Organizing Framework for Scoping of PMR Activities

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pmr | PARTNERSHIP FOR MARKET READINESS

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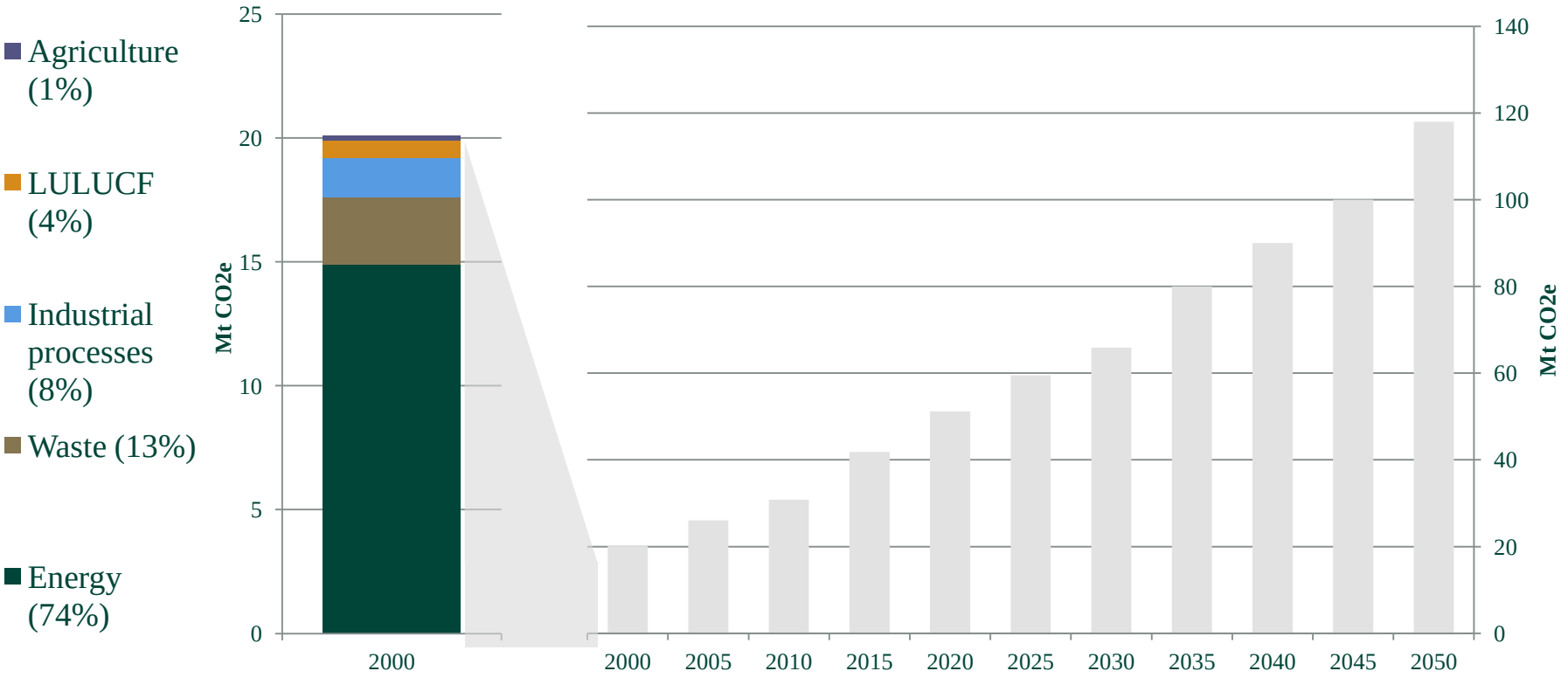
1. Policy context:
Domestic mitigation objectives and emissions profile

1.1 Policy context and objectives

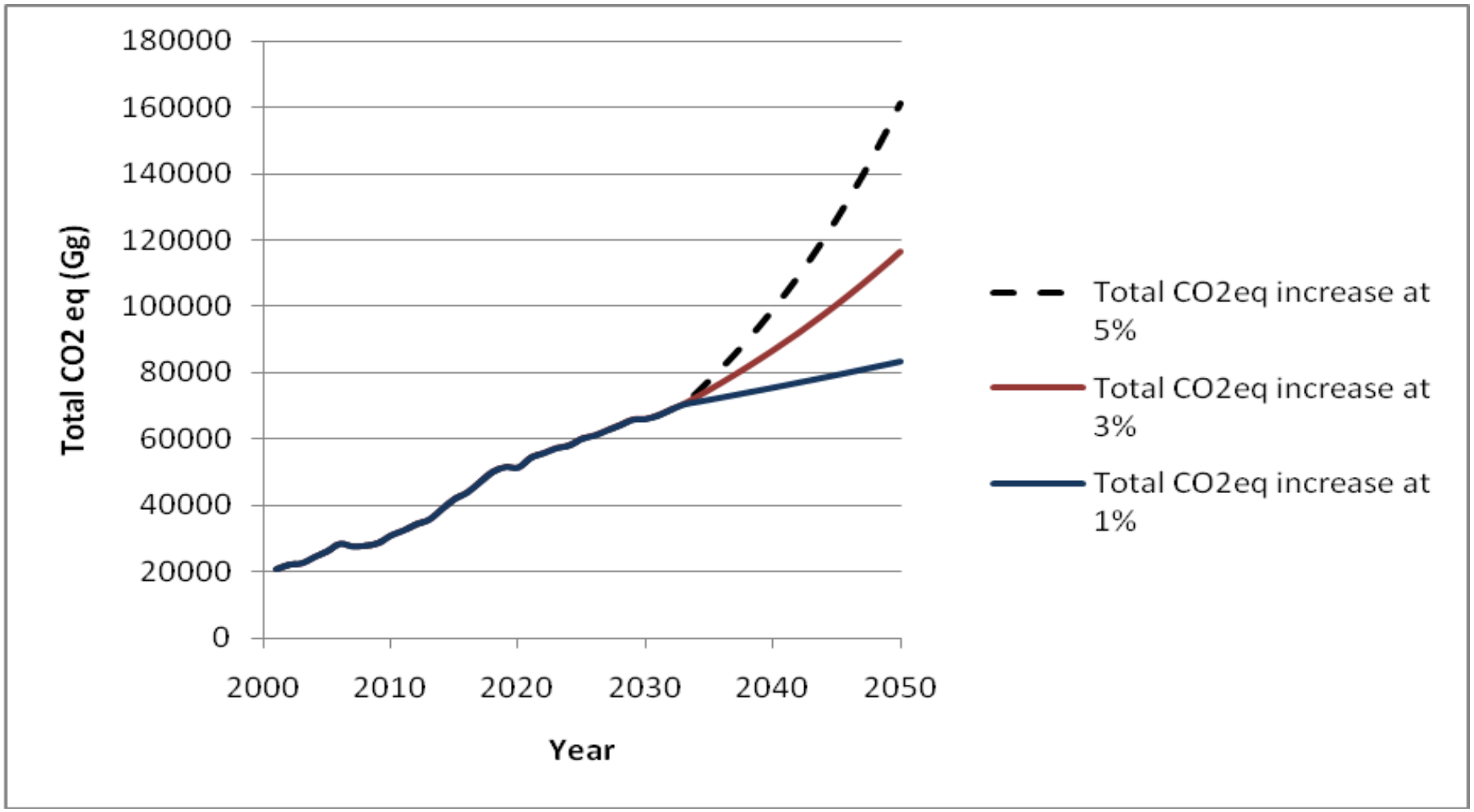
- UNFCCC ratified in 1993, Kyoto Protocol in 2003
- National communications to the UNFCCC:
  - 1st in 1997, 2nd in 2009
    - Inventory data for 2000, emissions baseline until 2030
  - 3rd ready by end-2013, GEF support for biennial report
    - Updated inventory
- National Environmental and Economic Development Study (NEEDS) for Climate Change 2010
  - Baseline until 2050, mitigation costs, barrier analysis
- Renewable energy law 2010
  - Bylaws scheduled to enter into force 2012
- CDM
  - 4 projects registered, 18 DNA approved, one project issued

1.2 Overview of country's GHG emissions (1/2)



- **At current emissions growth rate (3%), emissions will quadruple by 2050**
- **The energy sector is most important contributor to GHG emissions**

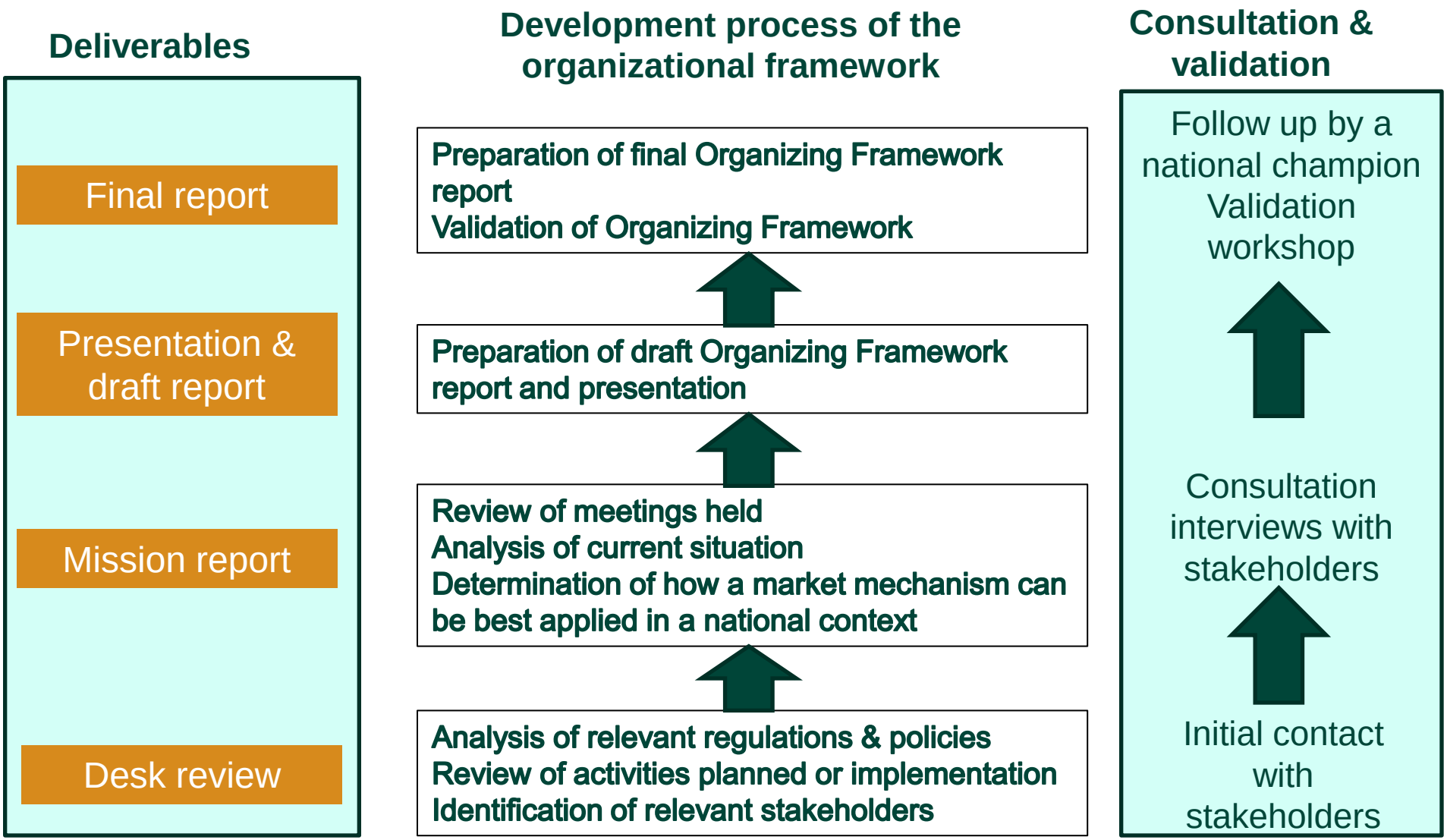
1.2 Overview of country's GHG emissions (2/2)



Projected greenhouse gases that will be emitted by all sectors in Jordan up to the year 2050

2. Organization and Consultations

2.2 Consultation process



2.3 Partners in the formulation and implementation of the country's Market Readiness Proposal (MRP)

Ministries	▪ Ministry of Environment ▪ Ministry of Energy and Mineral Resources ▪ Ministry of Water and Irrigation ▪ Ministry of Transport ▪ Ministry of Finance ▪ Ministry of Municipalities
Offices/Agencies	▪ Greater Amman Municipality ▪ NERC ▪ Special Economic Zone Authorities ▪ Hassan Scientific City/Drivers of Change Institute ▪ Jordan universities ▪ JSMO
Public Financial Institutions	▪ JREEEF ▪ Jordan Environmental Fund
Private Sector	▪ Jordan Chamber of Industry
Non-governmental organizations	▪ Jordan Environment Society, National Womens' Organization, etc.
International Cooperation	▪ e.g. European Union, UNDP, …

3. Technical building blocks of market-readiness

3.1 Considerations for identification of relevant target area(s)

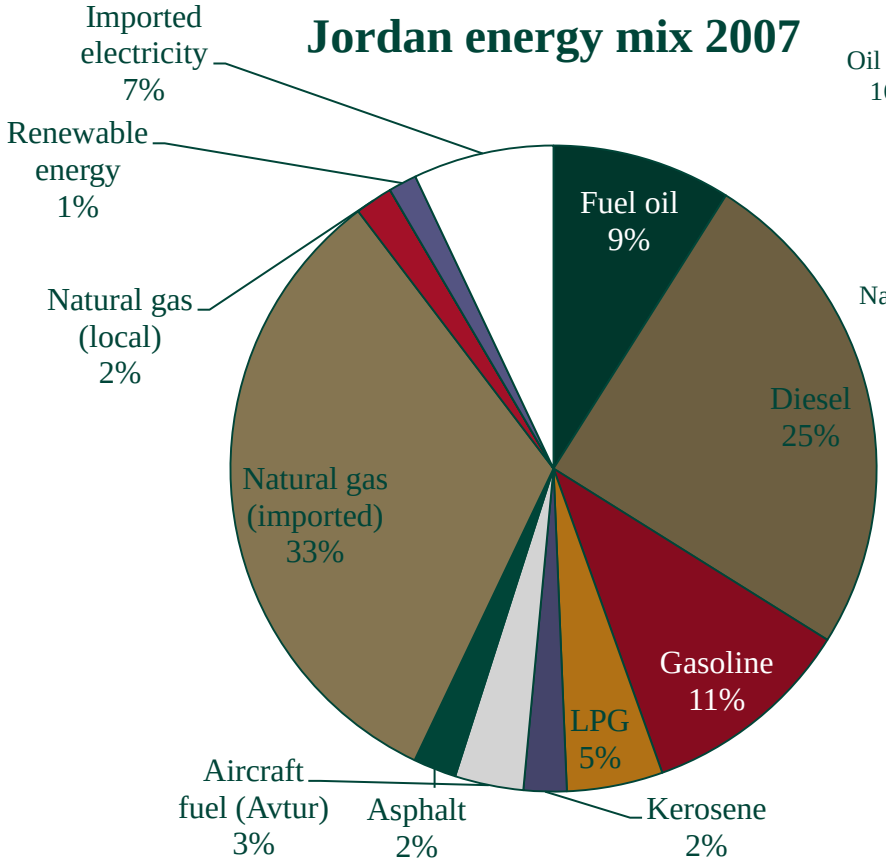
- Potential target areas were assessed according to:
  - Synergy with national sustainable development priorities
  - Mitigation potential
  - Prior experience with market mechanisms
  - Institutional and organizational feasibility
  - Overall suitability for a market instrument (responsiveness to economic incentives, data availability and MRV-ability)

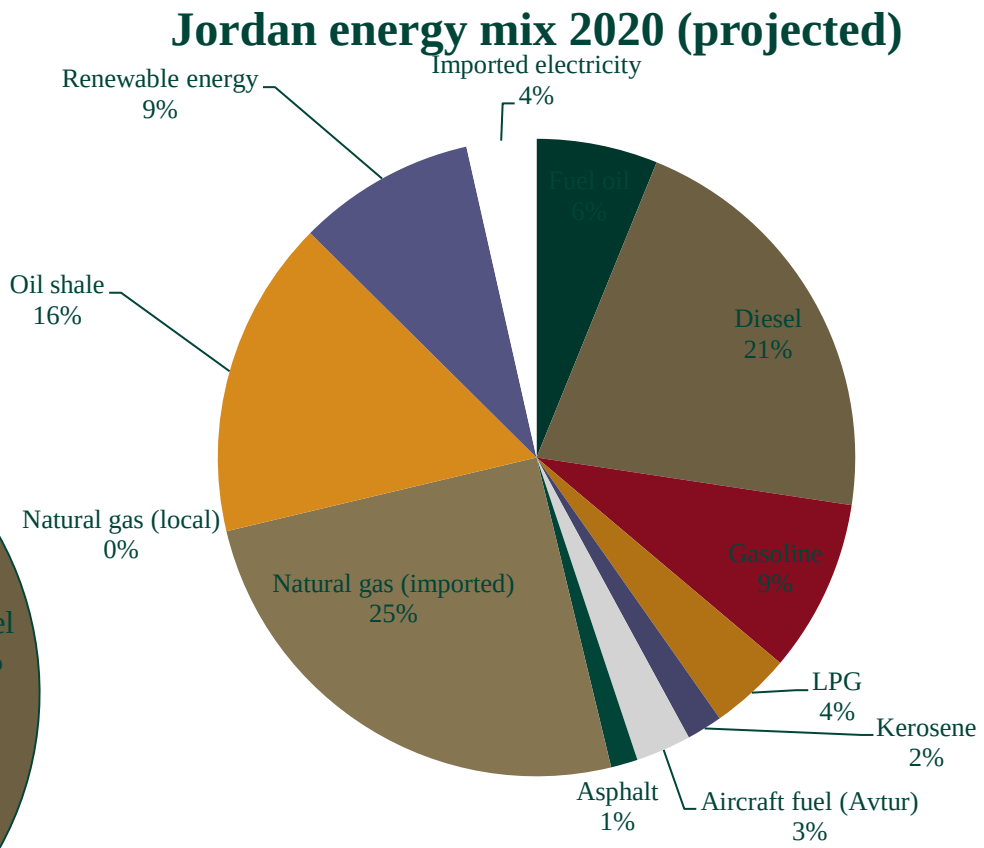
3.2 Analysis of relevant target areas – ENERGY (1/3)

- Jordan has limited domestic energy sources and relies heavily on imported fossil fuels
- Energy consumption forecast to double from 2007 to 2020[1]
- Significant increases in the consumption of liquid petroleum gas and diesel expected, even if an ambitious renewable energy capacity increase occurs
- Recent increases in fuel import costs make renewable energy / energy efficiency activities more attractive
  - Fuel import bill now reaches over 20% of GDP
  - Power plants have reverted back to fuel oil from gas due to the disruption of the gas pipeline from Egypt.

[1] Source: Master Strategy of Energy Sector in Jordan for the period (2007 – 2020)

3.2 Analysis of relevant target areas – ENERGY (2/3)





Master Strategy of Energy Sector in Jordan for the period (2007 – 2020)

3.2 Assessment of readiness – ENERGY (3/3)

Sector	Implemented Activities	Strengths	Challenges	Assessment of Readiness
Renewable Energy for Electricity Generation **(Priority activity)**	- Wind farms in the north - Solar – PV at the Royal Scientific Society to power part of the buildings - Many studies: wind maps, solar intensity, etc - Upcoming: PV in Maan (Shams Maan)	- Renewable energy law exists - National energy strategy exists - High import fuel prices reduce cost gap - Renewables contribute to energy security - High potential in GHG reduction	-Passing bylaws (e.g. feed in tariff) and enforcing laws and bylaws -Lack of incentives for private sector activities - Long project lead times	High
Energy efficiency in buildings, industries and commercial sector	- Various small EE projects for industries and hotels - Prohibition of import of incandescent lightbulbs - Promotion of Solar Water - Heaters (SWHs) -EU efficiency labelling system - for household appliances adopted	-National EE Strategy exists - Energy efficiency contributes to energy security - Management of the demand side: most are simple measures - High potential reduction	- Horizontal work in many sectors involves many agencies and stakeholders - Lack of data for baseline - Lack of criteria and incentives for monitoring - Lack of incentives for private sector activities due to energy subsidies	High

3.2 Analysis of relevant target areas – WATER (1/2)

- Jordan is one of the four driest countries in the world
- Scarcity of water is the most important constraint to growth and development
- Water derived from:
  - Developed surface water (37%)
  - Groundwater (54%)
  - Other included treated wastewater for irrigation
- Water Authority is the largest electricity consumer in Jordan, consuming approximately 14% of total electricity consumption
- Water use:

Irrigation in Jordan Valley: 32%	Highland irrigation 32%	Municipal use: 30%
Industrial use: 5%	Tourist use: 1%	

Sources: MWI, Ministry of Environment, GIZ

3.2 Assessment of readiness – WATER (2/2)

Sector	Implemented Activities	Strengths	Challenges	Preliminary Assessment of Readiness
Water Sector (including waste water) **(Priority activities – energy efficiency & wastewater)**	- Project on Energy Efficiency in Pumping Stations, including Energy Contracting Approach - Project on Energy Efficiency and Sludge Treatment in Waste Water Treatment Plants	- Openness of water sector for innovative projects - Successful show cases - Good MRV possibilities - High mitigation potential	Incentives to develop NAMA to support strategic approach and private sector involvements	High – medium

3.2 Analysis of relevant target areas – CITY-WIDE APPROACH

- Amman currently has a population of 2.8 million people (~43% of Jordan's population) expected to reach 6.5 million by the end of 2025
- An Amman 2025 Master Plan was developed by the Greater Amman Municipality (GAM) between 2006 and 2008
- Main challenges faced within Amman with relation to greenhouse gas mitigation as per Master Plan and proposed improvements
  - Urban expansion
  - Inadequate infrastructure and social services
  - Absence of efficient and effective public transit
  - Incompatible land-uses

  Transport corridor development
  Landfill management
  Bus rapid transit (BRT)
  Buildings efficiency, urban planning
- The Master Plan served as basis for development of a programmatic approach for CDM to cover cross-sectoral mitigation options in Amman
- The status of GAM's engagement in carbon markets needs clarification after recent changes in city boundaries

3.2 Assessment of readiness – CITY-WIDE APPROACH

Sector	Implemented Activities	Strengths	Challenges	Preliminary Assessment of Readiness
Cross cutting – energy, water, waste & transport (potentially agriculture) **(Priority activities: all but agriculture)**	- Work begun, but now delayed, on the bus rapid transit system - Concept for programmatic CDM on the city level developed	-Substantial mitigation potential in a variety of areas including: - transport - energy efficiency in buildings - water consumption - methane from waste & wastewater -Significant work already completed on the GAM Amman 2025 plan -Recognized internationally as best practice for city planning	-Lack of incentives for private sector investment in GHG mitigation -The planned citywide CDM Programme of Activities was not done in time to meet the 2012 submission deadline for the EU market	Medium

3.2 Analysis of relevant target areas – SUMMARY

Area	Preliminary Assessment of Readiness
Renewable energy	High. Substantial amount of feasibility studies, generally responsive to economic incentives, but currently suffering from project implementation barriers.
Energy efficiency	High. Relevant experience in project implementation. Responsiveness to economic incentives currently limited due to energy subsidies. High transaction costs.
Water efficiency	High. In line with two main national sustainable development priorities. Good implementation experience.
Wastewater	Medium. Many agencies involved, project size limited, generating higher transaction costs.
City-wide approach	Medium. Highly innovative approach which could play a leading role internationally but constrained by complexity and cross-sectoral nature.

3.2 Analysis of relevant target areas – PRIORITY ACTIVITIES

- Priority target areas build upon experiences made in CDM and PoAs to cover larger sectors of the economy, by utilizing standardization approaches
- Assess the possibility of crediting of NAMAs, possibly building on previous work done in
  - energy efficiency in the water sector
  - urban activities across sectors
- All Jordanian institutions and stakeholders confirm that ***emissions trading systems*** are not suited to Jordan's specific circumstances
- Key elements of target activities are ***cross-sectoral***
  - This is due to the limited mitigation potential in a specific sector as well as the experience in specific cross-sectoral approaches

3.3 Domestic (and area-specific) MRV system & tracking tool

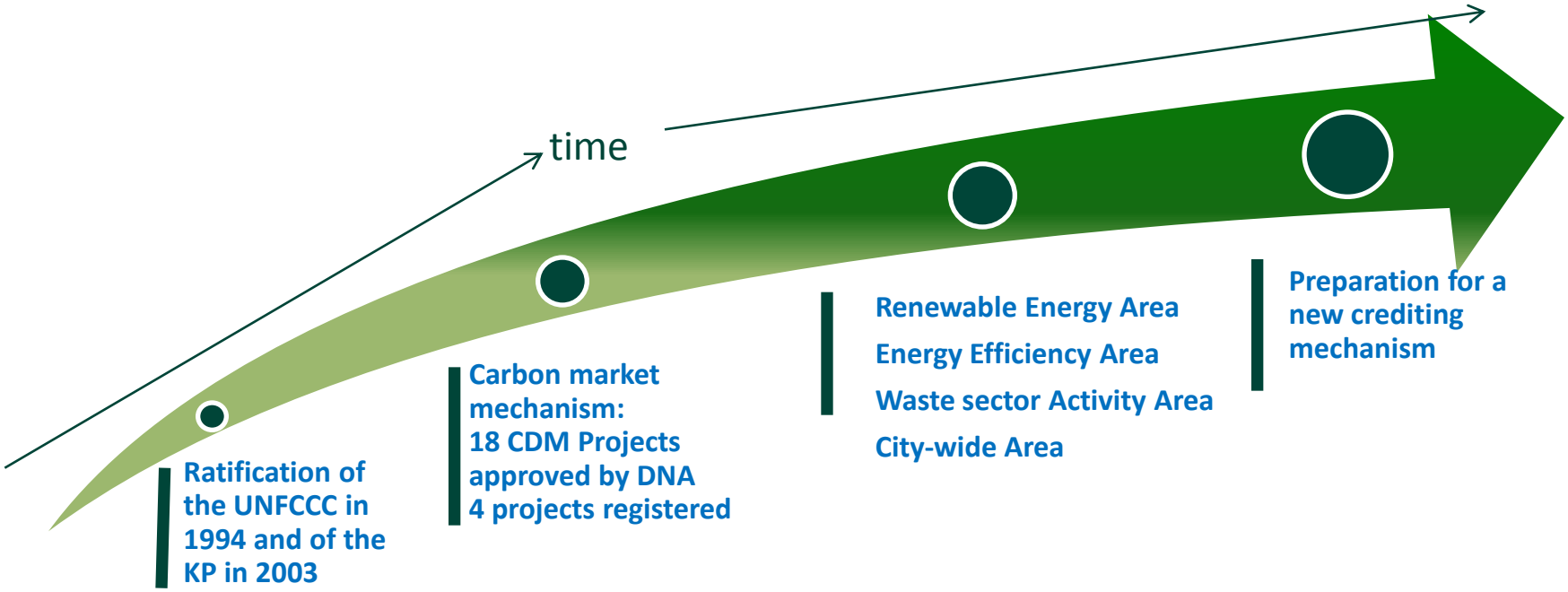
- There is currently limited domestic readiness regarding MRV:
  - Information sources for major emitters in Jordan are specified. But no formal reporting/verification system is in place
  - National information gathering system is relatively advanced (Department of Statistics, other sources). Improvements towards CC & GHG data are required
  - To include CC & GHG data within the existing information system, institutional and regulatory adjustments are required

- Develop tracking tool as part of the PMR and enhance capacity
  - Establish electronic GHG data base on the basis of enhanced data collection system, preferably with sub-components for the priority target areas
  - Acquire necessary software and enforce data collection as well as build capacity/awareness on policy level
  - Ensure sufficient depth regarding data availability for the priority target areas

3.4 Institutional/regulatory components

- Relevant institutional/regulatory components under which market mechanism work could be placed:
  - 2000 National Strategy for Sustainable Development
  - 2006 Environmental Law
  - Greater Amman Municipality Sustainable Action Plan (to be developed in 2012)
  - Relevant sectoral regulation, such as the Renewable Energy Act and Energy Efficiency Act

3.5 Interest in market-based instrument(s) over time



4. National champions and PMR Contact Point

- The following institutions could play the national champion role for the different priority activities:
  - Ministry of Energy / The National Energy Research Centre (NERC) – Renewable Energy and Energy Efficiency
  - Ministry of Water – Water Efficiency
  - Greater Amman Municipality – City-wide approach
  - Ministry of Industry – Waste water
- Support would be provided by a technical working group from the National Climate Change Committee (NCCC)
- The PMR contact will be the UNFCCC focal point (H.E. Ahmed Al-Qatarneh and Mr. Hussein Badarin, Ministry of Environment)

5. Other key relevant initiatives: Some examples

- There is a number of other on-going relevant initiatives:
  - Ministry of Environment is engaged in a project to support a dialogue between researchers and policymakers about climate policy (to be finalized October 2012), as well as in a project to support energy efficiency labeling of household appliances (to be finalized July 2013).
  - The Ministry of Energy is planning compact fluorescent light dissemination and a regulation for mandatory installation of solar water heaters on new houses.
  - Several financing initiatives are underway
    - The EU develops a € 35 million facility developed by the EU
    - A € 200 million facility is envisaged by AFD,
    - KfW wants to engage in financing for water efficiency
  - Use of soft loans may be constrained by financial absorption capacity of Jordan

6. Organization of work and estimated timeline

6.1 Overview of organization of work/tasks envisioned to prepare the Market Readiness Proposal (MRP)

- Tasks
  - Development of technical specifications for upscaling experiences from CDM and programmatic approaches for each priority target area, including standardization
  - Define specifications for tracking tool, including area-specific components
  - Key preconditions for successful market readiness
    - Generate awareness that funding of actual implementation of mitigation is key for the success of the MRP given the wealth of studies on potential already done
    - Make clear that PMR can only support facilitation, not the actual mitigation projects
    - Make clear that successful private sector participation requires clear incentives and supportiveness to price signals
  - Coordination with donor finance (e.g. EU, AFD) is key to mobilize mitigation
  - Awareness and capacity building can play a subsidiary role
- Ministry of Environment assures co-ordination between the different actors that need to be involved in priority areas

6.1 Overview of organization of work/tasks envisioned to prepare the Market Readiness Proposal (MRP)

- Stakeholder consultation:
  - Drivers of Change Institute could coordinate stakeholder participation
    - Series of stakeholder workshops
  - NGOs (like Jordan Environment Society and Womens' Organization) should be involved in the design of NAMA(s)
    - Transparency regarding the allocation of proceeds from credit sales
- Data collection:
  - Build on 2nd and 3rd National Communication exercise for all areas
  - Build on inventory development done for the biennal reports
  - Energy efficiency area: Use NERC studies on energy efficiency potential
- Design MRV system for the priority target areas

6.2 Overview of estimated timeline for formulation of Market Readiness Proposal

	2012											2013				
Activities/ Task	**Feb**	**March**	**April**	**May**	**June**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**March**	**April**	**May**
Desk review																
Mission																
Draft Organizing Framework																
Final Organizing Framework																
Negotiating TORs for Bank-executed activity																
Preparation workshop																
Consultation process																
Area studies																
Showcasing of PMR initiative at COP 18																
Market Readiness Proposal development																
Informal presentation at PMR Assembly																
Draft Market Readiness Proposal																
Validation workshop																
Final Market Readiness Proposal																
Market Readiness Proposal presentation at PMR Assembly																

7. Other relevant information: SWOT analysis

Strengths	Weaknesses
- National renewable energy law - High political pressure to reduce fuel imports - Substantial past engagement in GHG mitigation studies - Experience with CDM	-Long lead times for mitigation activities, including supportive legislative framework -Low domestic financing availability -Limited mitigation options outside the energy sector -Limited availability of skilled experts
Opportunities	**Threats**
-Leadership status in Middle East -Build on innovative city-wide approach - Recent increases in fuel import costs make RE & EE activities attractive	-Lack of determined champions on the sectoral level -Low credit prices

8. Conclusions – Summary of market readiness priority target areas for PMR support

- Target areas are relatively small and will build on experience with CDM and PoAs to upscale market activities and benefit from standardization
- Most priority areas are cross-sectoral and build on prior activities
  - Renewable energy: Energy
  - Energy efficiency in households, industry and commerce: Energy
  - Energy efficiency in water pumping: Water & Energy
  - Wastewater: Water & potentially Energy & Industry
  - City-wide approach: Water, Energy, Transport, Waste & possibly Industry
- An emission tracking tool is to be built, preferably with detailed modules for each priority area
  - Data collection to be enhanced
  - Awareness and capacity on a policy level is to be built
- The National Climate Change Committee coordinates the activities and identifies “champions” for each target area