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Energy Efficiency Policies and the Arab Future Energy Index

Experiences on energy efficiency actions at the city level

Valentina Palermo

11th October 2018

European Commission

CoM

Covenant of Mayors for Climate and Energy

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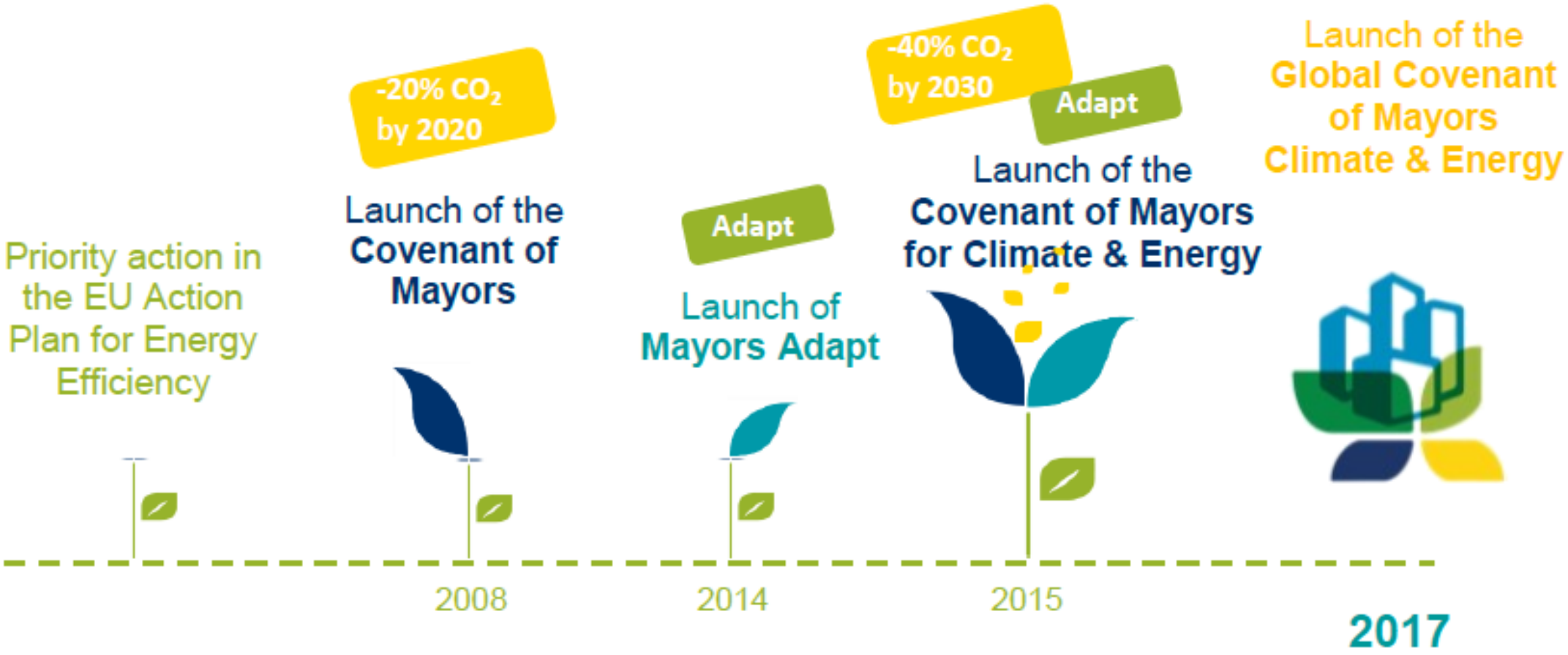
CoM origins & developments



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Global Covenant of Mayors

9,138 cities, representing **779,118,441** people worldwide and **10.21%** of the total global population, have committed to the Global Covenant of Mayors for Climate & Energy.

Under the CoM, local authorities are invited to make a voluntarily political commitment to implement climate and energy actions in their communities and agree on a long-term vision to tackle 3 pillars: **access to energy**, **climate mitigation** and **climate adaptation**.
In order to translate the political commitment into practical measures, CoM signatories commit to produce and implement a Sustainable Energy and Climate Action Plan (**SECAP**).

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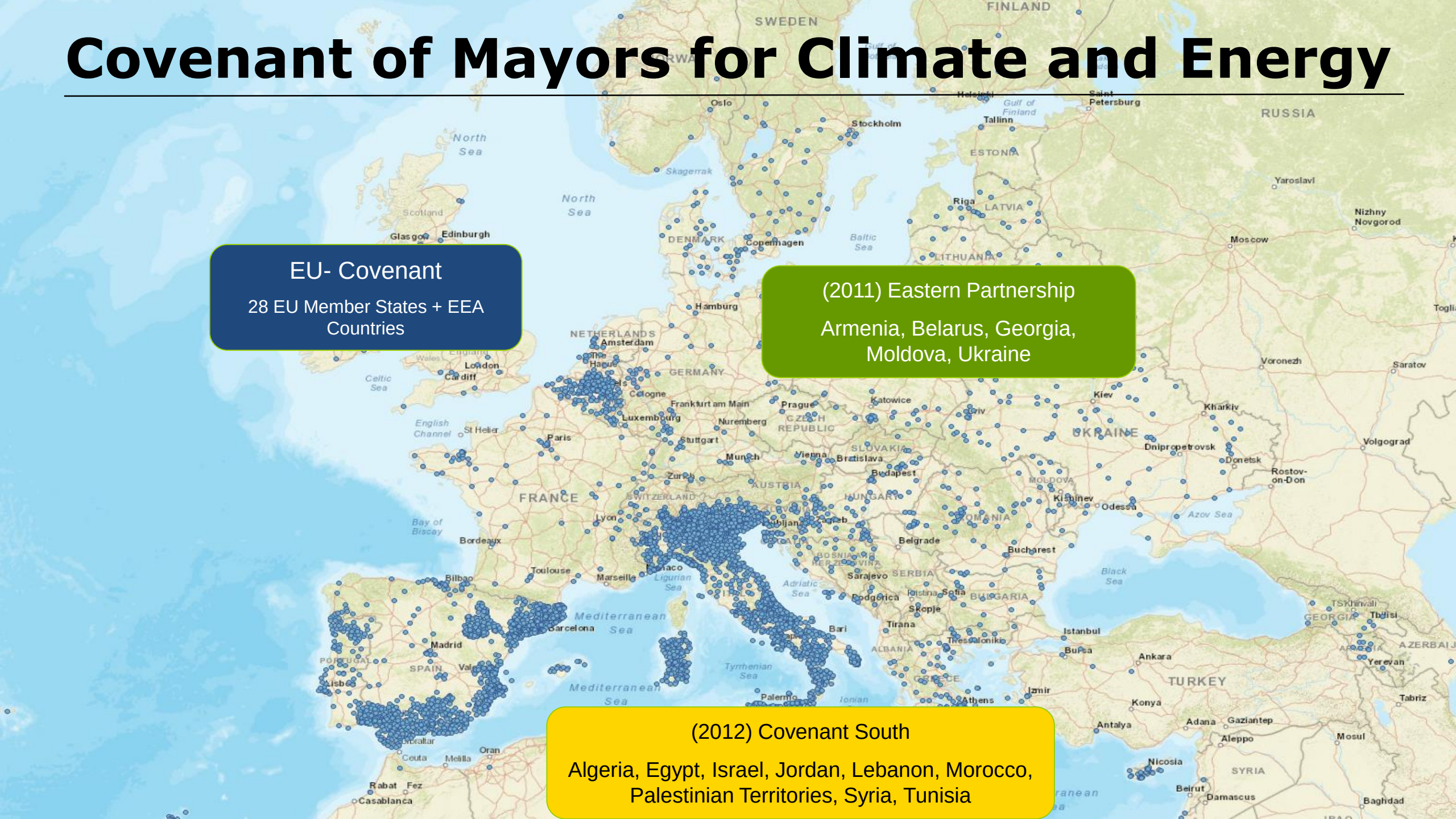
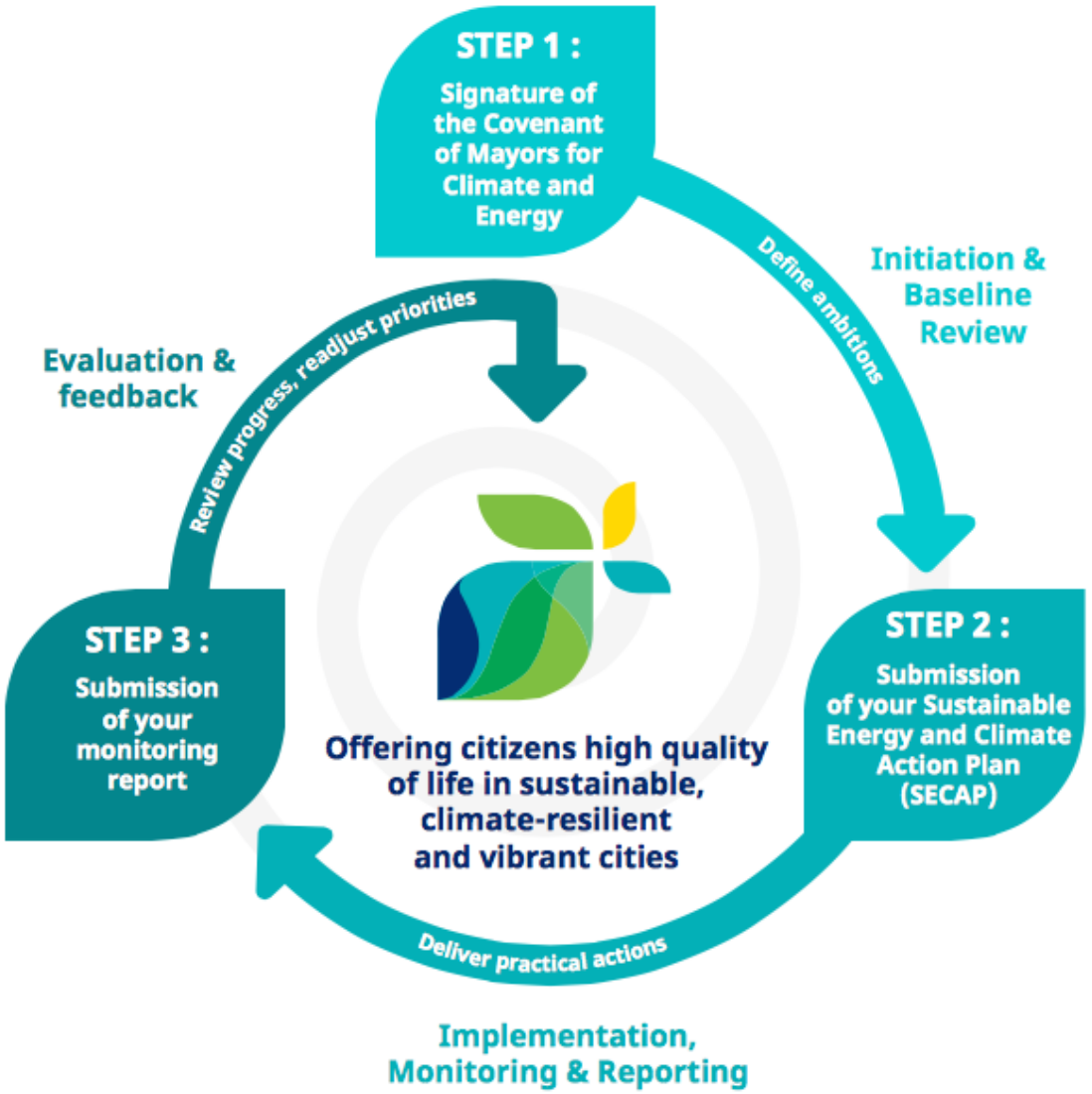
Covenant of Mayors for Climate and Energy



Covenant of Mayors Pillars



3 PILLARS

MITIGATION

ADAPTATION

ENERGY ACCESS

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THE INITIATIVE:

•started in 2013 as a result of the European Union objective to support the MENA (Middle East and North Africa) region through ENPI (European and Neighbouring Partnership Instrument).

ENP-SOUTH COUNTRIES:

•Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestinian Territories, Syria, Tunisia

THE CES-MED:

•(Cleaner Energy Saving Mediterranean Cities) project has been supporting local authorities in the ENPI South Mediterranean Partner Countries.

PROJECT GOAL:

•increase the engagement of Local Authorities in sustainable development energy policies and climate adaptation and mitigation actions.

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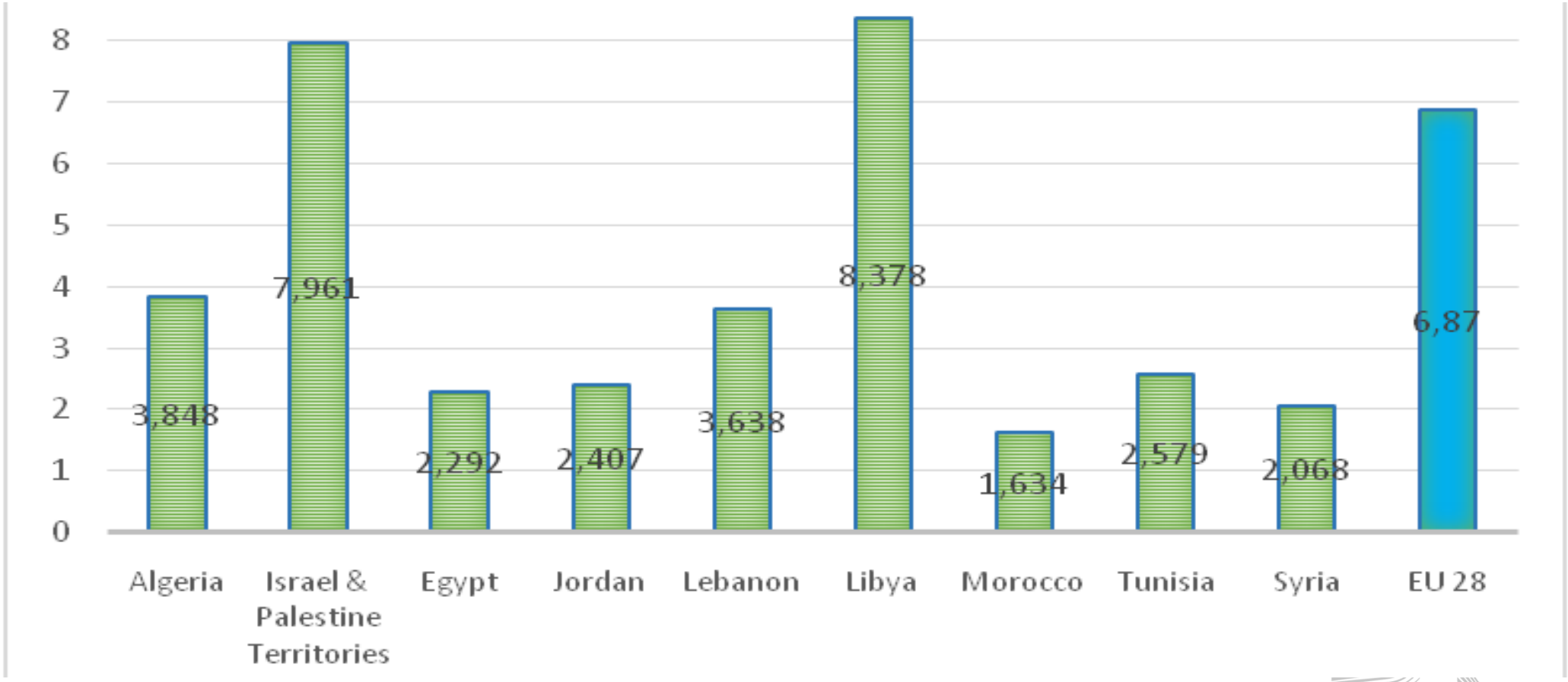
CO_2 emisssions/cap/yr per country (2016)



(Source: Janssens-Maenhout, 2017)

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Phase	Step
Initiation	Establish a political commitment
	Establish an appropriate governance structure
	Build a stakeholder support
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
	Approve and submit the SEAP
Implementation	Implement the SEAP
Monitoring and reporting	Monitor SEAP actions
	Report and submit the Implementation Report
	Review and update the SEAP

Main steps in the SEAP process

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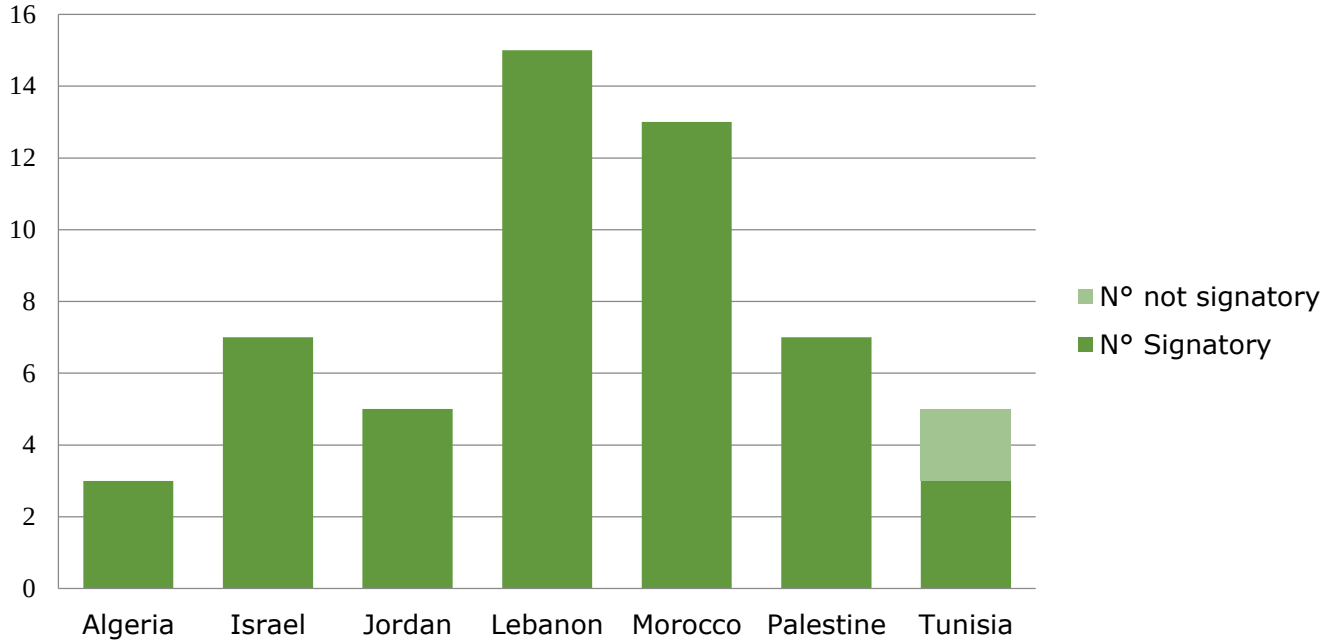
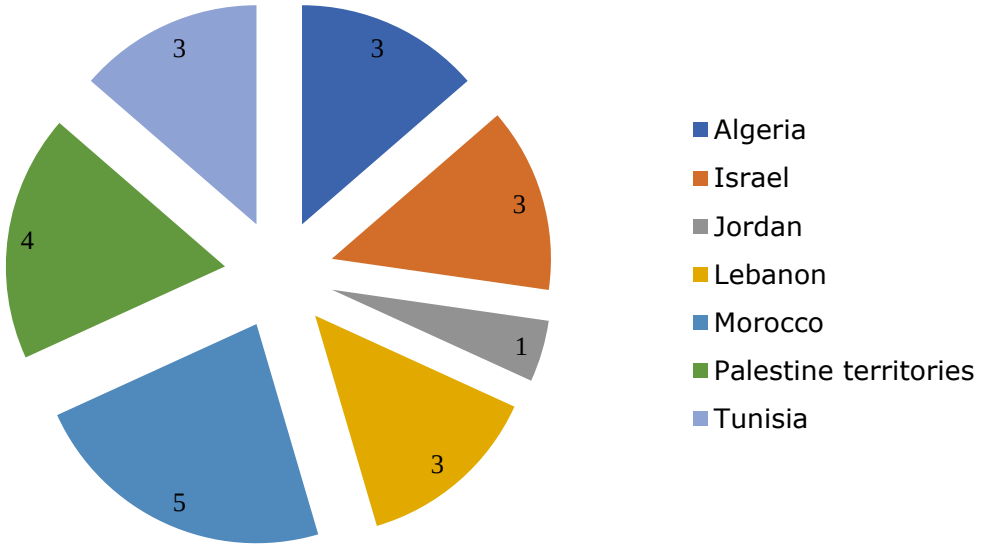
Local authorities per country



N° of SE(C)APs submitted



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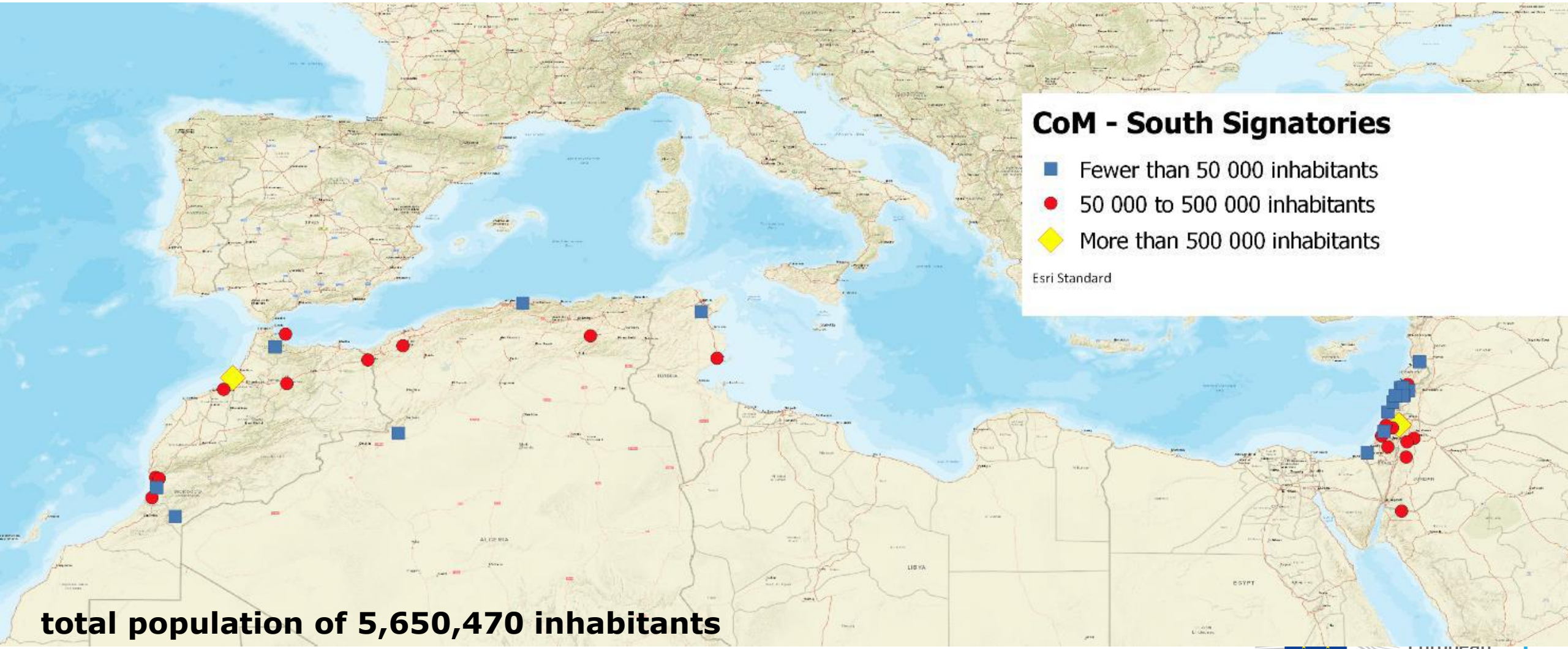

total population of 5,650,470 inhabitants

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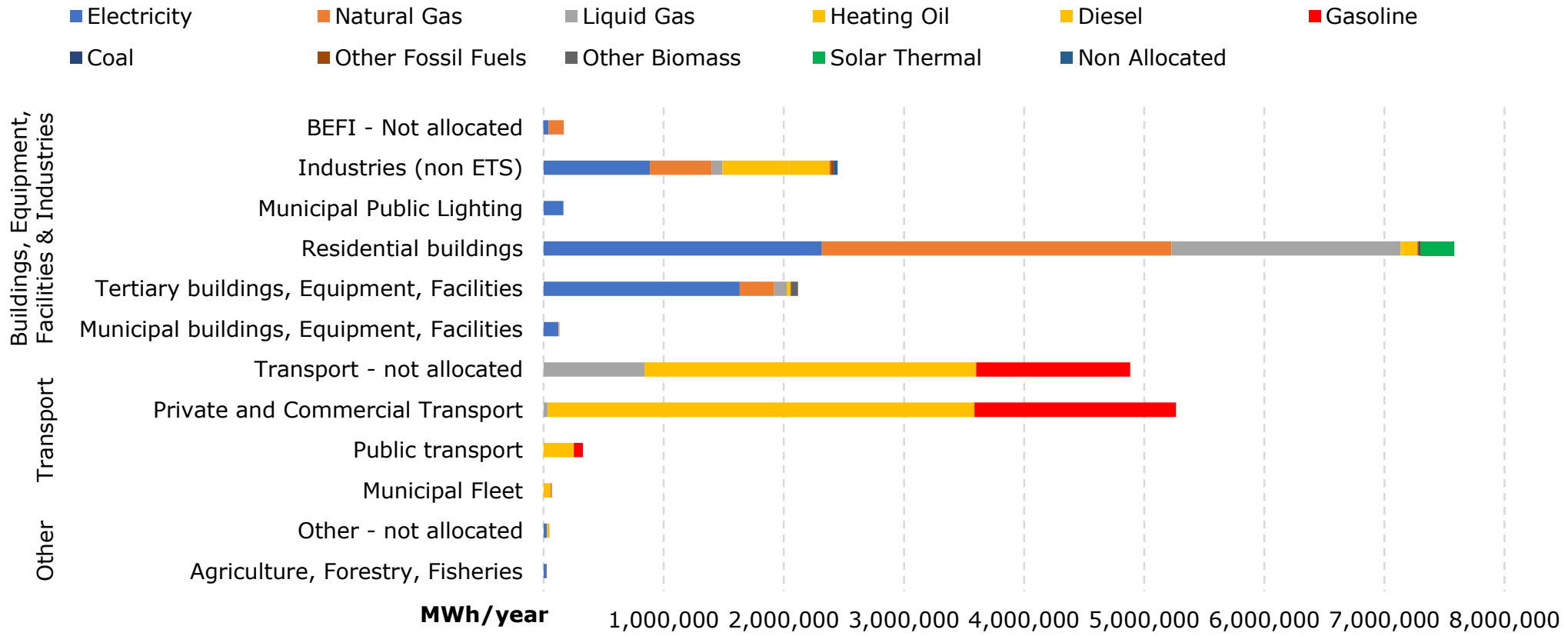
Final energy consumption by sectors and energy sources



Further details on the outcomes are available in JRC Report (2018):"Covenant of Mayors: Overall analysis and evaluation of SEAPs in the MENA Region"

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Challenges for local authorities

- Lack of experience in the field of sustainable development policies
- Lack of knowledge on way to encourage sustainable development approaches in the communities
- Lack of appropriate budget and difficulties to have access to financing by international financial institutions
- Lack of ability to implement potential actions to mitigate the changes at the local level
- Lack of appropriate regulatory frameworks and low level of involvement in the design process of sustainable development policies (usually at the central level).

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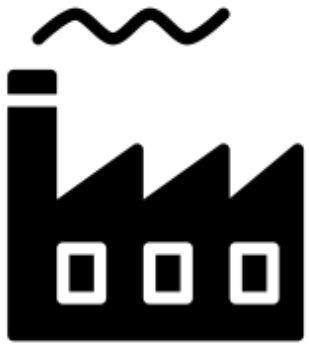
SEAPs in Tunisia

Local Authority	Population	Adhesion	Commitment		TCO_2	
Sfax	320,000	Feb-14	2020	CES-MED	759 055	BAU
Hammam-Lif	42,518	Dec-16	2030/Adapt			
Kairouan	118 000		2020	CES-MED	238 321	BAU
Sousse	223 235		2020	CES-MED	492 808	BAU

ENERGY INTENSIVE SECTORS



The Emission Inventory allows assessing the initial condition of the municipality and identifying the energy intensive sectors.
Results show that in these municipalities, the emitting sectors are:
Transport, buildings, industry.

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2 types of actions:

Horizontal

Aimed at supporting SEAPs and raise awareness on local energy management, at anticipating constraints that can inhibit the achievement of objectives.

Creation, at the local level of a Sustainable Energy Information Point (FOIP), which aims at raising awareness and communication about sustainable energy.

Creation, at the local level of an Energy Management Committee, whose tasks are: the definition of the local policy, the validation and monitoring of the SEAP.

&

Specific

- Improvement of energy efficiency in buildings
- Public lighting
- Transport
- Land use planning
- Energy Production
- Public-private partnership
- Prosol Project development

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Renewable energy

Aware of its dependence on fossil fuels, Tunisia has been promoting since the 2000s a gradual integration of renewable energies into the energy mix.

ANME- L'Agence Nationale de Maîtrise de l'Energie - plays a key role in developing energy efficiency at national but also regional level with branches at local level.

Specific actions at local level

- Public lighting from renewable energy - feasibility study
- Pv on roofs of municipality buildings
- Encourage public-private partnerships (PPPs) for energy recovery from waste.
- Awareness and training- advantages and disadvantages for the production of renewable energy for the needs of the municipality.
- Development of local skills in sustainable energy at local level

Buildings

Installation of thermal insulation

PROMO-ISOL is a national program (initiated by Agence Nationale pour la Maîtrise de l'Energie -ANME in 2012) that aims to promote the thermal insulation for building roofs. This program is oriented to individual buildings. The program includes a financial mechanism to promote the thermal insulation of the roofs of new and existing buildings through a subsidy of up to 30% of the cost (work and equipment). The intervention of the municipality in the context of this action consists of relaying and reinforcing communication about the PROMO-ISOL program for houses and tertiary buildings in Sfax in collaboration with ANME.

ANME saving estimations:

159 kTOE primary energy from residential buildings;

89 kTOE primary energy from tertiary buildings.

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Transport

Urban transport

Urban Mobility Action plan (PDU)
Strategic planning documents addressing the whole organisation of transport, traffic and parking;

Parking management: aimed at reducing congestion and encouraging people to take public transport;

Provision of Transit systems: aimed at increasing the share of public journeys. Advantages: improved frequency and punctuality, reduction in journey times, increase in people's transport capacity. Two tram lines (23 km and 11 km) are planned in Sfax to be operative in 2020.

Support of non-motorised modes: To encourage the modal shift towards walking. Provision and maintenance of infrastructure for pedestrians, to improve safety of pedestrian journeys

Développer un système de TCSP dans la ville de Kairouan

Municipality of Kairouan, Regional Transport Company of Kairouan (SORETRAK)

Numerous Partners and Stakeholders: National Agency for the Control of Energy (ANME), Ministry of Transport […]

Kairouan opted for a BRT transit system for its flexibility, since the city shows territorial constrains.
A dedicated lane is the key aspect of the system, which will have a length of 19 km on three lines.
The BRT will cover the main traffic axes of the city.
Buses can be also electric or hybrid.

Overall rate of reduction of emissions 44%
Emissions avoided 1983 tCO_2.

Land use planning

Sfax Development of the Taparura site

The Taparura project in Sfax aims at the rehabilitation of a former industrial zone, the development of an urban extension and the construction of an eco-neighbourhood on the north coast of the city. This project foresees the construction of residential housing, a shopping centre, a zone dedicated to services, entertainment and recreation as well as community facilities.

The project was initiated in 1985 and the development of the Taparura site have been launched in 2006.

The construction work is still under development. A technical assistance team with funding from the French Agency for Development and the European Investment Bank is looking at the environmental aspects of the project.

Beyond compliance with environmental standards, the project has the ambition to create a real eco-city that responds to climate change adaptation objectives, efficiency and mitigation of greenhouse gas (GHG) emissions and finally, to achieve a reduction in local pollution.

Thanks

Any questions?

Valentina Palermo
Joint Research Centre (JRC)
Directorate C - Energy, Transport and Climate
Unit C.2 Energy Efficiency and Renewables

valentina.PALERMO@ec.europa.eu

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