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CES-MED

CLEANER ENERGY SAVING MEDITERRANEAN CITIES

Contract No. ENPI 2012/309-311/EuropAid/132630/C/SER/MULTI

# Jordan

## Report

## Recommended National Sustainable Urban and Energy Savings Actions

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**REPORT**

***Recommended National Sustainable Urban and Energy Savings Actions for Jordan***

**June 2015**

This project is funded by
The European Union

Implemented by a Consortium led by Hulla & Co. Human Dynamics KG

**Disclaimer.** The content of this report does not reflect the official opinion of the European Union. Responsibility for the information and views expressed lies entirely with the author(s).

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## LIST OF ABREVIATIONS AND ACRONYMS

| | |
|---|---|
| AFD | Agence Development Française |
| ASEZA | Aqaba Special Economic Zone Authority |
| BEI | Baseline Emissions Inventory |
| CES-MED | Cleaner Energy Saving Mediterranean Cities Project |
| CoM | Covenant of Mayors |
| CSO | Community Service Organizations |
| EE | Energy Efficiency |
| EIB | European Investment Bank |
| ENPI | European Neighborhood and Partnership Instrument |
| ERC | Electricity Regulator Committee |
| ESMAP | Energy Sector Management Assistance Program |
| EU | European Union |
| GAM | Greater Amman Municipality |
| GHG | Green House Gases |
| GIZ | German International Cooperation |
| GoJ | Government of Jordan |
| IDRC | International Development Research Center |
| JICA | Japan International Cooperation Agency |
| JGBC | Jordan Green Building Council |
| JNBC | Jordan National Building Code Council |
| JRC | Joint Research Center |
| JREEEF | Jordan Renewable Energy and Energy Efficiency Fund |
| JCS | Joint Services Councils |
| KfW | Kreditanstalt fuer Wiederaufbau (German Development Bank) |
| MEMR | Ministry of Energy and Mineral Resources |
| MENA | Middle East and North Africa |
| MPWH | Ministry of Public Works and Housing |
| MoEnv | Ministry of Environment |
| MoF | Ministry of Finance |
| MoMA | Ministry of Municipal Affairs |
| MoPIC | Ministry of Planning and International Cooperation |
| NCG | National Coordination Group |
| NEEAP | National Energy Efficiency Action Plan |
| NERC | Nation Energy Research Center |
| NGO | Non-Governmental Organization |
| NREAP | National Renewable Energy Action Plan |
| PPP | Public Private Partnership |
| PV | Photovoltaic |
| RCREEE | Regional Center for Renewable Energy and Energy Efficiency |
| RE | Renewable Energy |
| REEEL | Renewable Energy and Energy Efficiency Law |
| SEAP | Sustainable Energy Action Plan |
| SudeP | Sustainable Urban Demonstration Project |
| SWH | Solar Water Heater |
| TOE | Tonne of Oil Equivalent |
| UNDP | United Nations Development Programme |
| USAID | United States Agency for International Development |
| WB | World Bank |

# EXECUTIVE SUMMARY

Municipalities can play a crucial role in reduction of GHG emissions, therefore the EU initiated the **Cleaner Energy Saving Mediterranean Cities Project (CES-MED)** to support the efforts of local authorities in nine European Neighborhood and Partnership Instrument (ENPI) South Mediterranean Partner Countries, including Jordan. The project aims at:

- Developing the local authorities' capacities to formulate and implement sustainable local policies.
- Expanding the use of sustainable policies, such as solutions to renewable energy, measures to reduce $CO_2$ emissions, efficient water and waste management, and environment-friendly public transport.
- Increasing the awareness and responsiveness of national authorities to the need for and benefits of a strong involvement of cities in local sustainable policy issues.

**CES-MED in Jordan** is coordinated under the Ministry of Planning and International Cooperation, and with the National Coordination Group (NCG). CES-MED partners with three municipalities for the development and implementation of Sustainable Energy Action Plans:

- Aqaba in the South, falling under the Aqaba Special Economic Zone Authority (ASEZA)
- Irbid in the North, falling under the Ministry of Municipal Affairs (MoMA)
- Kerak in the Middle highlands, falling under MoMA.

This report provides national recommendations and a set of actions specific for Jordan to address the challenges, constraints, and best accompanying measures needed at national level to assist local authorities in the formulation and implementation of sustainable energy policies and actions such as those formulated in SEAPs. Additionally, institutions that meet the definition of Covenant Coordinators or Supporters are identified, including institutions that can host the future regional COM activities.

Existing donor projects and the funding opportunities that can be used by cities and municipalities to support the implementation of SEAP projects are documented in a separate report: **Donors and Funding Initiatives in the Areas of Sustainable development at the Local Level.**

### Legal framework findings

**In the current legal framework Municipalities have the opportunity to develop a SEAP,** and by law there are sectors where they can influence the energy consumption, such as transport (their vehicle fleet and use of public transport), Building energy consumption (their own buildings and enforcement of EE Building Code), Electricity (Street lighting and water pumping), Waste (Solid and Water Waste Management) and Energy (Solar electricity (PV), including Wheeling, Waste to Energy (Agriculture-Biogas), Thermal (SHW)).
However all actions need timely planning, as for financial provision or private sector engagements approval is needed from the Minister.
There is a wide range of laws and regulations in place, or under development. **EE Building Codes are in process of review**, before they can be endorsed, a Roadmap plan for implementation is ongoing. Waste management issues fall under the environmental ministry and there are **several laws and regulations dealing with waste management**. For the **transportation sector** the environmental and energy issues are **not yet strongly developed**. However for the **electricity and energy sectors, there is a solid legal framework in place**, indicating **a strong political commitment for EE and RE Actions**, also for municipalities.

**Recommendations**

**Municipalities that initiate a SEAP need to assign a responsible entity, an Energy Efficiency Unit** or Officer, for the development and implementation. On National level this needs to be regulated through the update of the Municipality Act.

For the smaller municipalities this function could be hosted at the Joint Services Councils, or the Cities Alliance council, as planned under the new Municipality law, see figure below. In both cases the knowledge and experience in developing SEAPs, initiating projects and managing the implementation could be supported by NERC in the initial start-up phase.

To facility access to information for municipalities, two information points are important to be established on the short term, see figure below.

1) **Info Point GoJ and Finance** for issues related to legal procedure and donor support, connected to the EE Unit of MoMA, as a short terms action, until the National Com Coordinator is in place. Beside the current NCG members, it is recommended to include in the future the Ministry of Public Works and Housing (MPWH, the JNBC for EE Building), Ministry of Transport (MoTRA for transport strategy and mobility planning) and Ministry of Finance (MoF) for budgeting support. MoPIC is also to provide the information for relevant support by the donor community so as to kick start the implementation of the first Pilot SEAP measures.
2) The **National Sharing Platform** (NSP, under the MoEnv) for connection to private sector for PPP and ESCO projects, and specific waste management projects. This entity is already under development, and connection to SEAP could make its start position stronger. (EU funding in this direction might be considered).

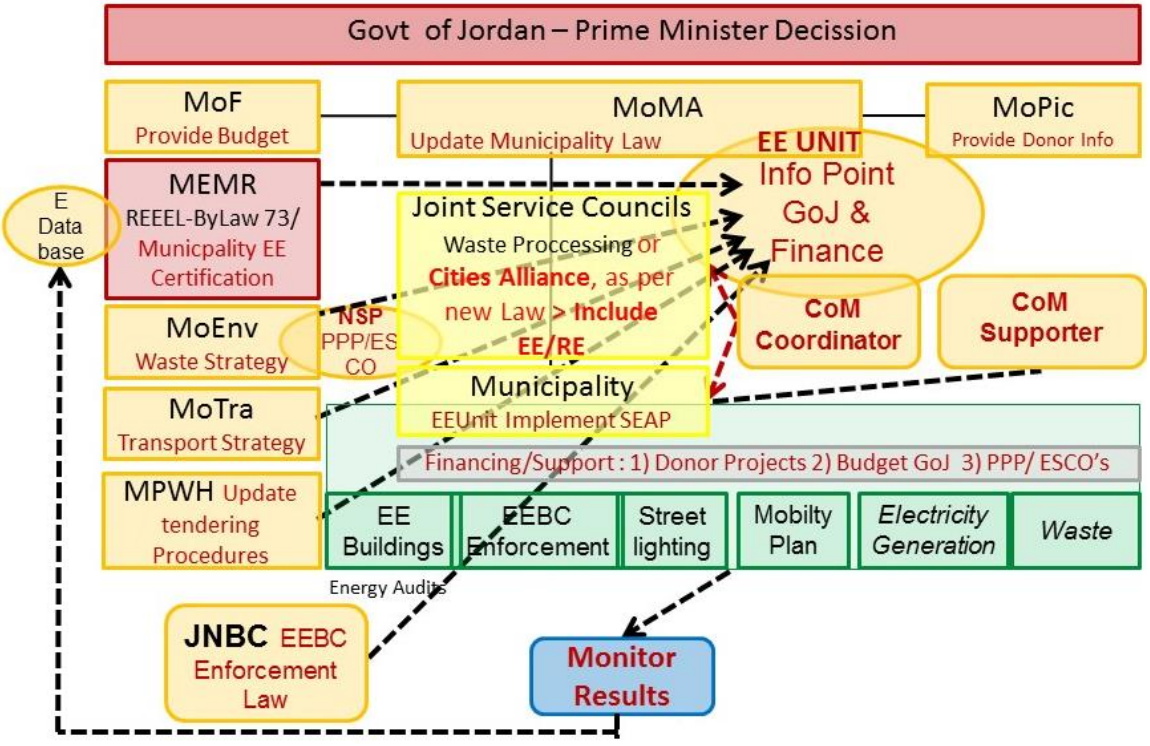


**Figure Institutional and legal framework recommendations**

The Energy database is currently being set up under MEMR, see figure above (E-database), needs to be accessible for municipalities for data relevant for SEAP development, in return energy information from municipalities needs to be delivered to this E-database.

For matching **legal framework development** the major laws, in process of review, that provide the opportunity to pave the way for SEAP development at municipality level are:

1) **The update of the Municipalities Act No. 13 (2011)** should include
   - Environmental and energy sustainability, mandatory support of municipalities to national environmental and energy action plans, like NEEAPs, such as by development, implementation and monitoring of planning tools, like SEAPs.
   - Additional (new) income generating opportunities for municipalities, such a decision power to charge energy taxes or generate income from electricity production.
   - Regulate the possibilities for municipalities to engage in Public Private Partnership agreements and/or conditions to start a company, for the purpose of RES.

   Endorsement of the updated law should be a priority.
2) **Include energy performance criteria in the national procurement regulations** (under the Ministry of Industry and trade).
3) To **clarify the legal lending options for municipalitie**s, the contradiction between Municipality Act (13/2011) and the CVDB law (63/1085) is to be eliminated.
4) Develop a **new transport Strategy and Law that includes energy conservation**.
5) **The procurement regulations of MPWH are to be aligned** with the energy laws, bylaws and regulations, to allow also in procurement and tendering processes of governmental building energy performance criteria (or even make it mandatory).
6) In the **new Waste Management draft Law**, the coordination of all laws and regulations related to waste (management) needs to take place and **waste to energy to be included**, in line with the regulation of MEMR, Bylaw waste to energy projects 5281/2014.
7) In the **update of the Bylaw No. 73 (2012)** the following issues should be tackled:
   - Clarify the position of municipalities as governmental entities, and obligation to abide by this law.
   - Indicate the energy type of the 50 TOE: final energy consumption or primary energy.
   - Align art.10 with the Solar Energy Code, of MPWH, which is leading.
   - The obligation for Utilities to give clear insight (to Municipalities) electricity consumption and bills.
   - Access for Municipalities to energy consumption data for the Baseline Emissions Inventory (BEI) sectors for the purpose of SEAP development.

   In support of implementation of Bylaw 73, develop regulations to clarify procedures for mandatory energy audits and compliance certification for governmental entities (provided municipalities are considered as a governmental entity), with related penalties in case of non-compliance, as well as a clarification of the use and the functioning of the Energy database.
8) **Reconsider the 'directive governing the sale of electricity generated from RE systems'** to establish energy sales prices that increase the number of feasible (bankable) energy projects.
9) Develop a **regulation under the Environmental Protection Law** No. 52 (2006)[1], to **make the Jordan Environmental fund operationa**l, in such a way that is not depending on Ministerial changes.

**Support at National level for the preparation and implementation of SEAPs**

Municipalities need to be able to have the relevant budget line items to carry out their responsibilities, only then the political commitment is in force. Budget would need to be created for SEAP development (EE officer /Unit) and implementation (measures, actions and their monitoring), in the form of a revolving fund (under JREEEF), see the **Donors and Funding Initiatives in the Areas of Sustainable development at the Local Level** report.

[1] http://www.sweep-net.org/ckfinder/userfiles/files/country-profiles/CountryreportJordan-En-mai2011.pdf

Considering the current financial health of many municipalities, the role out of the SEAP can only take place in those municipalities, in a good financial condition, besides those that started already. These Pilot SEAPs can set successful examples to follow once other municipalities are ready, in terms of internal set-up (EE Unit or Officer) and related budgets in place.

Actions additional to the recommendations for the institutional set up and legal framework are provided in the report. Actions for the short term are indicated in the below table.

**Table Short term actions at national level to support SEAPs**

| WHAT | WHO |
|---|---|
| Assign EE Officers/Unit for SEAP development for Irbid, Kerak and Sahab (In Aqaba a team is already established for the SEAP development) | **Municipalities** |
| Facilitate exchange between the pilot municipalities | **MoMA** |
| Coordinate the activities of international donors and share relevant information with the 'Pilot Municipalities' (Aqaba, Irbid, Kerak, Sahab) | **MoPIC** |
| Collect the Monitoring data and information from the ongoing projects and extract the best practices, share these with other municipalities | **NERC/MEMR** |
| Provide information on procedures – reduce project preparation time | **MEMR/MoENV/MPWH** |
| Collect lessons learned (technical specification, procedures, financing options) from ongoing projects and make this information available | **MoPIC/NERC** |
| Publicity for current actions/projects being implemented by Municipalities, to motivate other Municipalities to take action. Communicate the energy and budget savings | **MoMA** |

**A CoM Coordinator** could be appointed as a focal point or SEAP Coordinator, with the full support of local authorities and higher levels, as well with the necessary time and budget to carry out strategic guidance and technical assistance to the interested municipalities for SEAP development and implementation, including support on EE and RE measures, energy audits, and development of economic energy projects as well as assisting in application of regulations and procedures from the different Ministries.

During the NCG meeting two potential CoM coordinators where discussed:

- **A (new) Unit in MoMA,** since this would be the most direct connection to the municipalities, and most easy to **control the SEAP development**. However in depth knowledge and/or experience of RE and EE is not yet in place and internally there was no agreement yet whether a new unit should be established. It could be considered that the EE unit, which is to be established, takes this role.
- **The National Energy Research Center** (NERC) has the technical knowledge and experience needed to provide support to SEAP development and implementation. NERC is already actively cooperating with Sahab Municipality for a SEAP (in the EU funded SuDeP project).

**A Regional Coordinator** could be considered for smaller Municipalities. In the NCG meeting it was discussed whether the tasks of the Joint Services Councils could include energy conservation activities in the future. Once the new municipality law is in place, the new 'Cities Alliance Councils', could potentially play the role as regional coordinator. In both cases the knowledge and experience in developing SEAPs, initiating projects and managing the implementation could may be supported by NERC is the initial start-up phase.

**COM Supporters** for the regional level were only briefly mentioned during the NCG meeting. It could be further investigated whether the **EcoCities** organisation (related to MoEnv) could play such a role.

The Eco Cities Forum take place on an annual basis, addressing environmental issues in which the SEAP would fit very well. However (financial) support for Eco Cities would be needed to organize and manage activities around the SEAP exchange in the region.

# 1. INTRODUCTION

The European Union (EU) is leading the global fight against climate change, and is considering it as an urgent matter that needs immediate attention. The EU committed itself to reducing its overall emissions to at least 20 % below 1990 levels by 2020 through the development, among others, of Sustainable Energy Projects that can help reduce the emission of Greenhouse Gases **(GHGs)**.

## 1.1 CES-MED project brief and Objective of the Report

Municipalities can play a key role in the achievement of energy and climate objectives, therefore the EU initiated the regional **"the Cleaner Energy Saving Mediterranean Cities Project" (CES-MED)** under the European Neighborhood and Partnership Instrument (ENPI), launched on the 7th of January 2013 for a period of 3 years. The CES-MED project covers nine countries, namely Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, occupied Palestinian Territory and Tunisia and its primary goal is to support and strengthen the capacity and involvement of the Local Authorities to embrace and implement Sustainable Development Policies (sustainable energy and public transport systems) with respect to national regulatory and legislative frameworks. Moreover, this project offers direct support and assistance (in terms of expertise and training sessions) to Local Authorities for the preparation and implementation of Sustainable Energy Action Plans **(SEAPs)** in the cities, villages and regions of the above mentioned countries so that they become eligible to join the Covenant of Mayors **(CoM[2]).** A National Coordination Group **(NCG)** is established to secure a coordination platform among key stakeholders active in the field of sustainable energy use.
SEAPs allow cities to execute measures in a structured and integrated approach and track their efforts while communicating to stakeholders the significance of energy efficiency and climate protection measures. Benefits from the implementation of SEAPs by Municipalities:

- Reduce energy bills and the Carbon Footprint.
- To have a practical document to coordinate, implement and monitor the sustainable energy actions.
- Improving quality of services, such as public street lighting, waste collection, transportation, etc.
- Improvement of the Municipalities' green image, wherever relevant.
- Gaining the trust of relevant stakeholders and donors for the allocation of funds and the implementation of other green projects.

A SEAP focuses on energy saving actions for the following:

- Sustainable urban transport,
- Reduction of energy consumption in buildings,
- Electricity production and management at local level (such as public lighting),
- Solid waste and wastewater management,
- Production of non-conventional energy.

[2] "The Covenant of Mayors is the mainstream European movement involving local and regional authorities, voluntarily committing to increasing energy efficiency and use of renewable energy sources on their territories. By their commitment, Covenant signatories aim to meet and exceed the European Union 20% $CO_2$ reduction objective by 2020". www.ces-med.eu/support/faq

The complete SEAP process is described in the Guidebook developed for the South Mediterranean countries by the Joint Research Center of the EU[3], as a top-down procedure:

1) Initiation
   - Establish political commitment.
   - Establish appropriate governance structure.
   - Build stakeholder support.
2) Planning
   - Assess current policy framework.
   - Establish the Baseline Emission Inventory (BEI).
   - Establish the vision: at least -20% of $CO_2$ emissions in or across required and/or selected sectors by 2020.
   - Elaborate the plan.
   - Secure sustainable financial resources.
3) Implementation
   - Approve and submit the SEAP.
   - Implement the SEAP.
4) Monitoring and Reporting
   - Monitor SEAP actions.

In Jordan three municipalities are partnering with CES-MED for the development of a SEAP, or SEAP like action plans:

- Aqaba in the South, falling under the Aqaba Special Economic Zone Authority (ASEZA).
- Irbid in the North, falling under the Ministry of Municipal Affairs (MoMA).
- Kerak in the Middle highlands, falling under MoMA.

The objective of the report is to produce **a national recommendation paper identifying a set of national level actions** addressing **challenges and constraints specific for Jordan**, and more specifically **best accompanying measures** needed at **national level to assist local authorities in the formulation and implementation of sustainable energy policies and actions** such as those formulated in SEAPs.

Based on analysis of the existing institutional framework, in cooperation with the key national actors, such as the EU Delegation, NCG, Ministry of Municipal Affairs (MoMA), Ministry of Energy and Mineral Resources (MEMR) and Ministry of Environment (MoE) among others, the report **identifies institutions that meet the definition of Covenant Coordinators** or Supporters and are interested and have potential to become supporters/coordinators for CoM **in Jordan**, including institutions that can house **and/or adopt the future regional COM offices**.

The information for this report has been gathered in the following way:

- Internet and desk search of sustainable energy programs and projects available on websites of the donor community, international organizations, and governments;

[3] http://iet.jrc.ec.europa.eu/energyefficiency/publication/guidebook-how-develop-sustainable-energy-action-plan-seap-south-mediterranean-cities

- Information obtained from the specific institutions, organizations and programmes operational in Jordan, through meetings, phone calls and email exchange, see interview list Annex I.

Existing donor projects and the funding opportunities that can be used by cities and municipalities to support the implementation of SEAP projects are documented in a separate report: **Donors and Funding Initiatives in the Areas of Sustainable development at the Local Level** (Annex III).

## 1.2 Agreement with the NCG for the co-preparation of this report and its structure

In Jordan, the CES-MEDS project is coordinated under the Ministry of Planning and International Cooperation (MoPIC), and with the NCG, consisting of the following members:

- **Mr. Naguib Amin:** CES-MED Team leader;
- **Mr. Maher Abdel Raheem**: Focal Point, MOPIC;
- **Mr. Emad Shana'a:** Head of EU Partnership division, MOPIC;
- **Eng. Mohammad Dabbas:** Assistant of Secretary General, Ministry of Energy and Mineral Resources (MEMR);
- **Eng. Hussain Mhaidat:** Chairman of Joint Services Councils for Irbid Governorate, and Head of the Emergency Unit of the Northern Region, MoMA;
- **Mr. Raouf Dabbas**: Advisor to the Minister, Ministry of Environment (MoEnv).

During a meeting in the EU delegation offices, contacted members agreed to support the project and take part in the NCG. The NCG agreed to the following:

- Assist Municipalities in terms of guidance in regards to CoM initiatives that can be replicated on a National level;
- Ensuring logistic support to CES-MED actions during all its phases;
- Providing regional helpdesks for municipalities;
- Offering technical assistance to municipalities.

The condition of meeting the $CO_2$ reduction of 20% in 2020 is not included in the cooperation agreement between CES-MED and Jordan, since this target was considered not to be realistic. Therefore the CES-MED project focus is on the development and implementation of Sustainable Energy Action Plans, as much as possible according to the Guidelines developed specific for the South Mediterranean Countries[4].

This report and its recommendations have been discussed with the NCG on April 20th, 2015 at MoPIC, and provide an overview of existing framework in Jordan, together with related recommendations on National level for the development and implementation of SEAPs by municipalities. The focus is on issues related to energy savings, including Energy Efficiency (EE) and Renewable Energy (RE).

All partners and stakeholders who have been consulted during the preparation of this report (see Annex I) are generously thanked for their time and efforts to provide information. Without their support the content of this report could not have been developed.

[4] http://iet.jrc.ec.europa.eu/energyefficiency/publication/guidebook-how-develop-sustainable-energy-action-plan-seap-south-mediterranean-cities

Especially thanks to the Focal Point, NCG Members and attendees of the coordination meeting in Jordan for their support and input: Mr. Maher Abdel Raheem (MoPIC), Mr. Emad Shana'a (MoPIC), Eng. Hussain Mhaidat (MoMA), Eng, Murad Al-Baqaeen (MoMA), Eng. Mohamed Abu Gouad (MoMA), Eng. Mohammad Dabbas (MEMR), Mr. Muawiyah Faydi (MEMR), Mr. Raouf Dabbas (MoEnv), Eng. Walid Shahin (NERC), and Mr. Omar Abu Eid from the EU Delegation to Jordan.

# 2. EXISTING LEGAL AND INSTITUTIONAL FRAMEWORK

The institutional set up is divided in Jordan in twelve Governorates, each headed by a Governor and subdivided into administrative regions. The Governors are considered extensions of the central government, and are supervised by the Ministry of Interior Affairs. Governors enjoy wide administrative authority, and in specific cases they exercise the powers of ministers.

The second level within a Governorate is the **Municipal Council**, which is elected by local residents for a four-year term. The Government appoints the mayor and half of the council, of the Greater Amman Municipality (GAM), and the other half is elected directly by voters in the capital[5]. In Aqaba, in its special status as a Special Economic Zone the whole Municipal Council is appointed by the Government.

The municipalities, except those in the Special Economic Zones such as Aqaba, fall under the responsibility of the MoMA. The organizational set up of MoMA is shown in the figure below.

The country is divided in three zones, North, Middle and South, each with an Assistant Secretary General, under which a Directorate of Municipal Affairs and the Joint Services Councils reside. Directly under the General Secretary is an Assistant Technical Affairs, see Figure 2. These positions could play a supportive role in the development and implementation of SEAPs in Jordan.

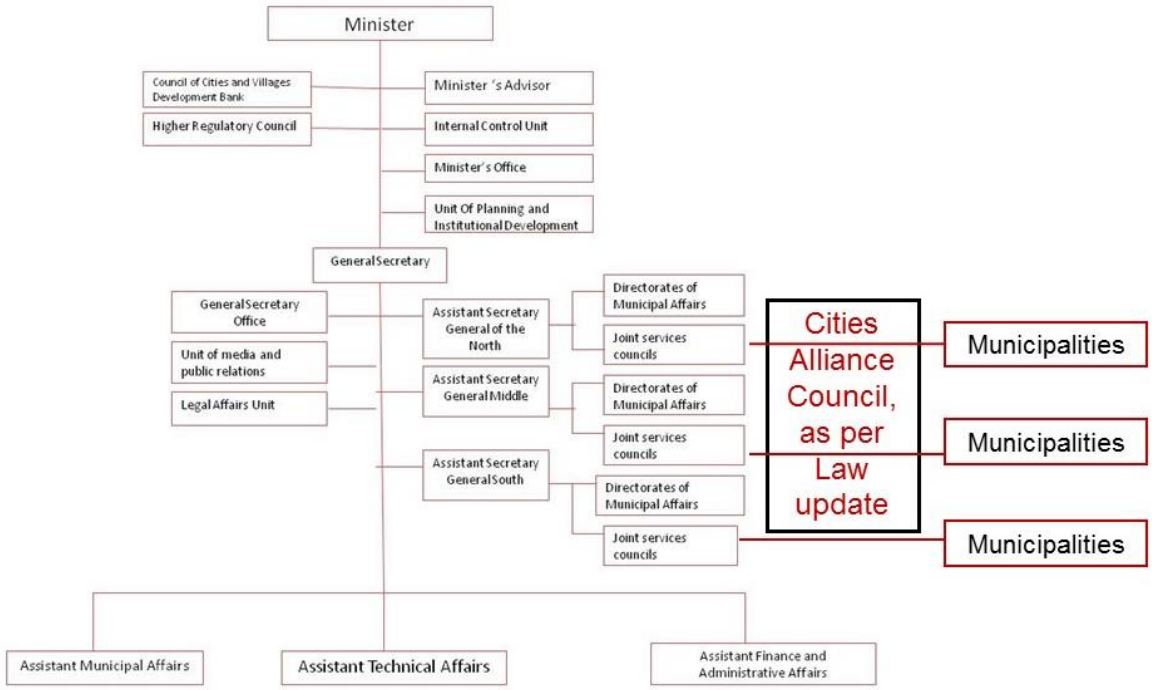


**Figure 1: Organizational set up of MoMA**

During the NCG meeting the question came up whether municipalities are governmental entities such as 'official departments, official public institutions, and public corporations'. This is relevant for the application of Bylaw 73, see page 20.

[5] Jordan's Third National Communication on Climate Change – UNDP - 2014/11/5178

The existing legal framework has been assessed on relevance for the development and implementation of SEAPs at Municipality level for the following sectors: Municipal Sector, Transport, Buildings, Electricity, Waste, and Production of non-conventional energy.

## 2.1 Laws and Regulations

The **Municipality Law No.13 (2011)**[6] describes the responsibilities of the Municipalities in Art 40. Municipalities are responsible for:

- City Planning.
- Building Permits – Procedures are regulated by JNBC law see Building Sector.
- Commercial Licensing.
- Public Lighting.
- Waste Collection (and licensing).
- Maintenance management.

Furthermore municipalities can be owners of buildings (Art.43), can charge fees for licensing procedures (Art. 44), and can, in principle, take loans (Art. 45). However MoPIC indicated to CES-MED that the Government of Jordan (GoJ) is not interested to increase the financial burden by taking up more loans.

Municipalities are in a legal position to collect fines (Art.50) and set their own budget (Art.55), which is approved on an annual basis by the Prime Minister. During the fiscal year, changes to the approved budget are possible, this has to be approved by the Minister of Municipal Affairs.
Licensing procedures are defined by the Ministry of Trade and Industry, municipalities have to follow these national regulations and cannot make changes.

For procurement, municipalities are bound by the regulations set by MoMA, or by MEMR for energy specific projects. In tendering and procurement procedures, municipalities have to follow the national procedures for tendering (Art.58). Tendering related to buildings runs through the Ministry of Public Works and Housing (MPWH), this is a time factor, to be considered in implementation planning.

If municipalities are considered as governmental entities (official departments, official public institutions, or public corporations), Bylaw No. 73 (2012)[7] on Regulating Procedures and Means of Conserving Energy and Improving its Efficiency (Art.11/a) is applicable and municipalities can develop direct proposals and tendering schemes for RE and EE projects, see below under Energy Sector.

For Public Private Partnership and ESCO projects municipalities need to seek approval of the Minister of Municipal Affairs.

For the purposes of implementing the provisions of this law, municipalities are classified into the following four categories (Art.4), according to population size:

[6] http://www.mma.gov.jo/Legislation/MOMARule2011.pdf
[7] www.memr.gov.jo/LinkClick.aspx?fileticket=7xnTASsmwyY%3d&tabid=254

- Category I: Municipalities provincial centers and any other municipality with a population of more than a hundred thousand
- Category II: Municipalities and municipal centers with a population between five teen thousand and one hundred thousand.
- Category III: Municipal centers of districts and municipalities with a population between five thousand and five teen thousand.
- Category IV: other municipalities not included in the first three categories.

**Currently the Municipality law is in process of revision**. The draft law is ready and in review process, before it can be endorsed, which is expected early 2016. The updated law includes more independency and responsibilities for municipalities on local economic development. The new law also foresees a 'Cities Alliance Council', which makes it possible to coordinate certain activities at a higher level, or provide support that otherwise would not be available for the smaller municipalities. More details on this new law could not be provided during the preparation of this report.

**In the current legal framework Municipalities have the opportunity to develop a SEAP, and by law there are sectors where they can influence the energy consumption,** such as transport (their vehicle fleet, and use of public transport), Building energy consumption (their own buildings and enforcement of EE Building Code), Electricity (Street lighting and water pumping), Waste (Waste Management) and Energy (Solar electricity (PV), including Wheeling, Waste to Energy (Agriculture-Biogas), Thermal (SHW)).

However all actions need timely planning, as for financial provision or private sector engagements approval is needed from the Minister. The possibility to establish a company (in cooperation with other municipalities, for RES) is not regulated.

**The Cities and Villages Development Bank Act,** Law 63 (1985), regulates the structure and aim of the bank (Art.3), duties and eligibility criteria for funding projects (Art.5), as well as the Bank Capital and funding ceiling for loans (Art.12). Municipalities can take loans from this bank. The current financial health of the bank is a concern indicated in several of the interviews (with IFIs), in many cases municipalities are behind on their payment schedule, due to their tight financial situation.

There is a contradiction between Municipality Act (13/2011) and the CVDB law (63/1085). According to CVDB law Municipalities can only lend from CVDB, according to Municipalities Act, loans can also be taken from other entities, upon Ministers' approval.

**The transportation sector** is dominated by road transportation since there are no rail networks and marine transportation is negligible due to the geographical location of the country. The Transportation Regulatory Commission is regulating this sector by defining the routes and issuing permissions and controlling the whole sector operations. In addition, the internal transportation (inside cities) especially small cars (service and taxis) have their own regulations and are mostly controlled by Municipalities[8]. Specific law could not be found with the timeframe of the preparation of this report, except the Transport Strategy Action Plan[9] see 3.3 National strategies, programmes and planning tools.

[8] Jordan's Third National Communication on Climate Change – UNDP - 2014/11/5178
[9] www.ltrc.gov.jo/?q=en

**In the Building Sector**, the Jordan National Building Code Council (JNBC) of the Ministry of Public Works and Housing (MPWH), developed several codes related to the energy consumption in buildings, as part of the Jordan National Building Law No 7 (1997). The following codes have been developed and approved:

- Daylighting Code 17/2014
- Solar Energy Code 45/2012
- Energy Efficient Building Code 36/2009
- Thermal Insulation Code – Approved in 2010

The following Codes are developed but not yet endorsed:

- Mechanical Ventilation and AC Code –-/2014
- Central Heating Code --/2014
- Natural Ventilation Code --/2014

The enforcement of building codes in general is weak, the JNBC is working on this together with the EU funded TA to REEEP and MED-ENEC projects. The Roadmap for Enforcement of EE Building Codes is expected to be ready by mid 2015.

**In the Electricity Sector**, Jordan is one of the few countries in the ENPI region with relatively comprehensive EE and RE policies in place[10]. Electricity Law No 64/2003[11] established the Electricity Regulatory Commission (ERC) and details its various functions, duties, responsibilities etc. It also provides the regulatory framework for issuing of licenses for the purpose of producing, transmitting, and distributing electricity.

Utilities provide energy consumption data to their consumers on the bills and obtained by official (ministerial) letter. An obligation for the utilities to provide electricity consumption data is not included in the Electricity Law.

The Net metering Regulations[12], allow also municipalities to connect to the grid:"…municipalities might offset all consumed energy by auto production if complying with system criteria and defined rules"[13]. The related bylaws and regulations of the utilities have restrictions concerning the size, access to a connection point, maximal capacity, as well as the balancing and remuneration process for excess electricity. The laws related to the energy sector are presented below.

**For the Waste sector** the regulations are the responsibility of the MoEnv, currently preparing a new draft Law related to Waste Management which will cover both municipal and hazardous waste. Currently **The Management of Solid Waste Regulations** No. 27 (2005)[14] arrange the protection of the environment and public health.

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[10] AFEX Energy Efficiency 2015 (http://www.rcreee.org/projects/arab-future-energy-index%E2%84%A2-afex) and AFEX Renewable Energy 2013 http://www.rcreee.org/sites/default/files/reportsstudies_afex_re_report_2012_en.pdf ), RCREEE

[11] The Electricity Law: http://ppp.worldbank.org/public-private-partnership/library/jordan-electricity-law-2003-english

[12] http://erc.gov.jo/Arabic/Pages/RenewableEnergy.aspx

[13] http://erc.gov.jo/Arabic/Pages/RenewableEnergy.aspx

[14] www.moenv.gov.jo/AR/LegislationAndPolicies/Legislation/Systems/Pages/Solid-Waste-Management-System.aspx#.VSaat_mUdtx

**Regulations of allowance of waste services, instructions, transport, treatment and disposal (2014)**[15] include waste collection fees and mechanism (Art. 5) and GAM's role for issuing licenses (Art. 9) and responsibility for licensing of waste collection companies (Art.11)

**The Waste Prevention and Collection Fees** regulation No. 8 (2014) identifies the solid waste services fees according to municipality category[16]. This regulation is currently under revision.

**Industrial fuel from waste** is regulated in Law 26/1985[17]. The MoMA and the GAM can grant regulatory approval for the establishment of waste processing facilities (Art. 6).

**Regulation of Services (Community) Councils** No. 75 (2009)[18] charges the Services Councils with the responsibility for operating and managing the landfills.

There are other legislations implemented through different governmental agencies, such as Law No. 14 (2007), Public Health Law No. 54 (2002) and Environmental Protection Law 52 (2006). **The coordination between all these laws and regulations is to be considered in the new Waste Management draft Law,** to create a clearer situation for municipalities in the execution of (solid) waste management.

Note, that according to Sweep Net 2011 Jordan Country Report, all municipalities are operating without full cost recovery[19]. Aqaba is the only city with private sector involvement in the collection and transport of solid waste. This suggests that there is a need to develop plans to create incentives for private sector to take role in Solid Waste Management[20]

**For the Energy sector** (production of non-conventional energy), after the Energy Strategy 2007-2020 (see below 3.1 National strategies), programmes and planning tools, several laws, bylaws and regulation have been developed and endorsed, **indicating a strong political will to reduce the energy consumption.**

The **Renewable Energy and Energy Efficiency Law (REEEL)** No. 13 (2012)[21] promotes RE self-consumption, and is the basis for supporting schemes and other incentives. The REEEL is unique in the MENA region, since it is a dedicated and comprehensive law with incentives for the private sector to invest in renewable energy. In two ways renewable power can be competitively procured: competitive tendering and direct proposals. As a result, at least 525 MW of renewable power capacity is in the pipeline and expected to be operational by the end of 2015. This suggests that the REEEL has been effective in increasing renewable power capacity and has put the country on track to meet its 2015 renewable energy target[22]. Additionally, it also contributes to environmental protection and sustainable development. REEEL addresses:

- The establishment of new RE installations and grid connections, including 'net metering' (see above under Electricity Sector) and 'energy wheeling'[23] (2014).

[15] http://www.pm.gov.jo/arabic/index.php?page_type=gov_paper&part=3&id=5317
[16] http://www.sweep-net.org/ckfinder/userfiles/files/country-profiles/CountryreportJordan-En-mai2011.pdf
[17] www.pm.gov.jo/arabic/index.php?page_type=gov_paper&part=3&id=5281
[18] http://www.sweep-net.org/ckfinder/userfiles/files/country-profiles/CountryreportJordan-En-mai2011.pdf
[19] Jordan's Third National Communication on Climate Change – UNDP - 2014/11/5178
[20] idem
[21] http://www.memr.gov.jo/Default.aspx?tabid=291
[22] Jordan Assessment Report, ISMED/OECD- Nov.2014
[23] http://www.rcreee.org/sites/default/files/rcreee_up-scaling_solar_pv.pdf

- The Jordan Renewable Energy and Energy Efficiency Fund (JREEEF)
- Tax and Customs regulations.

In accordance with the REEEL the Energy Regulatory Committee (ERC) issued:

- A reference pricelist for the Calculation of Electrical Energy Purchase Prices from RE Sources according to (REEEL Art. 2)
- A directive for the Costs of Connecting RE Facilities to the Distribution System for direct proposals and competitive tenders (REEEL Art 9B)
- A directive governing the sale of electricity generated from RE systems (REEEL Art. 10B)

The bylaw on **Regulating Procedures and Means of Conserving Energy and Improving its Efficiency** No. 73 (2012)[24] addresses the conservation of energy and improvement of its efficiency with a number of initiatives and decisions regarding monitoring (Energy Database, Art.3), **obligation for governmental entities to comply with energy conservation policies (Art.4), mandatory energy audits (Art.5), also for consumers of more than 50TOE[25]**, labelling (Art.7 and 8), smart metering (Art.9), Solar Water Heaters (Art.10) and an Energy Efficiency Award (Art.12).

However the applicability of this law to municipalities was raised as a question during the NCG meeting, since it was not clear whether municipalities are considered a government entity (official departments, official public institutions, or public corporations).

The bylaw on the **Exemption of Renewable Energies and Energy Efficiency (tools) from Taxes and Tariffs** No. 10 (2013) details the extensive list of tools and equipment exempted from taxes and tariffs.

Within the comprehensive set of regulation promoting EE and RE **Municipalities are eligible to take initiative and support Renewable Energy projects in their SEAP**. This will result in a direct energy saving to reduce their own energy consumption, or indirect by promoting implementation of RE in their community by informing the public, seeking cooperation with the private sector as part of their local economy development (according to the Municipality Law update).

**In the Environment Sector** the Environmental Protection Law No. 52 (2006) provides legal tools for the management of environmental issues in general, but not explicitly for solid waste management issues. Part of this law is the Jordan Environment National Fund. However this fund is currently not activated.

**Considering the wide range of laws and regulations in place there is political commitment for EE and RE Actions, by municipalities.**

## 2.2 Role of NCG' members and keys stakeholders and networks

**The National Coordination Group has a good combination of participating Ministries:**

- MOPIC for the international cooperation and planning.
- MoMA to coordinate on Joint Services Councils and Municipality level.
- MEMR to provide input on energy regulation, and data collection related issues.

[24] http://www.memr.gov.jo/LinkClick.aspx?fileticket=7xnTASsmwyY%3D&tabid=291
[25] 50 TOE equals approx. 580 MWh, not clear whether final energy consumption or primary energy is indicated.

- MoEnv for waste management related issues.

As an expansion it could be considered to involve the **MPWH for building** and EE tendering, procurement and Building Code enforcement procedures. The role of the **Ministry of Finance** (MoF) will be crucial as well, when it comes to **budget allocation for SEAP development and implementation**.

Once SEAPs are up and running, further connection could be considered with the Ministry of Transport (promotion of public transport) and the Ministry of Industry and Trade (to enforce mandatory energy audits through commercial/industrial licensing by municipalities).

**Key stakeholders** that could be of relevance for development and implementation of SEAPs are:

- **The Joint Services Councils** (JSC): for energy issue related to solid waste management, and or agriculture waste collection for biogas.
- **The Local Development Councils**: as information point to facilitate access to funding procedures.
- **National Energy Research Center** (NERC): for energy indicator collection and support on funding application (potential role of CoM The Coordinator see chapter 5)
- **Utilities:** EDCO, JEPCO, IDCO: for coordination of demand side management programmes at municipality level.
- **Jordanian funding/financing organizations**: CVBD, JEF, JREEEF

At later stage, further involvement could be considered of the Housing and Urban Development Cooperation for energy efficiency on the level of urban planning and city development.

**Networks** currently in place, and that could be relevant for the SEAPs at Municipalities, either as a supporting role (providing information, training) or for Public Private Partnerships are:

- **EDAMA**[26]**,** a Business Association seeking innovative solutions for energy and water independence and productivity.
- **Jordan Green Building Council**[27] (JGBC) provides currently trainings on EE Building and Energy Management.
- **SWEEP NET**[28] Regional network for integrated waste management in the MENA region[29].
- **Renewable Energy Efficiency Society** (REES) a new society, which was indicated in several interviews (USAID is providing support), within time frame of preparation of this report contact details could not be tracked.
- **PV Suppliers Association:** exchange on PV projects.
- **Eco Cities of the Mediterranean**: for exchange on regional level.

**The National Sharing Platform** is currently under development by the Green Economy Unit (MoEnv). This platform could be an interesting exchange opportunity with private sector for PPP projects.

[26] www.edama.jo

[27] www.jordangbc.org

[28] www.sweep-net.org/ckfinder/userfiles/files/country-profiles/CountryreportJordan-En-mai2011.pdf

[29] www.sweep-net.org/ckfinder/userfiles/files/country-profiles/CountryreportJordan-En-mai2011.pdf

Figure 2 provides an overview of the institutional set-up with most relevant regulations and SEAP subjects.

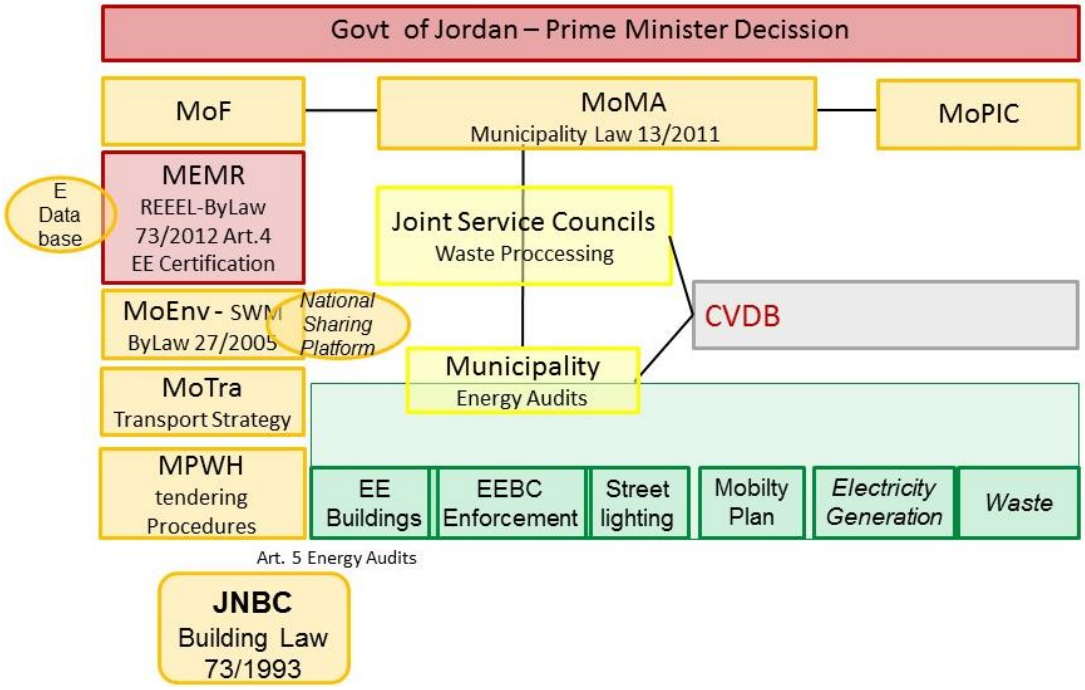


**Figure 1 Institutional Set-up and most relevant regulations and Law**

## 2.3 National strategies, programme s and planning tools

The overall national strategy is the Jordan Vision 2020[30], developed in 2006 with support of USAID, the Energy Strategy 2007-2020 was a result from it. UNEP developed the National Agenda 2006-2015[31] for the government of Jordan.

Several Donor organisations are supporting Jordan on strategy development, where relevant they are included in the below paragraphs.

**On the Municipality level** the only specific strategy found is the Developing an Energy-Efficient Urban Transport Plan for Zarqa, Jordan (2011). This includes major restructuring of the public transport network, new lower emission buses, a parking plan, junction improvements and much improved pedestrian facilities[32]. The implementation of the strategy is not known.
**A Transport Strategy and Action Plan**[33] has been developed for 2012-2014.

A letter was send by the Prime Minister to all Government entities to save 25% on fuel cost, in 2011. It includes provision for fuel consumption of governmental vehicle, in order to save on fuel cost.

[30] inform.gov.jo/en-us/By-Date/Report-Details/ArticleId/15/smid/420/ArticleCategory/3/Jordan-Vision-2020-Phase-II
[31] www.unep.org/greeneconomy/AdvisoryServices/Jordan/tabid/56335/Default.aspx
[32] http://www.esmap.org/node/1291
[33] www.ltrc.gov.jo/?q=en

The above mentioned Energy-Efficient Urban Transport Plan for Zarqa included projection of $CO_2$ emissions for different scenarios.

**For the building sector** the Green Building Guidelines have been published in 2013 by the JNBC. These guidelines are voluntary, quite comprehensive and address Energy, Water, Indoor Quality and Materials issues. So far it is not known whether building projects have been using these guidelines.

For the Electricity Sector the **National Energy Efficiency Action Plan** (NEEAP) is the most important document and an umbrella regarding EE at the national level. It follows the energy saving targets as set in the Energy Strategy 2007-2020, see below, to reduce the electricity consumption. The first NEEAP was adopted in summer 2013 by the cabinet, and is currently in process of updating, as part of the bi-annual updates, which decrease primary energy consumption by 4-5% each time, to reach the 20% reduction goal by 2020. It provides a comprehensive assessment of energy efficiency policies and projects in place or planned for 2013-2015. The NEEAP also details measures, undertaken for the exemplary role of the public sector, that are interesting for SEAP development[34]:

2.1.1.2 Energy Label program for four home appliances. Appliance Labeling is in place for Refrigerators, Freezers, Air Conditioners and Washing Machines and mandatory from July 2015. End of 2015 all testing labs will be ready.

2.2.1.1 Mobile Energy and Environment Clinic - Amman Chamber of Industry.

2.3.1.1 Replacement of conventional Ballasts by Electronic Ballasts for fluorescent Lamps, replaced by LED for the updated version 2013-2015.

2.5. Street Lighting.

2.5.1.1 Replacement of Mercury lamps by efficient lamps and use Automatic street lighting controls and voltage regulators.

3.1.1.1 Reduce the consumption of public buildings by 10%.

3.1.1.2 Replacement of 50,000 incandescent lamps with compact fluorescent lamps (CFL).

4.1.11 Energy Database: comprehensive monitoring, evaluation and verification (MEV) system.

Currently the NEEAP is in process of update by the EU TA to REEEP programme, and expected to be finalized mid of 2015. It is recommended to include the development and implementation of SEAP for Municipalities.

**For the Waste sector** the National Agenda (2006-2015)[35] identified the need for integrated solid waste management hierarchy[36]. In one of the interviews a National Waste Strategy was mentioned, but the report could not be retrieved online.

**The Energy Strategy** 2007-2020, that set the targets for use of Renewable energy on 7% of primary energy supply by 2015 and 10% by 2020, several laws, bylaws and regulation have been developed and endorsed, as indicated under 3.1 Laws and Regulations. Given that RE only made up 2% of the total energy mix in 2012, and that EE measures were not yet deployed at a large scale, the targets are ambitious, indicating a strong political will to reduce the energy consumption.

**The National Renewable Action Plan** (NREAP) is currently under development and expected to be finalized mid of 2015.

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[34] NEEAP April 2013

[35] http://www.unep.org/greeneconomy/AdvisoryServices/Jordan/tabid/56335/Default.aspx

[36] http://www.sweep-net.org/ckfinder/userfiles/files/country-profiles/CountryreportJordan-En-mai2011.pdf

For the development of the baselines emissions, as part of SEAP development, energy data and indicators are essential. The MEMR is working on a National Energy Database with support of the EU funded TA to REEEP project. NERC is working on and indicator data base (processed energy data). GHG emission per sector will be part of it.

**In the environment sector** several policy and recommendations have been developed, mostly with support of international donors:

- Third National Communication on Climate change – UNDP.
- National Climate Change Policy, 2013 –UNDP.
- Indicator National Development Committee – INDC.
- Jordan action plan for green growth BMUP – GIZ.

# 3. RECOMMENDATIONS OF NATIONAL LEVEL ACTIONS

Considering the existing laws, bylaws, regulations and actions plans (as NEEAP and NREAP under development) and the Prime Minister letter of 2011 to reduce on fuel consumption, the political will to develop and implement SEAPs at Municipality level is eminent.

A few municipalities developed the first initiatives towards SEAPs at local authority level, such as ASEZA, GAM and Sahab, followed up by Irbid and Kerak very soon, due to the CES-MED project. However, most municipalities still require support, because budgets, knowledge and skill are not yet (sufficiently) in place. If according to Bylaw 73 (2012), art.5 municipalities are responsible to carry out energy audits, the institutional set-up and/or 'infrastructure' to be able to do so needs to be in place, and a SEAP can help to plan the related necessary actions.

After the general observations on the implementation steps of SEAP, as indicated in paragraph 2.1, this chapter provides recommendations to involve also municipalities, in an active way, by developing and implementing their own SEAP, to support the implementation of national energy policies and action plans. It is a need for the national level to take actions to reduce energy consumption, and secondary that municipalities could join the Covenant of Mayors for exchange of experiences to speed up the learning curve in the (near) future.

The steps of SEAP development process (paragraph 2.1) are reviewed on requirements or success factors, to be able to provide targeted recommendations. Based on the feedback from the stakeholders' meetings, most of these issues are currently not – sufficiently – in place, especially in the smaller municipalities.

**1. Initiation**

- The **political commitment for energy saving actions is present**, however implementation of existing action plans, such as the NEEAP, is behind due to lack of capacity and budgets.
- For an appropriate governance structure, a **person or unit responsible for SEAP development and implementation has to be in place**. This requires not only budget, knowledge and skills to be effectively operational, also an approval mechanism and entity.
- **Stakeholder support** needs to be built on both, **internal** levels for execution of SEAP projects and also on **external level**, to generate acceptance by the general public, in the different sectors, residential commercial, etc.

**2. Planning**

- With the current policy framework **municipalities can develop and implement SEAP**, however internal **capacity needs to be developed**. The initiative is already ignited, for Aqaba, Irbid, Kerak and Sahab thanks to EU funding.
- To be able to establish the Baseline Emission Inventory (BEI), **energy and financial data need to be accessible and available** for municipalities. Currently (part of) the municipalities' electricity bill are off-set against the waste collection fees, that are collected by the utilities. During the interviews it was indicated that therefore Municipalities do not know their actual electricity expenses and related consumption. Electricity data can be obtained from the utilities by official (ministerial) letter. Internal data collection systems, for instance for the fuel consumption vehicles under the municipalities responsibility, or diesel for heating of

municipality buildings, need to be in place to be able to assess the internal energy consumptions.

- Not only a vision is needed, also **a specific and concrete energy reduction target of the SEAP** has to set. To have a guideline, a reference could be made to the targets in the Energy strategy and NEEAP, for instance Industrial sector 15% saving, Commercial Sector 13%, and/or Street lighting 30% energy saving, in 2020, related to the baseline year, and governmental building to abide by the energy building codes.
- To be able to elaborate the SEAP, **economic assessment and development of 'bankable project'** need to be made, to select the **most appropriate energy saving actions**. This requires specific knowledge and skills, just as the capacity to be able to make sound decisions on technological choices. It is not necessary that all such relevant skills are present in a municipality. In Europe often consultants are hired for such specific tasks. However the capacity and budget needs to be place to be able to hire such consultant, not only financial, a basic technical understanding would be required, or an access point for such information needs to be in place for support.
- To be able to secure sustainable financial resources most municipalities have to rely on their annual budgeting procedure, in which budgets need to be approved by the Prime Minister. This is a long procedure, large investment cannot be absorbed by municipal budgets. Currently municipalities are not encouraged to take loans.

**3. Implementation**

- In the governance structure, the **internal approval procedure of the SEAP needs to be included**, before it can be submitted to the CoM. If this is not yet in place, the Mayor and/or Municipality council would be the highest eligible level for SEAP approval.
- The most critical phase is the implementation of the SEAP. The **responsible entity, EE unit or officer,** needs not only to have the **decision making power** needed to be able to manage this process, also sufficient experience or skills in project management, coordination, technical standards, tender documents, relevant procedures, and adequate staff capacity to oversee the execution or implementation.
- **Create opportunities for municipalities to engage in PPP**- projects, or even the options for municipalities to establish a company for RES (or joint venture with other municipalities) could be considered.

**4. Monitoring and Reporting**

- A great value of the SEAP is monitoring activities, to **know the actual savings**, implementation cost and **return on investment**. This requires not only procedures for energy monitoring (data collection), also on implementation cost and challenges, to learn for the future.

  **Standardized procedure, methodologies, reporting templates, specific for municipalities**, would support getting the actual results, and in a way that comparison between municipalities is easier facilitated. For instance by making links to Data collection mechanism on national level.

  The monitoring mechanism need to include **feedback loops to make adjustments in case of changes.**

Currently, as in many countries, the challenges that most Municipalities are facing are:

- **'To keep the shop running'**
- The **'strenght of their financial health',** it seemed that often municipalities do not pay all bills, including electricity, due to lack of resources and budget deficits (60% of the budget is for human resources, electricity is the second largest budget line).
- **Formal budgeting procedure** require time and planning**.**
- **Planning and implementation procedures** which are not known upfront and therefore can be very lengthy, which make appropriate planning complicated, and are as well not encouraging for private sector to engage in cooperation with the public sector.
- **Public Pressure,** for instance for Mayors, as it might influence the changes in elections, therefore the first selection of SEAP measures should target added quality for citizens.
- **Motivation** to 'invest' efforts' in energy saving actions, if reduced E-bills lead to lower budgets in the next year, then the net balance is '0'. This is not encouraging to make the effort to reduce energy consumption, while many other issues are considered of higher priority, unless, reduction of energy consumption is mandatory.

## 3.1 Improving Legal and Institutional Framework:

**In the institutional set-up** of Municipalities it is currently not clear who is responsible for the overall planning. When introducing a new tool like the SEAP, this needs to be clear. On ministerial level the installation of Energy Efficiency Unit or Officer started. This process could be taken to the municipality level, starting with the municipalities that are currently involved in the SEAPs (Aqaba, Irbid, Kerak and Sahab), then the other larger municipalities (Category I,) before further role out to the next categories.

For the smaller municipalities (Category III and IV), a full time EE unit or Office will be too big a load, instead this function could be hosted at the Joint Services Councils, or the Cities Alliance council, as planned under the new Municipality law, see figure 3, below. This development fist towards decentralization which is set in the new law, and could be aligned to the role of the Regional Coordinator, as indicated by the CoM. In both cases the knowledge and experience in developing SEAPs, initiating projects and managing the implementation could be supported by NERC in the initial start-up phase.

To support municipalities in finding information two information points are important to be established on the short term.

The first one related to government and donor information: **Info Point GoJ and Finance** in figure 3. This information point could be established, as a short terms action, until the National CoM Coordinator is in place.

Connected to the EE Unit of MoMA, this information point collects the relevant information from the different ministries on regulations, procedures and obligations. The members of the NCG play a crucial role here in bringing the relevant information. Beside the current NCG members, it is recommended to include along the process development, in order of priority, Ministry of Public Works and Housing (MPWH, the JNBC for EE Building), Ministry of Transport (MoTRA for transport strategy and mobility planning) and at the end, Ministry of Finance (MoF) for budgeting support, if needed.

MoPIC can provide the information for relevant support by the donor community, to kick start the implementation of the first Pilot SEAP measures.

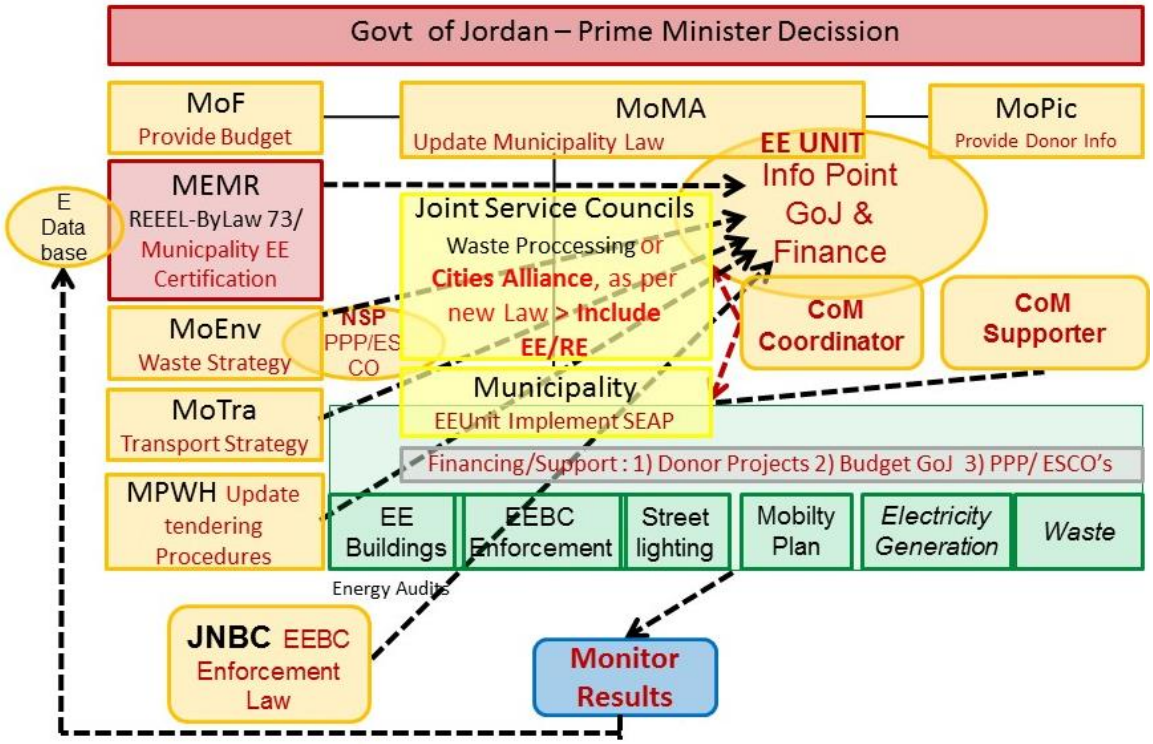


**Figure 2 Institutional and legal framework recommendations**

The second information point could be the **National Sharing Platform** (NSP, under the MoEnv) for connection to private sector for PPP and ESCO projects, and specific waste management projects. This entity is already under development, and connection to SEAP could make its start position stronger. (EU funding in this direction might be considered).

A **responsible entity for energy data collection** is currently being set up in the MEMR, the E-database in figure 3. The results of the implemented SEAP measures and actual annual energy consumption data (electricity, final energy (for fossils fuels) and primary energy (for RE generation/consumption)) of municipalities need to be shared with this database, preferably for the BEI sectors[37]. It is still a question which entity would be responsible for collecting and or delivering the data, either through the Energy Unit of MoMA, to the data base in MEMR, so communication can take place on ministerial level, or direct from municipalities to MEMR data base unit. This might be a future option, when and digital/online information system is fully operational.

On the **Legal Framework development there are several opportunities to pave the way for SEAP development at municipality level.**

The first opportunity is the **update of the Municipalities Act No. 13 (2011)**, which is currently being reviewed, under the responsibility of MoMA. Environmental and energy sustainability is to be

[37] The following BEI sectors are defined: buildings, equipment/facilities and industries (sub sectors: Municipal buildings, Tertiary (non-municipal) buildings, equipment/facilities, Residential buildings, Municipal public lighting, and Industries), transportation (though in Jordan it is not likely that electricity consumption for vehicles is already registered, first pilot just started) and other sectors (agriculture, forestry, fisheries).

included in this Law, as well as mandatory support of municipalities to national environmental and energy action plans, like NEEAPs, such as by development, implementation and monitoring of planning tools, like SEAPs.

Additionally, the possibility can be created for municipalities to generate new income revenues, to support implementation of energy conservation measures, as indicated in the **Donors and Funding Initiatives in the Areas of Sustainable development at the Local Level** report. These income revenues will be created either by charging new energy taxes to cover specific enforcement cost, like for EE Building Codes enforcement, or licensing to enforce the mandatory Energy Audit (for consumers over 50TOE (By Law 73/2012).

For instance by including articles on the following:

- Municipalities have the responsibility to monitor their energy consumption, in the field of Transport, Building, Electricity, Waste and Energy.
- Municipalities have the responsibility to develop and implement a Sustainable Energy Action Plan, to reduce their own energy consumption, according to National Strategy and Action Plans targets, and to promote energy conservation among the general public; the building, residential, commercial and industrial sectors, for the above mentioned fields, within the range of their influence, (such a licensing, public space allocation and permits, Energy Efficiency Day…). The SEAPs are to be submitted with the Annual budget to MoMA/PM.
- Municipalities can initiate additional taxes related to encouragement of implementation energy saving measures for the mentioned sectors. Income from such revenues needs to be allocated to either the enforcement process, or to measures included in the SEAP, aiming at reducing energy consumption.
- The conditions for municipalities to engage in Public Private Partnership agreements and/or start a company (or joint venture with other municipalities), for the purpose of RES.

Approval processes of new law take time, a priority should be given to endorse the new law, to make it in effect as soon as possible, as well as developing the relevant regulation or bylaws for specification of implementation.

The municipalities are bound by national **procurement regulations**. These regulations (under the Ministry of Industry and trade) are to be **revised to include energy performance criteria** for appliances and equipment procurement.

To **clarify the legal lending options for municipalitie**s, the contradiction between Municipality Act (13/2011) and the CVDB law (63/1085) needs to be eliminated.

To have more options for SEAP projects, it would be recommended to update the CVDB law no. 63 (1985); remove the relevant article from this law, and include the possibility to finance energy projects. However before making amendments it would be good to check the financial status of CVDB before developing further activities.

On the transport side the legal framework is not yet developed in a way that it reflects the energy saving ambition of GoJ. Therefore the recommendation is to develop a **new transport Strategy and Law that includes energy conservation**.

**The procurement regulations of MPWH are to be aligned** with the energy laws, bylaws and regulations, to allow also in procurement and tendering processes of governmental buildings, energy

performance criteria (or even make it mandatory). This could be supported by the KfW to upgrade Governmental buildings' energy performance.

In the **new Waste Management draft Law**, the coordination of all laws and regulations related to waste (management), currently existing under different ministries is to be considered and additional the legal framework for **waste to energy needs to be included**, in line with the regulation of MEMR, bylaw waste to energy projects 5281/2014.

In the **updating process of the Bylaw No. 73 (2012)** 'Regulating Procedures and Means of Conserving Energy and Improving Its Efficiency', which is currently ongoing, the following issues should be tackled:

- Clarify the position of municipalities as governmental entities, and obligation to abide by this law.
- Indicate the energy type of the 50 TOE, final energy consumption or primary energy.
- Align art.10 with the Solar Energy Code, of MPWH, with is leading.
- The obligation for Utilities to provide clear insight (to Municipalities) in electricity consumption and bills.
- Access for Municipalities to energy consumption data for the Baseline Emissions Inventory (BEI) sectors for the purpose of SEAP development.

In support of implementation of Bylaw 73, recommendations include the development of regulations that indicate to whom energy audits should be submitted and according to which procedure, what are the consequences when it is not done, as. As well as a regulation that clarifies the procedures to apply for the mandatory compliance certification for governmental entities (provided municipalities are considered as a governmental entity). Furthermore a regulation that clarifies the accessibility of the Energy database, and which entities are eligible to provide data should be placed, preferably in a way that municipalities can benefit from the database for their SEAP development.

Make these relevant regulations and procedures available for Municipalities.

As indicated in the 'Donors and Funding Initiatives in the Areas of Sustainable development at the Local Level' report another new source of revenue could come from energy generation projects. To be able to develop a business plan that supports such projects, by either solar or waste to energy solutions, a **reconsideration of the 'directive governing the sale of electricity generated from RE systems'** is recommended, to establish energy sales prices that increase the number of feasible (bankable) energy projects.

Develop a **regulation under the Environmental Protection Law** No. 52 (2006)[38], so as to **make the Jordan Environmental fund operationa**l, in such a way that is not depending on Ministerial changes.

## 3.2 Support at National level for the preparation and implementation of SEAPs

The new municipality law can only come into real effect when related budgets are also assigned. Municipalities need to be able to have the relevant budget line items to carry out their responsibilities, only then the political commitment is in force. This is a priority for the national support. Budget would need to be created for SEAP development (EE officer /Unit) and

[38] http://www.sweep-net.org/ckfinder/userfiles/files/country-profiles/CountryreportJordan-En-mai2011.pdf

implementation (measures, actions and their monitoring), in the form of a revolving fund (under JREEEF), see the **Donors and Funding Initiatives in the Areas of Sustainable development at the Local Level** report.

Considering the current financial health of many municipalities, the role out of the SEAP can only take place in those municipalities, in good financial health, and those that already joined the current initiatives. These Pilot SEAPs can set successful examples to follow once other municipalities are ready, in terms of internal set-up (EE Unit or Officer) and related budgets in place.

**The SEAP sectors**, agreed in the NCG meeting, that are relevant **for Jordan**, are besides those indicated by CES-MED (**EE for Municipality Buildings, EE Building Code enforcement, Street lighting and Mobility (transportation) planning), Electricity Generation** (due to the existing feed in tariff and legal framework) and **Waste** (due to the number of donor and IFI initiatives related to waste and waste to energy).

For examples of potential SEAP projects, that are already being implemented by Donors, see Annex IV, for donor contact details refer to the **Donors and Funding Initiatives in the Areas of Sustainable development at the Local Level** report (Annex III).

To promote the implemented EE measures, also those by the general public in the different sectors, every SEAP should include an EE Award, in line with Bylaw 73 (2012) on National level.

Actions additional to the recommendations for the institutional set up and legal framework, indicated in the previous paragraph, recommended at the national level to support municipalities in the development and implementation of SEAPs are listed in the below table, including the responsible entity to take or initiate such actions.

**Table 1 Long term actions at national level to support SEAP's**

| WHAT | WHO |
|---|---|
| **Political** | |
| Include development of Municipal SEAP in the NEEAP update and NREAP | **MEMR/TA to REEEP** |
| Include in regulations updates, such as for Municipality Act No 13 (2011), EE Bylaw No 73 (2012), the necessary actions to support Municipal SEAP development. | **MoMA / MEMR** |
| Streamline procedures for energy (supply) projects, make them transparent and inform Municipalities about them | **MEMR** |
| Integrate flexibility in Municipality Budget to assign budgets for staff and energy saving measures with a 'light procedure' for MoMA approval, when following required methodology for SEAP actions. | **MoMA** |
| Install "incentives" for Municipalities<br>• E-bill saving can be used for investment in the next Energy Saving | **MoMA, MoF & MEMR** |

| WHAT | WHO |
|---|---|
| Action (or a part of it).<br>• Launch an annual Municipal Energy Award (May 21st - Arab EE Day) for Municipality with the best implemented Energy Action[39] | |
| Create investor awareness for EE/RE instead of new urban projects | **MoPIC** (CESMED Municipalities: Irbid and Kerak, SuDep: Sahab)/**ASEZA** (Aqaba) /**2016** |
| **Institutional:** | |
| Assign responsible person or entity for SEAP coordination - Energy Efficiency Officers/Units - for Municipalities (Category I) or Joint Services/Local Development Councils ( for the Category II,III and IV), as long as it is not yet mandatory by law for municipalities | **MoMA & JSC/LDC & Municipalities** |
| Utilities (EDCO, etc) to provide (transparent) electricity bills | **ERC** |
| Distributors to provide grid access | **ERC** |
| Assign a CoM coordinator to support Municipalities | **MoPIC/MoMA/EU** |
| Mobile Energy and Environment Clinic as initiated by the Amman Chamber for Industry | **NERC** |
| **Information** | |
| Publish the list of labelled appliances and equipment | **NERC** |
| Provide information on different, relevant Application Procedures, where to go to get what and when? | **MoMA with support of MEMR/MoEnv, MoTra, MPWH** |
| Develop technology selection decision making models, tender documents packages, application templates, success factors for implementation, monitoring and reporting procedures. | **MEMR/NERC** |
| Provide methodology for energy data collection and indicator development on municipal level for Building (in corporation with MPWH), Street lighting (together with NERC), Municipality Vehicle (MoEnv), RE supply (MEMR). | **MPWH / NERC/ MoENv / MEMR** |
| Develop 'packages' of Energy Saving measures for Municipalities, including cost estimations and technical specifications: street lighting, low consumption vehicle and vehicle management, EE Building renovation, PV, (Agricultural) Waste to Energy (biogas), Commercial licensing criteria, Public Transport Promotion, Enforcement procedures, Fine collection, Public Communication | **NERC/MoMA** |
| Provide information on how to engage in Public Private Partnerships | **Green Economy Unit /MoEnv** |
| Create exchange mechanism for sharing best practices and successful project implementation | **National Sharing Platform, Green** |

[39] See as reference: EU Energy Award: www.european-energy-award.org/home/ and www.european-energy-award.org/international-projects/medeea-project/

| WHAT | WHO |
|---|---|
| | **Economy Unit /MoEnv** |
| **Skills Development** | |
| Train Energy Efficiency Officers or Units staff on SEAP development principles, Specific energy issues for municipalities, such as<br>• Street lighting,<br>• Vehicle fuel reduction,<br>• Building Energy Consumption,<br>• Sustainable Energy supply options (PV Biogas, Waste to Energy),<br>• Promotion of Public transport,<br>• Regulatory options for licensing and its enforcement | **NERC/CVDB** |
| • Technology selection decision making models, | **NERC** |
| • Tender documents | **NERC** |
| • Sustainable financing models | **MoMA** |
| • Success factors for implementation | **MoMA** |
| • Monitoring and reporting procedures | **MoMA** |
| • Energy Efficient Urban Development, to be included in SEAP sectors | **Municipalities** |
| ……or at least inform where to get required specific information when needed | **MoMA** |

The measure in the above table will need a longer time frame (up to five years) before they all can be in place. The NGC member would be to set priorities for the above action, as from their experience they have the best perspective on which action would be the most successful, or the quickest. This could be a discussion point for their next meeting with CED-MED.

The question arises **what can be done on the short term** with the support of CES-MED, currently in place? These actions are listed below in table 3.

**Table 3: Short term actions at national level to support SEAPs**

| WHAT | WHO |
|---|---|
| | **MoMA** |
| Assign Energy Efficiency Officers or Unit for SEAP development for Irbid, Kerak and Sahab (ASEZA established already a team in Aqaba for the development of the SEAP) | **Municipalities** |
| Facilitate exchange between the pilot municipalities | **MoMA** |
| Coordinate the activates of international donors and share relevant information with the 'Pilot Municipalities' (Aqaba, Irbid, Kerak and Sahab) | **MoPIC** |
| Collect the Monitoring data and information from the ongoing projects and extract the best practices,…share these with other municipalities | **NERC/MEMR** |
| Provide information on procedures – reduce project preparation time | **MEMR/MoENV/MPWH** |
| Collect lessons learned (technical specification, procedures, financing | **MoPIC/NERC** |

| WHAT | WHO |
|---|---|
| options) from ongoing projects and make this information available | |
| Publicity for current actions/projects being implemented by Municipalities, to motivate other Municipalities to take action. Communicate the energy and budget savings | **MoMA** |

# 4. POTENTIAL COM COORDINATORS

The European Commission defines "**Covenant Coordinators**"[40] as those public administrations which provide strategic guidance, financial and technical support to municipalities signing up to the Covenant of Mayors but lacking necessary skills and/or resources to fulfill their requirements.

The Commission distinguishes between Territorial Coordinators, which are sub-national decentralized authorities - including provinces, regions and public groupings of municipalities - and National Coordinators, which are national public bodies - including national energy agencies and the Ministry of Energy.

The European Commission defines "**Covenant Supporters**"[41] as European, national and regional networks and associations of local authorities which leverage their lobbying, communication and networking activities to promote the Covenant of Mayors initiative and support the commitments of its signatories.

Coordinators and Supporters are distinct in their operations, as coordinators focus on actually supporting the municipalities with the development and/or implementation of their SEAPs, while supporters provide mainly networking activities. The priority for Jordan is to assign Covenant Coordinators; however organizations capable of undertaking both roles could be possible too.

**CoM Coordinators**

One or more NCG members could be appointed as a focal point or SEAP Coordinator who is given the full support of local authorities and higher levels, as well as the necessary time and budget to carry out the role.

**The National CoM Coordinator** would need to be able to do the following tasks:

- Offer strategic guidance and technical assistance to municipality for SEAP development and implementation
- Support municipalities with its extensive technical knowledge on EE and RE measures, energy audits, and development of economic energy projects
- Assist in application of regulations and procedures from the different Ministries

During the NCG meeting two potential CoM coordinators where discussed:

- **A (new) Unit in MoMA,** since this would be the most direct connection to the municipality, and most easy **to control the SEAP development**. However in depth knowledge and/or experience of RE and EE is not yet in place and internally there was no agreement yet whether a new unit should be established. It could be considered for the planned EE Unit to take this role, additionally.
- **The National Energy Research Center** (NERC) does have the technical knowledge and experience needed to provide support to SEAP development and implementation. NERC is already actively cooperating with Sahab Municipality for a SEAP (in the EU funded SuDeP project).

[40] http://www.covenantofmayors.eu/Covenant-Coordinators.html.
[41] http://www.covenantofmayors.eu/about/covenant-supporters_en.html.

**A Regional Coordinator** could be considered for smaller Municipalities. In the NCG meeting it was discussed whether the tasks of the Joint Services Councils could be extended beyond their current tasks in waste landfill management, to include energy conservation activities in the future. Once the new municipality law is in place, the new 'Cities Alliance Councils', could potentially play the role as regional coordinator.

In both cases the knowledge and experience in developing SEAPs, initiating projects and managing the implementation could be supported by NERC in the initial start-up phase.

**COM Supporters** for the regional level were only briefly mentioned during the NCG meeting. It could be further investigated whether the EcoCities organisation (related to MoEnv) could play such a role. The Eco Cities Forum takes place on an annual basis, addressing environmental issues related to cities and urbanized areas. The SEAP would fit very well in the thematic set-up. However (financial) support for Eco Cities would be needed to organize and manage activities around the SEAP exchange in the region. This could be considered by the EU.

# 5. REFERENCES

## 5.1 Laws, Bylaws, Regulations and Directives


Municipality Law No.13 (2011): www.mma.gov.jo/Legislation/MOMARule2011.pdf
Industrial fuel from waste Law 26/1985: www.pm.gov.jo/arabic/index.php?page_type=gov_paper&part=3&id=5281
Renewable Energy and Energy Efficiency Law (REEEL) No. 13 (2012): www.memr.gov.jo/Default.aspx?tabid=291
Bylaw No. 73 (2012) - Regulating Procedures and Means of Conserving Energy and Improving Its Efficiency: www.memr.gov.jo/LinkClick.aspx?fileticket=7xnTASsmwyY%3D&tabid=291 and www.memr.gov.jo/LinkClick.aspx?fileticket=7xnTASsmwyY%3d&tabid=254
By-law Exempting renewable energy resources and equipment from customs duties: http://jordannetwork.net//sites/default/files/resources/Exemption%20of%20RE%20sources.pdf
CVDB Law: www.cvdb.gov.jo/en/about-the-bank/about-the-bank and www.cvdb.gov.jo/images/banklaw_a.pdf
The Electricity Law: http://ppp.worldbank.org/public-private-partnership/library/jordan-electricity-law-2003-english
The Management of Solid Waste Regulations: www.moenv.gov.jo/AR/LegislationAndPolicies/Legislation/Systems/Pages/Solid-Waste-Management-System.aspx#.VSaat_mUdtx
The Net metering Regulations http://erc.gov.jo/Arabic/Pages/RenewableEnergy.aspx
Regulations of allowance of waste services, instructions, transport, treatment and disposal (2014) http://www.pm.gov.jo/arabic/index.php?page_type=gov_paper&part=3&id=5317
The Electric Power Wheeling Directives http://erc.gov.jo/Arabic/Pages/RenewableEnergy.aspx
Allowance wheeling energy costs regulations: http://erc.gov.jo/Arabic/Pages/RenewableEnergy.aspx


## 5.2 Strategies and National Action Plans


Jordanian Government Renewable Energy Strategy 2007-2020: www.memr.gov.jo/portals/0/energystrategy.pdf
Jordan Vision 2020: inform.gov.jo/en-us/By-Date/Report-Details/ArticleId/15/smid/420/ArticleCategory/3/Jordan-Vision-2020-Phase-II
NAMA Jordan: www.ppiaf.org/node/816
National Agenda 2006-2015: www.unep.org/greeneconomy/AdvisoryServices/Jordan/tabid/56335/Default.aspx
National Resilience plan: http://un.org.jo/publications/national-resilience-plan-2014-2016
NEEAP: www.rcreee.org/sites/default/files/plans_jordanian_neeap_summery_2013.pdf
NREAP: www.rcreee.org/projects/arab-renewable-energy-framework-aref-and-national-renewable-energy-action-plans-template
Transport Strategy Action Plan: www.ltrc.gov.jo/?q=en


## 5.3 Others


AFEX Energy Efficiency 2015: www.rcreee.org/projects/arab-future-energy-index%E2%84%A2-afex)
AFEX Renewable Energy 2013: www.rcreee.org/sites/default/files/reportsstudies_afex_re_report_2012_en.pdf
Climate change (2013-2020): https://www.thepmr.org/system/files/documents/Climate%20change%20policy_PDF.pdf
Covenant of Mayors: www.ces-med.eu/support/faq,

Covenant of Mayors Coordinators: www.covenantofmayors.eu/Covenant-Coordinators.html.

Covenant of Mayors Supporters: www.covenantofmayors.eu/about/covenant-supporters_en.html.

Guidebook how to develop a sustainable action plan for south Mediterranean Cities: http://iet.jrc.ec.europa.eu/energyefficiency/publication/guidebook-how-develop-sustainable-energy-action-plan-seap-south-mediterranean-cities

EDAMA: www.edama.jo

ESMAP – World Bank: www.esmap.org/TRACE and [1] http://www.esmap.org/node/1291

EU Energy Award: www.european-energy-award.org/home/ and www.european-energy-award.org/international-projects/medeea-project/

Indicator National Development Committee http://www.mitigationpartnership.net/sites/default/files/u1679/jordans_perspective_on_indcs_giz_side_event_lima_peru_dec_3_2014.pdf

Jordan Assessment Report, ISMED/OECD- Nov.2014

Jordan Green Building Council (JGBC): www.jordangbc.org

Jordan Renewable Energy and Energy Efficiency Fund (JREEEF): www.edama.jo/Content/Events/Presentations/39a856ba-6553-45e6-be19-49c361d059cc/ae4f71a3-0baf-40a1-a707-62730020f670.pdf

Jordan's Third National Communication on Climate Change – UNDP - 2014/11/5178GIZ Training to improve efficiency in the water and energy sector: www.giz.de/en/worldwide/24677.html

RCREEE Upscaling Solar PV Jordan: http://www.rcreee.org/sites/default/files/rcreee_up-scaling_solar_pv.pdf

SWEEP NET, 2011 Jordan Country Report: www.sweep-net.org/ckfinder/userfiles/files/country-profiles/CountryreportJordan-En-mai2011.pdf

# 6. ANNEXES

## Annex I – Consultation Contacts

| Title | Name | Function | Date |
|---|---|---|---|
| Jordan Cooperation Partners and Stakeholders | | | |
| Mr. | Maher Abdel Raheem | Focal Point International Cooperation Officer EU Partnership Division-International Cooperation Department, Ministry of Planning and International Cooperation - MoPIC | 30.03.15<br>NCG 20.04.15 |
| Mr. | Emad Shana'a, | NCG<br>Head of EU Partnership division, MOPIC | NCG 20.04.15 |
| Eng. | Hussain Mhaidat, | Director of Local Councils<br>MoMA | 07.04.15,<br>NCG 20.04.15<br>04.06.15 Tel./Email. |
| Eng. | Murad Baqaeen | MoMA | 02.04.15 |
| | Eng. Areej Zureikat | | NCG 20.04.15 |
| | Eng. Emad Abdallah Al-abdallat | Director of planning and Development department MoMA | 02.04.15 |
| | Mohammed Abu Gaoud | energy projects with follow up Ministry of planning | 07.04.15<br>NCG 20.04.15 |
| Mrs. | Nancy Rimawi | EU focal point at MEMR | 02.04.15 |
| Eng. | Mohammad Dabbas, | NCG Assistant to Secretary General | 02.04.15 |
| Eng. | Mohammed Khaled Daghash | Head of environment and Energy Division<br>MEMR | 06.04.15 |
| Mr. | Muawiyah Faydi | EE Unit<br>MEMR | 19.04.2015<br>NCG 20.04.15<br>11.06.15 Tel./Email |
| Mr. | Raouf Dabbas | MoE Prime Minister Advisor Ministry of Environment | 02.04.15 Tel. |
| Eng. | Samir Kilani, | NCG<br>Head of Projects Department, MoE. | 05.04.15 |
| Mrs. | Indira Dahaby | Director Climate Change<br>Ministry of Environment | 06.04.15 Tel. |
| Mr. | Rasmi Hamzeh | JREEEF coordinator | 01.04.15 Tel.<br>02.04.15 Email |
| Eng. | Walid Shahin | Director- National Energy Research Center(NERC) | 08.04.15<br>NCG 20.04.15 |

| Title | Name | Function | Date |
|---|---|---|---|
| | | | 04.06.15 Email |
| Eng. | Eman Alkouz | Aqaba Special Economic Zone Authority - ASEZA Environment Directorate | 06.04.15 Tel. |
| Dr. | Mohammad Aladous | German Jordan University, Bio Gas project in corporation with GIZ | |
| Donors & IFI's | | | |
| Mr. | Omar Abu Eid | Energy, Environment & Climate Change Programme Manager – Operations Section EUD to Jordan | 30.03.15 |
| Mrs. | Lena Lampropoulou | Senior Expert for RE/EE in Buildings | 02.04.15 |
| | | Technical Assistance to the Renewable Energy & Energy Efficiency Programme in Jordan | 03.06.15 Tel.<br>11.06.15 Tel./Email |
| Mr. | Rafik Missoui | Alcor, Consultant TA to REEEP for NEEAP | 19.04.15<br>22.04.15 |
| Mr. | Serge Snrech | Director<br>Agence Developpement Francaise - AfD | 08.04.15 |
| Eng. | Hoda Matamet | Projects Officer - AfD | |
| Mr. | Michale Broege | Consultant to AFD SUNREF Jordan Project<br>TA to JREEEF | 21.04.15 |
| Mrs. | Nodira Mansurova | Senior Banker<br>Municipal and Environmental Infrastructure<br>European Bank for Reconstruction and Development - EBRD | 02.04.15 Tel. |
| | | JICA - PV plants / wheeling for municipalities | *Email 06.04.15* |
| Mr. | Ralph Senzel | Project Coordinator, Advice to Refugee Hosting Communities in Waste Management (ADHOC) project, GIZ | 12.04.15 Email &Tel. |
| Mrs. | Elke Zimmerman | GIZ Solar Cooling Project | 01.04.15 |
| Mr. | Mohammed Al Atoom | Environment Programme Analyst | 01.04.15 Email |
| | | Head of Environment & Climate Change Portfolio<br>United Nations Development Programme - Jordan | 06.04.15 Tel. |
| Mrs. | Beate Richter | National Director KfW | 07.04.15 Tel. |
| Mrs. | Kari Anna Eik | Secretrary General, OiER | 14.04.15 |
| | Ramzi Sabella | USAID<br>Project management Specialist – Energy Office | 01.04.15 Tel. |
| Eng. | Ruba Al Zu'obi | Director of Jordan Competitiveness Program - USAID | 05.04.15 |
| Mrs. | Mary Worzala | Chief of Party, Energy Sector Capacity Building Activity - USAID | 08.04.15 |

| Title | Name | Function | Date |
|---|---|---|---|
| Mr. | Adrien de Bassompierre | WB initiative in Jordan ESMAP trace tool –where are they now? | *Email 06.04.15* |
| | Farhat Esen | WB initiative in Jordan ESMAP trace tool –where are they now? | *Email 02.04.15* |
| Mrs. | Carolin Huwiler | MENA Energy Award | 28.03.15 Tel. |

## Annex II- Laws/decrees and decisions related SEAPs

| Sector | Laws/By laws/Decrees & Decisions | Relevant Provisions | Remarks / Recommendation[42] |
|---|---|---|---|
| **Municipality** | Municipalities Act No. 13 (2011)[43] | | A new Law pending endorsement includes more independence and responsibilities for local economic development of Municipalities.Include in the new law requirement to support and monitor implementation of National Energy policies, such as by developing, implementing and monitoring SEAPs and introduction of new relevant taxes.<br>Endorse the new Law |
| | | Art.40 Stakeholders, required procedures, procurement and tendering, income resources, and properties of the Municipality. Relevant duties & responsibilities:<br>- City Planning<br>- Building Permits<br>- Commercial Licensing<br>- Public Lighting<br>- Waste Collection<br>- Maintenance management | Municipalities can direct influence on energy consumption of their street lighting, buildings and vehicles fleet and indirect influence energy consumption for transportation, and through licensing conditions.<br>Not yet clear to what extent Municipalities have influence on their procedures.<br>**Investigate licensing procedure of Municipalities to assess their where they can have influence related to energy issues** |
| | | Art.43 Ownership of buildings | |
| | | Art.44 Charging fees | Procedures for licensing are regulated on national level, Municipalities cannot make changes. |

[42] **Legal frame work recommendation in bold**

[43] www.mma.gov.jo/Legislation/MOMARule2011.pdf

| | | | |
|---|---|---|---|
| | | Art.45 Facility to take loans | There is a contradiction between Municipality Act (13/2011) and the CVDB law (63/1085). According to CVDB law Municipalities can only lend from CVDB, according to Municipalities Act, loans can also be taken from other entities, upon Minister approval. |
| | | Art.50 Fine Collection | |
| | | Art.55 Budget allocation | To be approved by Prime Minister. |
| | | Art.58 Tendering procedure | Tendering procedures are set on a National Level. Municipalities cannot make changes. |
| | LAW no. (63) Cities and Villages Development Bank Act No. 63 1985[44] and its amendments | Art. 3 Internal structure and the aim of founding the bank: Support the local council's projects to secure the services and participate in their development by way of mobilizing its local and foreign financial resources, the bank also extends credit facilities necessary for the execution of the council's projects. | There is a contradiction between Municipality Act (13/2011) and the CVDB law (63/1085). According to CVDB law Municipalities can only lend from CVDB, according to Municipalities Act, loans can also be taken from other entities, upon Minister approval.<br>The financial health of the CVBD is a concern.<br>**Check financial status of CVDB before developing further activities.** |
| | | Art. 5 Duties and eligible criteria to funding projects:<br>- The administration and guarantee of the loans procured by the local councils, and performing banking functions related to this law, any other enactment, international agreements in which the GoJ is party, and implementation requires the CVDB participation. | Municipalities could make use of the services of the CVDB.<br>It is not yet clear to what extend CVDB is involved in energy projects, or other projects related to SEAP. |

[44] www.cvdb.gov.jo/images/banklaw_a.pdf

| | | | |
|---|---|---|---|
| | | - Assisting the local councils in developing economic feasible projects and participate in the capital for those projects.<br>- Assisting the procurement of technical expertise and services including the training of the technicians needed by the local councils.<br>- Extend credit facilities to local councils or Establishment to whose objectives include providing basic services within the boundaries of the local councils.<br>- Providing fund for zero interest projects for the local councils, according to specific criteria. | |
| **Building** | Jordan National Building Law No 7/1993 | - Daylighting Code 17/2014<br>- Solar Energy Code 45/2012 - JNBC Approved 2010<br>- Energy Efficient Building Code 36/2009 - JNBC Approved in 2011<br>- Thermal Insulation Code - JNBC Approved in 2010<br>- To be approved/endorsed:<br>- Mechanical Ventilation and AC Code –-/2014<br>- Central Heating Code --/2014<br>- Natural Ventilation Code --/2014 | Lack of Enforcement of Building Codes in general.<br>JNBC is working Enforcement procedures of EE Building Codes with EU - TA to REEEP project<br>GAM is working on an enforcement procedure project with UNDP.<br>**Bylaw Regulating Procedures and Means of Conserving Energy and Improving Its Efficiency No. 73 (2012), Art 10 and the Solar Energy Code are to be aligned.**<br>Include EE Building Code enforcement in SEAP |
| **Electricity** | Net metering Regulations[45] | REEEL gives a general permission for net-metering. The bylaws and regulations of the utilities make several restrictions concerning the size, access to a connection point, maximal capacity as well as the balancing and remuneration process for excess | Municipalities could offset all consumed energy by auto production if they comply with system criteria and defined rules.<br>The Municipality electricity bills are offset against the collected waste fees by utilities, there is no |

[45] http://erc.gov.jo/Arabic/Pages/RenewableEnergy.aspx

| | | | |
|---|---|---|---|
| | | electricity. | clear insight in the final bills.<br>**To be mandatory for Utilities to provide clear insight in Municipality electricity consumption and bills.** |
| **Waste Sector** | Management of Solid Waste Regulations By Law No. 27 (2005)[46] | Art. 3 The provisions of these Regulations govern the Management of Solid Waste, mainly focused on protection of the environment and public health. | This law relates to the Environmental Law No. 52 (2006).<br>A draft Waste Law is prepared by the MoEnv[47], it covers both municipal and hazardous waste, and will be subjected to a national review and discussion, before PM approval. |
| | *Regulations of allowance of waste services, instructions, transport, treatment and disposal (2014)*[48] | Art. 5 Waste collection fee and mechanism.<br>Art. 9 GAM role of issuing and giving license.<br>Art. 11 GAM responsible for licensing of waste collection companies. | |
| | *Regulation of Waste Prevention and Collection Fees (8/2014)* | Identifies the solid waste services fees according to municipality category[49]. | The Waste Prevention and Collection Fees regulation is currently under revision. |
| | Regulation of Services (Community) Councils No. 75/2009[50] | Charging the Services Councils with the responsibility for operating and managing the landfills | Other legislations implemented through different governmental agencies with a very weak level of coordination: Law No. 14 2007, Public Health Law No. 54 2002 and Environmental Protection Law 52 2006. |

[46] www.moenv.gov.jo/AR/LegislationAndPolicies/Legislation/Systems/Pages/Solid-Waste-Management-System.aspx#.VSaat_mUdtx
[47] http://www.sweep-net.org/ckfinder/userfiles/files/country-profiles/CountryreportJordan-En-mai2011.pdf
[48] http://www.pm.gov.jo/arabic/index.php?page_type=gov_paper&part=3&id=5317
[49] http://www.sweep-net.org/ckfinder/userfiles/files/country-profiles/CountryreportJordan-En-mai2011.pdf
[50] idem

| | | | |
|---|---|---|---|
| **Energy sector** | Renewable Energy and Energy Efficiency Law (REEEL) No. 13 (2012)[51] | Art. 10/a Regulates access to the electricity grid: "Any person, including small Renewable Energy Facilities and homes that have Renewable Energy Systems for the generation of electrical power, may sell the generated electrical power to the Bulk Supply Licensees and to the Retail Supply Licensees"<br>Art. 10/b Provides guidelines for the remuneration of renewable energy sources: "The size and nature of such Renewable Energy Facilities and the selling price of the generated electrical power shall be specified in accordance with instructions to be issued by the Electricity Regulatory Commission. The selling price of such power shall not be lower than the purchase tariff specified by the licensees, provided that such instructions shall be published in at least two daily newspapers. | |
| | Bylaw Regulating Procedures and Means of Conserving Energy and Improving Its Efficiency No. 73 (2012)[52]. | | Issued related to Art.18 of the REEEL No. 13 (2012).<br>Currently Bylaw 73 is being revised. |
| | | Art.3 specifies the topics MEMR is working on, related to energy conservation and efficient use. This includes encouraging investment this field, energy audit procedures, national awareness and establishment of an energy database. | The energy database could be a source of information for Municipalities for BEI.<br>Publish information of the Energy database in a way that is accessible for Municipality BEI. |
| | | Art.4 Indicates that Municipalities **shall comply with policies and procedures related to EE, including compliance with the EE building codes**, | The consumer is an individual consuming over (50 TOE) of energy annually, as well as **ministries, official departments, official public institutions**, |

[51] http://www.memr.gov.jo/Default.aspx?tabid=291
[52] http://www.memr.gov.jo/LinkClick.aspx?fileticket=7xnTASsmwyY%3D&tabid=291

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| | | and **apply for a compliance certificate MEMR.** MEMR to issue this certificate within two months upon fulfillment of all required conditions.<br>Municipality shall adapt their (licensing) conditions according to this Bylaw before July 2015 | and public corporations whatever the amount of its consumption.<br>Not clear what are the procedures to apply for such compliance certification.<br>**Develop regulation on how to apply for the compliance certificate for Municipalities.** |
| | | Art. 5 Indicates **Mandatory Energy Audits for Government entities and consumers** over 50TOE. | **Specify the 50 TOE: Primary Energy or Final Energy?**<br>Energy Audit procedures including reporting to be developed for Municipalities.<br>**Develop regulation for Energy Audit enforcement mechanism** and provide relevant budgets. |
| | | Art.7 Relates to Energy performance labeling of appliances and equipments.<br>Art.8 indicates the establishment of a database with all technical information and the documentations for labelled appliances and equipments. | NERC is working on appliance labeling. Labels for refrigerators, freezers, air conditioners and washing machines are in place, mandatory for display from July 2015. All testing labs are ready by end of 2015.<br>Not clear where the list with all appliances and equipment to be labelled is published.<br>Publish the list of labelled appliances and equipments |
| | | Art.9 Relate to smart meters, to be installed before July 2019 | |
| | | Art.10 deals with the **mandatory installation of Solar Water Heater (SWH) for following:**<br>Buildings exceeding 250 $m^2$s in area, from 1/4/2013.<br>Apartments exceeding 150 $m^2$s in area.<br>Offices exceeding (100) 150 $m^2$s in area in | **Bylaw Regulating Procedures and Means of Conserving Energy and Improving Its Efficiency No. 73 (2012), Art 10 and the Solar Energy Code are to be aligned.** |

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| | | commercial buildings. | |
| | | Art. 11 Allows Municipalities to go into direct proposal and tendering for implementing projects of conserving energy and improving its efficiency in sites and projects directly in cooperation with the MEMR and Regulates the tendering process and competitive bid selection process and criteria for ministries and official departments. | Make procedure available for Municipalities |
| | | **Art.12 Initiates an Energy Efficiency Award to encourage consumers to conserve energy and improve efficiency of its use.** | Include the EE Award in the SEAP |
| | The Reference Price list | Includes the indicative prices for each type of Renewable Source | Relates to Art. 2 of the REEEL No. 13 (2012) |
| | By-law Exempting renewable energy resources and equipment from customs duties[53] | Customs duty exemption and zero sales tax rate for renewable energy, its equipment and energy saving source systems, as well as the goods and services requests that are input to the production and manufacturing of renewable energy systems and its equipment sources | |
| | The Electric Power Wheeling Directives [54] | This directive allows the customer to install Renewable Energy Systems for electric power generation from Renewable Energy Sources in different location (not the same (allocated) location of the consumer premise that is connected with grid) and connect them to the electric grid. | This Directive relates to the General Electricity Law No. 64 (2002), and its amendments, Art. 7/B/3 and 9/B.<br>Electric Power Wheeling Scheme is a methodology under which electric power generated by Renewable Energy System and delivered over transmission and/or distribution lines and its |

[53] http://jordannetwork.net//sites/default/files/resources/Exemption%20of%20RE%20sources.pdf
[54] http://erc.gov.jo/Arabic/Pages/RenewableEnergy.aspx

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| | | A Customer or Authorized Party by the same customer may design, procure, and install at its own cost the Renewable Energy System and its associated facilities such as the export meter and the interconnection facilities to connect the Renewable Energy Plant to electric grid (Transmission or Distribution), and shall be complied with Grid Code or Distribution Code, as appropriate. | associated facilities to a specific customer, which may be used to offset the electric power provided by the electrical company to the same customer during a billing period |
| | Allowance wheeling energy costs regulations[55] | Provision of this regulation is to identify transition cost of the electricity power generated by renewable systems, delivered over transmission and/or distribution lines and its associated facilities to a specific customer, | This regulation relates to the General Electricity Law No. 64 (2002) and its amendments, Art. 7/B/3 and 9/B |
| | By law waste to energy projects 5281/2014 issued by MEMR 26/1985 | Art.6 MoMA is responsible for issuing the approval of establishing the utility for producing electricity from refusing derived fuel.<br>Art.8 shows the process and the procedure and documents are needed to apply for the license | For regulations of waste fuel for producing electricity |
| **Environmental sector** | Environmental Protection Law No. 52 (2006)[56] | Includes legal tools for the management of environmental issues but not explicitly for solid waste management issues. One of the tools is the Jordan Environment national Fund (JEF) | Updated Dec 2013, and now in approval process from Prime Minster.<br>The JEF is managed at the MoEnv, was launched in 2012, but is yet not operational. |

[55] http://erc.gov.jo/Arabic/Pages/RenewableEnergy.aspx
[56] http://www.sweep-net.org/ckfinder/userfiles/files/country-profiles/CountryreportJordan-En-mai2011.pdf

## Annex III - National strategies/ programmes/ planning tools related to SEAP's

| Sector | National strategies/ programs / planning tools | Relevant provision | Remarks/Recommendations |
|---|---|---|---|
| **Transportation sector**[57] | Transport Strategy Action Plan 2012-2014[58] | Fuel consumption of governmental vehicle, in order to save on fuel cost | **Develop new transport Strategy and Law, including energy conservation measures** |
| **Building Sector** | Green Building Guidelines (2013) | Comprehensive guidelines including Energy, Energy efficiency and renewable energy | Voluntary |
| **Electricity Sector** | NEEAP[59] | The NEEAP targets to save more than 502 GWh in the first two years (2013- 2015). To achieve the 20% decrease in electricity consumption, 8 sectors are tackled through 25 different measures. The plan will cost in total $ 114 million with a projected pay-back period of about 2.3 years. The Targets relevant to Municipalities are in the Residential and Commercial Sectors, relevant EE measures and actions:<br>- Street Lighting<br>- Replacement of Mercury lamps by efficient lamps and use Automatic street lighting controls and voltage regulators<br>- Reduce the consumption of public buildings by 10%<br>- Replacement of 50,000 of incandescent | Update expected to be finalized July 2015<br>**Include SEAP development in the NEEAP** |

[57] www.ltrc.gov.jo/?q=en
[58] http://inform.gov.jo/en-us/By-Date/Report-Details/ArticleId/72/Transport-Strategy-Action-Plan
[59] www.rcreee.org/sites/default/files/plans_jordanian_neeap_summery_2013.pdf

| Sector | National strategies/ programs / planning tools | Relevant provision | Remarks/Recommendations |
|---|---|---|---|
| | | lamps with compact fluorescent lamps (CFL).<br>- Mobile Energy and Environment Clinic<br>- Energy Database: comprehensive monitoring, evaluation and verification system. | CFL will be replaced by LED |
| **Waste Sector** | National Strategy of the solid waste[60] | . | A National Solid Waste Strategy does not exist.<br>The National Agenda (2006-2015) identified the need for integrated solid waste management hierarchy. |
| **Energy** | Jordanian Government Renewable Energy Strategy 2007-2020[61] | Jordan Renewable Energy Targets: 7% of Renewable Energy supply in 2015, 10% in 2020.<br>RE Schemes:<br>- Competitive Biddings<br>- Direct Proposal Submissions<br>- Energy Net – Metering Applications<br>- Electric Power Wheeling Applications<br>- Self-Generation Applications | |
| | NREAP[62] | | Underdevelopment, expected to be finalized Mid 2015 |
| **Environmental sector** | Third National Communication on | To build the adaptive capacity of communities and institutions in Jordan, among others, to | Developed with support of UNDP<br>Relevant planned actions: |

[60] http://www.sweep-net.org/ckfinder/userfiles/files/country-profiles/CountryreportJordan-En-mai2011.pdf

[61] www.memr.gov.jo/portals/0/energystrategy.pdf

[62] www.rcreee.org/projects/arab-renewable-energy-framework-aref-and-national-renewable-energy-action-plans-template

| Sector | National strategies/ programs / planning tools | Relevant provision | Remarks/Recommendations |
|---|---|---|---|
| | Climate change (2013-2020)[63] | optimize mitigation opportunities such as:<br>- Strengthening the promotion of renewable energy and energy efficiency in Jordan.<br>- Developing and adopting strategies for the transport sector to promote EE and low carbon transportation modes, and facilitate transfer of low carbon transport technologies;<br>- Integration of the climate change issues in solid waste and waste water policies, strategies and action plans;<br>- Improving forest and rangelands management to increase the capacity to store GHG;<br>- Promoting access to national and international financing for low carbon energy and environmental technologies and projects;<br>- Promoting technology R&D and technology transfer of mitigation in Jordan | Inventory of GHG emission, creation of an entity at the Climate Change directorate (MoEnv), as a hub to collect, process and report GHG inventory and exploring the possibility of creating a National GHG Inventory System.<br>Mapping available financial resources in climate change and opportunities for resource mobilization.<br>Integrate climate change issues in bilateral and multilateral international cooperation programmes.<br>Channel available domestic financial resources into with climate change areas.<br>Mapping opportunities for technology transfer in climate related issues.<br>Conduct a national needs assessment exercise for adaptation technologies required. |
| | National Appropriate Mitigation Action (NAMA's) | Transport Sector:<br>- Amman- Zarqa light rail project, to improve urban transport standards in greater Amman and Zarqa metropolitan area, reduce pollution and cut back vehicles emission, by introducing an environmentally friendly transport system<br>Environment Sector: | Funded by World Bank[64] upon assistance request from GoJ<br><br>The NAMA's it's not mandatory.<br>Implementation will take place by the MoEnv. |

[63] https://www.thepmr.org/system/files/documents/Climate%20change%20policy_PDF.pdf
[64] : http://www.ppiaf.org/node/816

| Sector | National strategies/ programs / planning tools | Relevant provision | Remarks/Recommendations |
|---|---|---|---|
| | | - Removed Customs and taxes on energy saving Technologies, such as: Energy saving lightning fixtures, Hybrid cars etc.<br>Energy Sector<br>- Renewable energy law enacted by the government, (wind, solar energy).<br>- Energy efficiency programs.<br>- Biogas to become part of the sources for Jordanian electricity system.<br>- Upgrade of the Jordan refinery to improve quality of diesel and further emissions reduction.<br>Waste Sector / Solid Waste Sector<br>- Recycling projects to improve solid waste management.<br>- Emission reduction from Solid waste management projects. | |

| Sector | National strategies/ programs / planning tools | Relevant provision | Remarks/Recommendations |
|---|---|---|---|
| | National Resilience plan (NRP)[65] | Addressing the increased demands for energy as a result of the refugees influx by innovative and sustainable solutions<br>Acceleration of EE and RE measures in buildings and residences to offset increased power demands from the Syrian crisis (short-term coping) and stablishing new RE power supplies to relieve pressure on the grid (medium-term).<br>Improvement of Municipal service delivery performance in host communities.<br>Local governance and municipalities target urgently required investment and capacity building in municipal services and infrastructure, especially in solid waste management.<br>The local governance system is responsiveness to host citizens and communities needs in governorates most affected by the refugees. | A three year program of high priority investments of GOJ to respond to the impact of the Syrian crisis in Jordan.<br>Options exist to disburse funds through existing or new donor grant mechanisms in the immediate coping phase while, for the recovering phase, the GOJ has committed to a gradual increase in the transfers pool for municipalities during 2014 and 2015.<br>Debt relief may be considered for municipalities facing the biggest service delivery gaps. |
| | Indicator National Development Committee – INDC[66] | To get prepared in determining ambitious and realistic Intended Nationally Determined Contributions (INDC). | Not clear yet which indicators are going to be developed. |

[65] http://un.org.jo/publications/national-resilience-plan-2014-2016
[66] http://www.mitigationpartnership.net/sites/default/files/u1679/jordans_perspective_on_indcs_giz_side_event_lima_peru_dec_3_2014.pdf

## Annex IV – Example Projects by Donors and IfI's

For further details and donor contact details see **Donors and Funding Initiatives in the Areas of Sustainable development at the Local Level** report (Annex III).

### Donor activities relevant for SEAP development and implementation

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| **EU Sector Support 2013-2015**<br>TA to REEEP | - NEEAP Update - End July 2015<br>- NREAP - Mid 2015<br>- Training with NERC on Economic Energy Project proposals<br>- Best Practices from Pilot Projects (EE Building, PV, Biogas, Wheeling)<br>- Energy Data Base – MEMR<br>- EE Building Codes Enforcement Roadmap |
| **EU Sector Support 2016-2019** | - Support to Pilot Projects (2017)- call for proposals<br>- National Plan for PV roof tops to invest in Public sector and rural area's (MEMR)<br>- Enhancing EE in public buildings Ministry of Public Works and Housing (MPWH)<br>- Training component |
| **GIZ** | - Training to improve efficiency in the water and energy sector[67]<br>- Waste to Energy – Biogas from Agricultural waste with GJU<br>- Waste management in Kerak and Irbid, CO2 reduction could be included in co-financing agreement with the EU.<br>- Vehicle maintenance, route efficiency (fuel consumption reduction), Kerak<br>- Landfill rehabilitation in Mafraq – CO2 reduction |
| **JICA** | - Best Practices: PV plants - wheeling for municipalities (Shams Aqaba under development) |
| **OiER** | - Smart City project Amman, the website is being uploaded: www.unitedsmartcities.com. It will include projects from all urban sectors, plans and finance mechanisms and opportunities. |
| **UNDP** | - Appliance labelling with NERC<br>- Street lighting project 5mln with GAM<br>- NAMA – emission reduction from Solid Waste Management (several other donors involved in the project implementation)<br>- United Nations Development Assistance Framework 2013-2017<br>- Appliance Labelling – NERC – testing labs ready by end of 2015<br>- Domestic MRV system - 2016<br>- EE Building Code Enforcement with GAM<br>- 15-year strategic investment plan in street lighting<br>- Third National Communication on Climate change – GHG Emissions reporting |
| **USAID** | - Support access to finance – ESCB / JCP / LENS (Private Sector) |
| **Energy Sector Capacity Building programme** (ESCB) | - PV - tool kit bidding document specification and procedure for grid connection- end 2015<br>- Accreditation for ESCO's > Municipalities can make use of it.<br>- ESCO – municipal street lighting – MRV – case study<br>- DSM Incentive mechanisms could be considered for Municipalities.<br>- Economic Analysis of energy projects – input cost output savings and |

[67] www.giz.de/en/worldwide/24677.html

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| | subsidies reduction > could be transferred to Municipal programs<br>- Professional association for Jordanian energy engineers<br>- CMVP certification exam on the fundamentals of measurement & verification of energy savings<br>- Energy Efficiency Officers training on EE action planning and energy auditing<br>- JREEEF – criteria for grant scheme for municipality projects |
| **Jordan Competitiveness Programme** (JCP) | - GAM incentives for Green Buildings – regulation<br>- EDAMA business platform development<br>- PV powerplant for M. 16 MW – combined with street lighting - technical RfP under preparation with EBRD |
| **World Bank** | - Tool for Rapid Assessment of City Energy (TRACE)[68] –No Jordan update<br>- **Energy-Efficient Urban Transport Plan for Zarqa,** major restructuring of the public transport network, lower emission buses, a parking plan, junction improvements and improved pedestrian facilities.[69] |

## IFIs activities relevant for SEAP development and implementation

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| **AfD** | - Green lending Program Soft loans, Non-commercial for Private Sector, open until November 2015 |
| **AfD /EIB FEMIP /UfM** | - Urban Projects Finance Initiative (UPFI). A Local and Regional Development Plan, Public space and equipment, Mobility plan for AZESA, and biogas from the land fill Al Ekaider in Irbid |
| **EBRD** | - Can lend to Municipalities and private sector<br>- PPP street lighting project<br>- Solid waste solutions – to waste to energy |
| **KfW** | - Energy Efficiency in Public Buildings MPWH, MoEdu and MoH<br>- The loan serves to finance technical measures in these buildings with respect to the building envelope and technical installations<br>- Schools project – Pilot Project with EE design to set example<br>- Greywater recycling for Mosques[70] |
| **World Bank** | - Feasibility Study for waste to energy –not economic at the moment |

[68] www.esmap.org/TRACE
[69] http://www.esmap.org/node/1291
[70] http://www.greywater-recycling.info/en/the-partners/

The European Union is made up of 28 Member States who have decided to gradually link together their know-how, resources and destinies.

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