

# Amman

## Climate Change Mitigation Strategy



# Agenda

**1**

**Development  
changes**

**2**

**Regulatory  
Reforms**

**3**

**GAM's  
Achievements**

**4**

**De-Risking  
policies and  
Platforms**

**5**

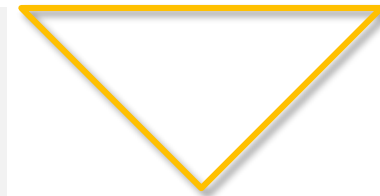
**GAM's  
Approach**

# Development Challenges( 2008, ..., 2011)

- *population growth.*
- *and successive influxes of refugees ( 2011)*
- *Jordan imports 96% of its oil and gas*
- *water insecurity.*

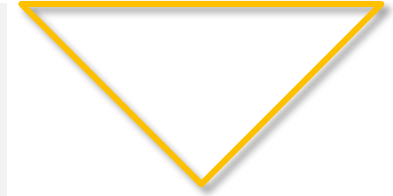
Emission Sources	2010	2015	2020	2025	2030	2035	2040
Electricity	7477	9140	12562	10114	17517	19019	19264
Transport	7573	9052	11145	13584	16221	18934	21550
Industry	1843	1407	1664	1947	2261	2605	2984
Residential	1471	1737	2030	2344	2684	3049	3332
Commercial	439	407	486	574	670	764	853
Agriculture	395	526	649	766	902	1046	1181
Others*	792	973	870	591	668	555	447
<b>Total energy</b>	<b>19990</b>	<b>23242</b>	<b>29406</b>	<b>29920</b>	<b>40923</b>	<b>45972</b>	<b>49611</b>

\*.Emissions from refinery processes and fuel transportation



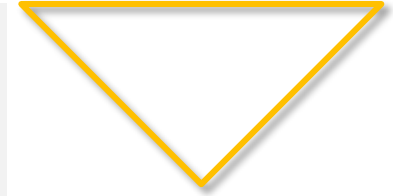
# *Jordan's national strategy for energy*

- *Increase the contribution of local energy resources to the energy mix: R.E and oil shale.*
- *Achieving the security of providing Energy necessary for comprehensive sustainable development .*
- *Reduce the cost of energy on national economy ( Increase the energy efficiency of buildings and appliances in different applications ).*



# Regulatory Reforms for climate change

- **The Renewable Energy and Energy Efficiency Law No (13).**
- **National Green Growth Plan 2016**
- **Jordan's National Energy Efficiency Action Plan (NEEAP)  
(20% reduction target across all sectors)**
- **Establishes the (JREEEF) under the umbrella of (MEMR)**
- **By-law No (73) on Regulating Procedures and Means of  
Conserving Energy and Improving Its Efficiency**
- **Jordan's Nationally Determined Contribution(NDC)  
( 1.5% GHG Reduction by 2030 & 12.5% upon availability  
of International climate finance)**



*Amman's 2025 Vision and Aspiration | In Action*

# Amman: A Green, Sustainable City

An Efficient , heritage and multicultural City

## Amman's Vision



# GAM's Achievements- Mitigation plan

## Energy And Green Building

---

**Collaborated with  
JBC in Publishing  
Jordanian Green  
Building Guide**

**Delivering  
Incentives for Green  
Buildings  
*Like: Density Bonus,  
Extra Floor***

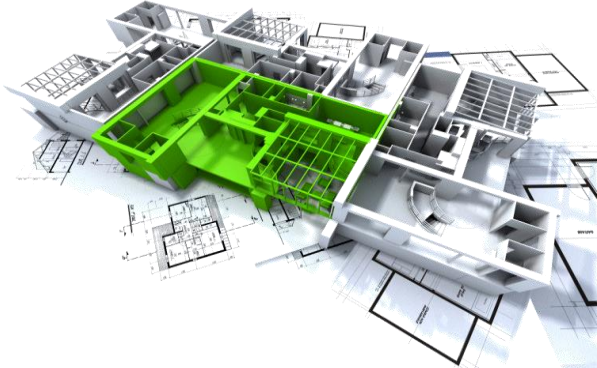
**Produced and  
launched PV roof  
installment municipal  
guidelines &  
regulatory  
framework &  
currently works on  
issuing approvals in  
regard**

**Awareness  
Campaigns**

FOR ANY GREEN BUILDING PROJECT Comply with Jordan Green Building Guide



**Density Bonus : Additional Percentage to original  
Floor Area Ratio ( FAR)**



**Objective:**

**Compensate the owner from Extra capital cost  
from the implementation of Green Building**



# Our Achievements- Mitigation plan

## Renewable Energy

---

**Installing PV panel  
on Rooftop of  
GAM's Building  
250KW**

**Launched a pilot  
project with Prince  
Khalid bin Al Walid  
bin Talal (KBW) of  
installing 80 MW PV  
project.**

**Launched a pilot  
project with Prince  
Khalid bin Al Walid  
bin Talal of installing  
LED for street lights**

# GAM's Achievements- Mitigation plan

## Transportation And Waste

---

**Licensing  
Electric Car as  
Taxi, and  
charging  
Stations**

**Bus Rapid Transit  
( BRT), public  
Transportation**

**Bio Gas Project  
Waste to Energy  
50 MW**

# De-Risking Policies and Platforms

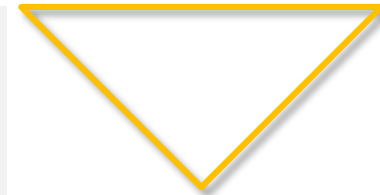
*Despite the initial accomplishments and regulatory reforms that the Government of Jordan and GAM have taken to shift to a more sustainable growth path.*



*Further integrated de-risking policies and platforms are needed across the energy and water nexus for the GAM to meet their EE targets, conserve water.*



*Help Jordanian Government authorities to cope with the additional financial obligations and income losses resulting from the Syria crisis.*





## **Barriers**

- Barrier #1: Lack of assessment tools for optimized climate-resilient**
- Barrier #2: Lack of tools for enforcing and enhancing regulatory frameworks for EE in the GAM**
- Barrier #3: Information/Awareness**
- Barrier #4: Technical capacity barriers and absence of performance-based GHG monitoring frameworks**
- Barrier #5: Lack of fiscal incentives**



# Project title: A systemic approach to sustainable urbanization and resource efficiency in (GAM)

## ( \$2.64 M ) Fund

United Nations Development Programme  
Empowered lives. Resilient nations.

**Project title:** A systemic approach to sustainable urbanization and resource efficiency in Greater Amman Municipality (GAM)

**Country:** Jordan | **Implementing Partner:** Greater Amman Municipality (GAM) | **Management Arrangement:** National Implementation Modality (NIM)

**UNDAF/Country Programme Outcome:**  
Outcome 3: Government and national institutions have operationalized mechanisms to develop and implement strategies and plans targeting key cultural, environmental and disaster risk reduction issues (including a transition to a Green Economy) at national and sub-national levels.

**UNDP Strategic Plan Output:**  
Output 3.3: Inclusive and sustainable solutions adopted to achieve increased energy efficiency and universal modern energy access (especially off-grid sources of renewable energy).

**UNDP Social and Environmental Screening Category:** Low | **UNDP Gender Marker:** 2

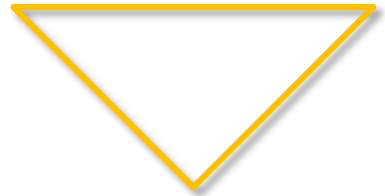
**Atlas Proposal/Award ID (also known as 'project'):** Atlas output Project ID (also known as 'output'):  
UNDP-GEF PIMS ID: 3543 | GEF ID: 9206

**Planned start date:** October 1, 2016 | **Planned end date:** September 30, 2022

FINANCING PLAN	
GEF Trust Fund	US\$ 2,640,000
UNDP TRAC resources	US\$ 100,000
UNDP	US\$ 200,000
<b>(1) Total Budget administered by UNDP</b>	<b>US\$ 2,940,000</b>
PARALLEL CO-FINANCING	
Government	US\$ 9,500,000 (GAM)
	US\$ 1,300,000 (MEMIR)
	US\$ 1,000,000 (MOR)
	US\$ 400,000 (UNBC)
	US\$ 3,000,000 (MOPIC)
NGO & Bilateral	US\$ 300,000 (SBC)
	US\$ 1,500,000 (RCREE)
Private Sector	US\$ 1,500,000 (SEED II)
	US\$ 2,150,000
<b>(2) Total co-financing</b>	<b>US\$ 21,850,000</b>
<b>(3) Grand-Total Project Financing (1)+(2)</b>	<b>US\$ 24,790,000</b>

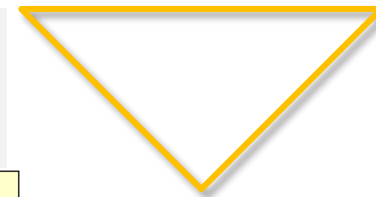
**Brief project description:**  
The UNDP-GEF project is designed to promote low-carbon buildings in Greater Amman Municipality, and eventually in other municipalities and cities in Jordan, through the application of Building Energy Codes, and in particular the Thermal Insulation Code for new buildings, and retrofits guidelines for existing buildings. The project will directly support the implementation of the National Energy Efficiency Action Plan 2016, and the National Green Growth Plan 2016. This will be achieved through four outcomes: (1) outcome 1: project preparation, including framework to foster sustainable investment decisions in GEM and subsequent program start-up.

1 | Page



## Example of long sheet work plan in details

EXPECTED OUTPUTS	PLANNED ACTIVITIES	PROJECT YEAR 20--					RESPONSIBLE PARTY	PLANNED BUDGET		
		18	19	20	21	22		Funding Source	Budget Description	Amount (US\$)
Outcome 1: Planning and monitoring frameworks in place to foster accelerated low-carbon development in GAM and benchmark progress against established international standards.										
Output 1.1: Development of a Sustainability Plan (SP) and Financing Strategy (FS) for the GAM using the updated Amman Master Plan.  Indicator 1.1: Number of Sustainability Plan and Financing Strategy  Baselines (2017): No Sustainability Plan and Financing Strategy in place.  Targets (2018): 1 Sustainability Plan and 1 Financing Strategy developed and approved by GAM administration.	Activity 1.1.1: Review and update Greater Amman Master Plan.	x					GAM	GEF	71300, 72200,72500	15000
	Activity 1.1.2: Develop a Sustainability Plan (SP) for the period 2017 – 2030.	x	x				GAM	GEF	71300, 75700, 74200	20000
		x	x	x	x		GAM	UNDP	71600	22200
	Activity 1.1.3: Develop a Financing Strategy (FS) to implement SP.	x	x				GAM	GEF	71300, 75700, 74200	20000



## **Project Outputs:**



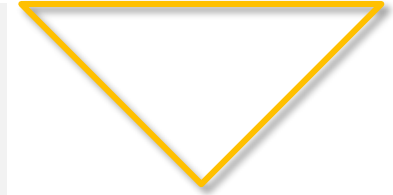
***Output 1 :Development of a Sustainability Plan (SP) based on Financing Strategy (FS) for the GAM using the updated Amman Master Plan.***



***Output 2:Quantification of all energy, water and material flows in the GAM.( Data Base collection)***



***Output 3:Institutional strengthening (Amman Urban Observatory) for data analysis and reporting.***



## ***Project Outputs, contin...***



***Output 4: Assessment and costing of awareness-raising campaigns for the Sustainability Plan.***



***Output 5: Development of an urban MRV system for Building Energy Codes for determination of emission reductions from investments***



***Output 6: 2 new private-sector and 2 existing public sector integrating best practices resource efficiency measures / technology are supported***





## *Project Outputs, contin...*



***Output 7: A new Sustainable Development Department (SDD) set-up within GAM.***



***Output 8: Enforcement capabilities of new Sustainable Development Department (SDD) strengthened as regards compliance with Energy Building Codes***



## **Project Outputs, contin...**



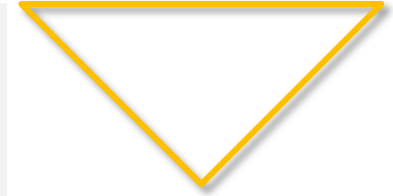
***Output 9: Update of the existing Building Codes and development of a 'Retrofit Building Guidelines' to make upgrades more acceptable.***



***Output 10: Development of a training and accreditation programme for ESCOs for selected Building Energy Codes.***

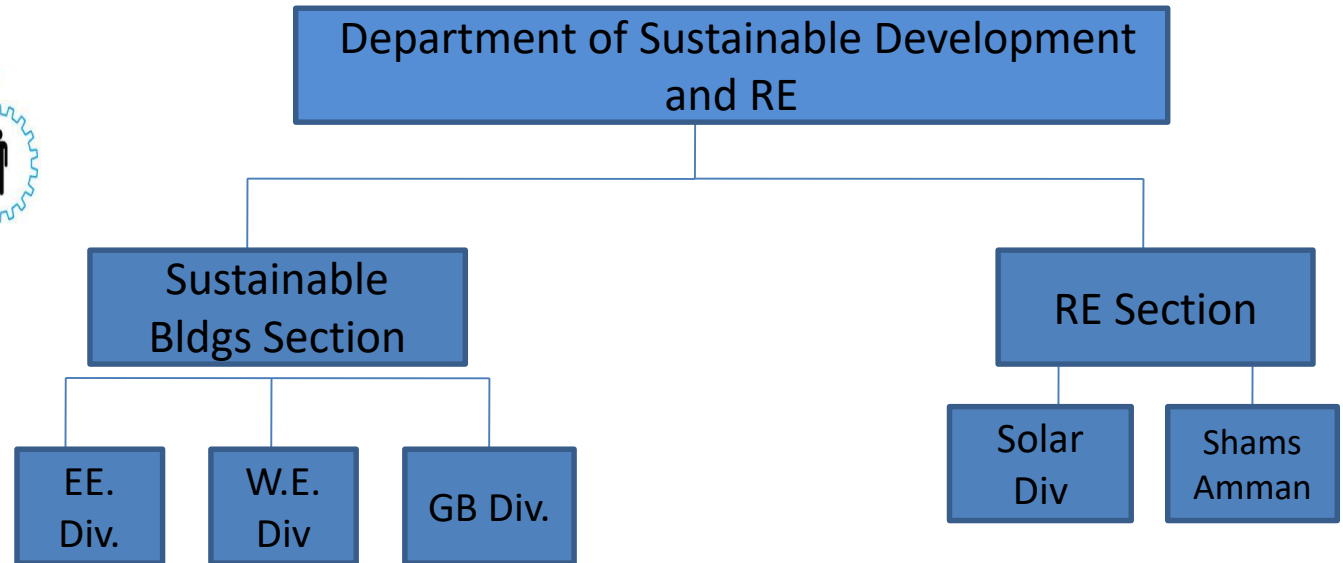


***Output 11: Development and dissemination of an online tool for carrying out comparative socio-economic and environmental analysis of buildings using life-cycle methodology***



# Our Approach

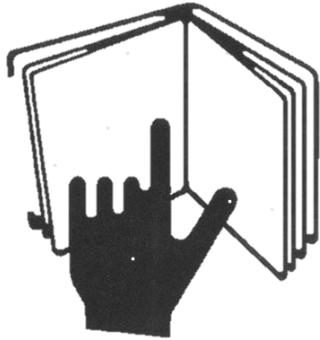
Sustainable Dept.



# Our Approach



**Awareness**



**Regulation**



**Capacity**



**Partnerships**



**Incentives**

## *Lessons Learnt*

*Experiences and Best Practices Related to the Project are Compiled and Disseminated in other Cities of Jordan*

**(((DATA POOL)))**



**RE's & EE**



**Water**



**Waste**



**Green Buildings**



Thank You