87] Taken together, these governmental, digital, corporate and civil society partnerships illustrate how Amman operationalizes SDG 17 in practice, through vertical coordination across government levels, horizontal collaboration across sectors, and digital facilitation that enables citywide volunteerism at scale.

The Amman is Listening platform exemplifies partnership-driven innovation. Developed through collaboration with international expertise, the participatory platform maps resident needs during both routine conditions and crisis events, transforming citizens into data generators for resilience planning. Engagement with refugee communities ensures that resilience planning incorporates

perspectives of those most exposed to urban risks.

(e) Multi-stakeholder coordination

Managing over 60 contributing partners requires governance architecture as sophisticated as the partnerships themselves. GAM coordination mechanisms, from the Sustainable Development Unit to the Smart City governance structure, provide the institutional intelligence layer ensuring that partnership density translates into coherent delivery rather than fragmented effort.

Amman exhibits remarkable partnership density: over 60 entities from public sector, private sector, civil society and international organizations contributed to VLR alone. Approximately 60% of SDG 17 projects involve external partners, with many engaging five to eight institutions in implementation arrangements requiring sophisticated coordination.

Internal mechanisms manage this complexity. The Sustainable Development and Amman Resilience Unit coordinates alignment with national priorities and manages engagement with donors, United Nations agencies and global networks. Partner relationship platforms formalize coordination currently dependent on individual relationships. The Smart City governance architecture, comprising the Steering Committee, the Executive Committee and the Project Management Office, ensures that digital transformation proceeds with clear accountability across the partner ecosystem.

Workforce development sustains partnership capacity. The Regional Training Center (connected to the Al Hussein Cultural Center complex) conducts over 50 courses and workshops annually, extending reach beyond GAM to government ministries and community institutions. This builds regional capacity, strengthening the broader ecosystem of actors who must coordinate during large-scale initiatives. Total Quality Management systems and external validation through the King Abdullah II Award for Excellence demonstrate quality standards that justify partner confidence.

The VLR process itself functions as partnership infrastructure, with structured multi-stakeholder engagement creating shared ownership of SDG progress while generating lessons feeding back into national reporting. Amman pioneered this process in the Arab region, establishing methodology now adopted by peer cities and explicitly linking local evidence to the Jordanian VNR.

(f) Integration

SDG 17 is where the city's smartness and resilience capacities become collaborative rather than solely institutional: the fiscal systems, digital platforms, city networks and community infrastructure examined here are the channels through which external resources, knowledge and legitimacy flow into every other Goal's implementation.

SDG 17 provides the partnership architecture enabling implementation across all other Goals: international financial institution engagement mobilizes resources for infrastructure (SDG 9, SDG 11) and climate action (SDG 13); humanitarian-development linkages ensure refugee inclusion across service delivery (SDG 3, SDG 11); city networks accelerate solution transfer for urban challenges; and community platforms translate institutional partnerships into resident-level benefits. Partnerships are not supplementary to development but constitutive of it, the collaborative relationships through which resources, knowledge and legitimacy flow into municipal action.

5. Policy recommendations and means of implementation for SDG 17

(a) Priority recommendation: governance innovation programme

Policy objective: consolidate community platforms and city-network engagements into a systematic programme that documents and exports tested governance innovations to peer cities while importing approaches through structured learning. Anchor this programme in Amman's active participation in the Partnership Platform on Localizing the SDGs (MASE), a joint MASE/UN-Habitat initiative recently joined by Jordan, leveraging its tools for peer-city exchange, project design and access to international funding, and connecting to its existing Jordanian footprint through the Local 2030 Knowledge and Scientific Network.

Responsible institutions

- GAM Sustainable Development and Resilience Unit, in coordination with the External Relations and International Cooperation Department.
- GAM Institutional Performance Development Directorate.
- GAM Community Development Sector.

Supporting partners

- International city networks (C40, UCLG, Metropolis, CityNet and Global Observatory Network).
- Universities and research centres.
- National institutions overseeing awards.
- Civil society organizations.
- Private sector.

Implementation pathway

- **Short term:** conduct an inventory of governance innovations already tested or operational within GAM, across digital services, participatory processes, resilience planning and service delivery, to establish what Amman can credibly document and share. Establish the Excellence Incubator as an internal mechanism for identifying, nurturing and recognizing innovative practices and staff, linked to national and international award programmes. Define a structured learning framework that identifies priority areas where Amman wants to import approaches from peer cities, matched to specific city-network engagements. Activate deliberate approaches to identifying and adapting specific practices from good practices (for example, Barcelona's integration of SDG indicators into municipal planning).
- **Mid term:** develop a documentation methodology that captures governance innovations in a format useful for peer cities – context, design, implementation, results, and transferability conditions. Begin publishing innovation case studies through international city networks and the global VLR community. Launch structured learning exchanges on priority themes, bringing specific practices from peer cities into GAM operational departments with clear adaptation plans. Integrate community platform outputs into the innovation pipeline, ensuring that bottom-up innovations from participatory processes are captured alongside institutional ones.

- **Long term:** position Amman as a recognized hub for urban governance innovation in the Arab region, building on the VLR process and city-network memberships. Embed the innovation programme into the GAM institutional culture through the Excellence Incubator and regular recognition cycles. Explore mechanisms for sustained peer exchange beyond one-off events (for example, twinning arrangements, secondments or thematic communities of practice).

Indicators and targets

- **Outputs**
  - Governance innovations documented and published, and actively communicated to Amman residents through accessible channels including social media, building public understanding and support for the city's work.
  - Structured learning exchanges completed with peer cities.
  - Staff participating in the Excellence Incubator and award programmes.
  - Community-originated innovations captured through participatory platforms.
- **Outcomes**
  - Innovations adopted or adapted by peer cities (tracked through network feedback).
  - Practices imported from peer cities and operationalized within GAM.
  - Amman's positioning in international governance and sustainability indices and recognition programmes.

Financing route

The short term is low-cost: innovation inventory, incubator design and learning framework development are institutional tasks financeable through existing budgets. In the mid term, documentation and exchange activities can be financed through city-network membership benefits (many networks offer funded peer exchanges), technical assistance from international organizations, and bilateral knowledge-sharing programmes. In the long term, positioning and sustained exchange can be partially self-financing if Amman becomes a learning destination, hosting delegations, contributing to training programmes and participating in funded research partnerships.

(b) Supporting recommendation: climate-SDG investment pipeline

— **Lead:** GAM Sustainable Development and Resilience Unit, in coordination with the External Relations and International Cooperation Department and the Debt Management and Funded Projects Unit.

— **Key actions:** establish a project preparation function within GAM that takes priority infrastructure and service initiatives through feasibility, financial structuring and SDG impact assessment. This can be delivered through existing administrative units without creating new structures, or through a dedicated technical unit. The appropriate model will depend on the GAM capacity assessment, but the function is needed regardless of where it sits. Build a database of priority urban projects linked to the SDGs, with standardized feasibility and impact assessment methodologies. Develop standard PPP frameworks that reduce transaction costs and attract private co-investment.

- **Key partners:** Ministry of Planning and International Cooperation; Ministry of Finance; international financing institutions (World Bank, EBRD); private sector investors; and the C40 network.
- **Primary indicators:** number of SDG-tagged projects in the pipeline that are investment-ready; volume of climate and development finance mobilized; PPP transactions completed; and time from project concept to financial close.
- **Financing:** project preparation itself requires upfront investment, including staff members, feasibility studies and financial structuring, but generates returns by unlocking capital at scale. IFIs often provide project preparation facility funding precisely because it accelerates their own lending pipelines. C40's Finance Facility and similar city-focused mechanisms are also relevant.

(c) Supporting recommendation: humanitarian-development-peace compact and SDG partnership forum

- **Lead:** GAM External Relations and International Cooperation Department, in coordination with the Sustainable Development and Resilience Unit.
- **Key actions:** launch an annual SDG partnership forum that convenes all relevant stakeholders (municipal, national, international, civil society and the private sector) to identify priorities, align programming and strengthen accountability across Amman's dense partnership ecosystem. Position the forum as the operational vehicle for connecting SDG-aligned partnerships to the financing of the EMV: while EMV priorities are by design aligned with the SDGs, they are not systematically monetized, leaving a persistent gap between strategic ambition and committed resources. The forum's mandate should therefore include matchmaking between EMV-aligned investment opportunities and SDG-oriented partners, structured engagement with international financing instruments (including the MASE/UN-Habitat Partnership Platform's funding channels), and joint articulation with the private sector around bankable projects that simultaneously advance EMV targets and SDG indicators. Formalize a humanitarian-development-peace (HDP) compact for refugee-hosting districts, converting ad hoc humanitarian-development coordination into a structured framework with shared objectives and mutual accountability. Develop a unified methodology for assessing partnership impact, ensuring that collaborations with the private sector and international entities deliver tangible returns on municipal performance. Improve quality-of-life indicators specifically in host communities, with UNHCR and local community organizations as essential participants.
- **Key partners:** UNHCR and the United Nations Country Team operating in Amman; Ministry of Planning and International Cooperation; Ministry of Social Development; international NGOs active in refugee-hosting districts; local community organizations; and private sector partners.
- **Primary indicators:** number of partnership agreements with defined impact metrics; quality-of-life indicators in refugee-hosting districts tracked against baseline; partnership forum convened annually with documented outcomes and follow-up; and share of partnerships with completed impact assessments.
- **Financing:** the forum itself is a coordination mechanism with modest direct costs. The HDP compact should be designed to redirect existing humanitarian and development funding towards shared objectives, not create new funding requirements. Impact assessment methodology development can be supported through United Nations technical assistance.

I. Cross-cutting implementation enablers

These three enablers were surfaced through SDG taskforce consultations as priorities that cut across multiple SDGs. They are not sector-specific recommendations but institutional preconditions that underpin the delivery of multiple policy recommendations across the VLR.

1. Enabler 1: Comprehensive master plan for Amman

Rationale: multiple consultation respondents, across different SDGs and institutional backgrounds, converged on the same point: Amman needs a new comprehensive master plan that serves as the integrating framework for the city's development trajectory. The current planning system does not provide the spatial and strategic coherence needed to deliver on compact development, sustainable mobility, climate resilience, green-blue infrastructure and gender-responsive urban design simultaneously. Without this overarching framework, individual SDG recommendations risk being implemented in isolation, producing fragmented outcomes that undermine each other.

The master plan was described in the consultation as needing to encompass all city service layers such as land use, transport and mobility, green spaces, sustainable urban growth, risk and climate data, AI, urban and social data, and heritage and culture. It should provide an integrated vision linking all elements of the city within a single strategic framework that balances economic development, environmental protection, quality of life and resilience.

Institutional home: GAM Planning and Urban Development sectors, with the Sustainable Development and Resilience Unit ensuring that climate, resilience and sustainability criteria are embedded throughout.

Key considerations: the master plan process is already under way through Amman's new planning system. The implementation opportunity is not to launch a separate exercise but to ensure that the SDG-related criteria (such as climate risk, health equity, gender safety, mobility access and green-blue infrastructure) are embedded as mandatory layers in the plan as it develops. The consultation also stressed that the plan must be grounded in verified as-built data reflecting actual site conditions, not reliant solely on GIS-based geographic information.

Financing: master plan development is a core municipal planning function financeable through the GAM budget. The technical inputs required (climate risk modelling, health equity mapping, gender safety auditing, and transport demand analysis) are generated through the SDG-specific recommendations and their associated financing. The enabler's cost is primarily coordination, not capital.

2. Enabler 2: Climate finance mechanisms for cities

Rationale: the consultation surfaced a clear gap between the ambition of Amman's climate and sustainability commitments and the financing architecture available to deliver them. Multiple respondents identified the need for innovative financing mechanisms to support climate adaptation and mitigation projects, including accessing international climate funds, establishing partnerships with international financial institutions, and introducing urban financing instruments such as green bonds.

This enabler is distinct from the individual project financing routes identified in each

SDG recommendation. It addresses the systemic capacity to mobilize climate finance at scale (the institutional readiness, financial instruments and relationships) that allow Amman to access capital markets and international funds consistently.

Institutional home: GAM Sustainable Development and Resilience Unit (climate strategy alignment), External Relations and International Cooperation Department (IFI and fund relationships) and the Debt Management and Funded Projects Unit (financial structuring and issuance), with the Ministry of Planning and International Cooperation and the Ministry of Environment as national-level counterparts.

Key actions: prepare a climate finance document for Amman's Climate Action Plan. Develop a portfolio of climate and green projects structured to meet eligibility criteria for international climate funds (GCF, Adaptation Fund, bilateral climate windows). Explore green bond issuance as a municipal financing instrument, building on the accrual accounting and creditworthiness reforms. Establish standing relationships with IFI climate financing windows (World Bank Climate Change Fund, EBRD Green Economy Transition) beyond project-by-project engagement. Align all of the above with the Ministry of Environment's role as UNFCCC focal point, ensuring Amman's municipal climate finance efforts complement rather than duplicate national reporting.

Financing: the enabler itself requires modest upfront investment, climate finance document preparation, project structuring expertise and relationship management. This can be financed through technical assistance from city networks, international organizations and bilateral climate programmes. The return is disproportionate: a functioning climate finance architecture unlocks capital at a scale that individual project fundraising cannot.

3. Enabler 3: Open urban data platforms

Rationale: across multiple SDG consultations, respondents pointed to the same underlying need: unified, accessible and transparent urban data as the foundation for evidence-based decision-making, public accountability and inter-institutional coordination. This enabler is not about building a single new platform – it is about establishing the data governance principles, protocols and infrastructure that allow the various data systems being developed under individual SDGs to communicate with each other and with the public.

The Urban Intelligence System (SDG 11, recommendation 3), the climate risk platform (SDG 13, recommendation 1), the compliance and enforcement platform (SDG 16, recommendation 1), the health equity monitoring framework (SDG 3, recommendation 3) and the gender gap dashboard (SDG 5, recommendation 1) are all generating valuable urban data. Without a shared open data architecture, they risk becoming another set of institutional silos, each valuable individually but unable to inform cross-cutting decisions or enable public scrutiny.

Institutional home: GAM AUO and GIS Department (data production and management), IT Directorate (technical infrastructure), and Institutional Performance Development Directorate (governance and standards). The Sustainable Development and Resilience Unit serves as the integrating function that ensures data from climate, health, gender and resilience domains flows into the shared architecture.

Key actions: adopt a municipal open data policy defining what categories of urban performance data will be made

publicly available, at what granularity and with what update frequency. Establish interoperability standards across the data platforms being built under individual SDG recommendations, so that the climate risk platform, the health equity framework, the compliance system and the mobility monitoring system can exchange data. Develop the neighbourhood atlas or district urban profiles proposed in the SDG 11 consultation as the flagship open data product, a tangible, citizen-facing output that demonstrates the value of the architecture. Build data literacy capacity within GAM and among community stakeholders, so that open data translates into informed participation rather than unused dashboards.

Financing: the open data enabler is primarily a governance and standards exercise, not a capital-intensive investment. The underlying data platforms are being financed through their respective SDG recommendations. The incremental cost is interoperability standards, the open data portal and the neighbourhood atlas, all of which can be financed through existing digital governance budgets supplemented by technical assistance from international organizations, or bilateral digital transformation programmes.

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The Second Voluntary Local Review (VLR) of the City of Amman reflects the Greater Amman Municipality's continued commitment to transparent governance, inclusive development, and the localization of the Sustainable Development Goals (SDGs). Building on the first VLR published in 2022, which positioned Amman as a regional pioneer in SDG localization, the second VLR demonstrates how sustainability has become institutionalized within the city's planning and governance systems. Grounded in evidence-based decision-making, participatory governance and long-term urban transformation, the second VLR strengthens national-local policy coherence through its alignment with the Jordanian 2026 Voluntary National Review, the Economic Modernization Vision 2023–2033, and the National Urban Policy.

The second VLR highlights how the foundations established through Amman's first VLR have translated into tangible and systemic progress across urban planning, mobility, energy, water management, climate action and digital transformation, moving from pilot initiatives to institutionalized implementation. It assesses progress toward SDGs 3, 5, 7, 9, 11, 13, 16 and 17, noting significant advances in urban mobility, climate action, planning reforms and digital governance, while recognizing persistent challenges related to spatial inequalities and equitable access to services. Four of these Goals, namely SDGs 7, 9, 11 and 17, are also under review at the 2026 High-level Political Forum on Sustainable Development, underscoring the broader relevance of Amman's experience to global SDG follow-up and review processes. Beyond reporting progress, the second VLR translates its findings into prioritized policy recommendations and a pipeline of bankable projects aimed at accelerating implementation, mobilizing investment and strengthening urban resilience, further consolidating Amman's position as a leading regional model for SDG localization and sustainable urban development.

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