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Covenant of Mayors initiative—Public perception issues and barriers in Greece

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HIGHLIGHTS

- Factors are defined to evaluate the penetration of the Covenant of Mayors initiative.
- Barriers are identified preventing the initiative reaching its full potential in Greece.
- A survey conducted in Greece shows poor dissemination of the initiative to citizens.
- Significant public acceptance is observed once targets and commitments are explained to citizens.
- The positive role of Supporting Structures in aiding signatories is appraised.

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ABSTRACT

The Covenant of Mayors (COM) initiative invites cities to commit themselves to reduce voluntarily the greenhouse gas emissions within their territories. This manuscript presents the COM initiative and analyzes its mechanisms. In order to better quantify the penetration of the initiative, the authors introduce suitable "participation factors". Moreover, a study and a survey are presented concerning the COM initiative in Greece. Certain barriers are identified preventing the realization of the initiative's full potential in Greece. Results from the public survey indicate lack of proper information and communication about the COM initiative and the obligations arising from its signing towards the citizens itself. Nevertheless, once the citizens are informed properly, the public acceptance of the initiative and its commitments is considerable, to the extent that its success would influence the vote of a substantial percentage of citizens. The positive role of supporting structures is evaluated and may be demonstrated through the survey's results and discussion. Recommendations are provided for future or existing signatories based on the findings of this work.

1. Introduction

Renewable energy sources (RES) and energy efficiency are of paramount importance for energy policy in Europe and consequently in Greece, mainly due to their substantial contribution to the reduction of CO_2 emissions and the security of energy supply (Lazarou et al., 2007, 2008).

In the above direction, several European (EU) Directives are promoting wide RES development and improvement of energy efficiency (for instance, the Directive 2009/28/EC on the promotion of the use of energy from RES (European Parliament and the Council, 2009) and the recast of the European Performance Building Directive 2010/33/EC (European Parliament and the Council, 2010)). These directives are in line with the 20–20–20 target of the EU as was expressed in "Europe's climate change opportunity" communication of the Commission to the European Parliament in 2008 (European Commission, 2008).

Furthermore, the second European action plan for energy efficiency identified as a Priority Action "Energy Efficiency in built-up areas", while laying the foundations for the EU targets (European Commission, 2006). Under this priority action, the Covenant of Mayors (COM) initiative was launched in January 2008, aiming to exchange and apply best practices between European cities and towns (Covenant of Mayors, 2012). Specifically, the main goal is to significantly improve energy efficiency in the urban environment, where local policy decisions and initiatives are important. This was a valid approach as the majority of the global population live in urban areas that consume more than two-thirds of the world's energy and account for more than 70% of global CO_2 emissions (International Energy Agency (IEA), 2008).

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Moreover, according to Eurostat (2008), in EU-27, 74% of the total population live in cities and towns with more than 5000 inhabitants, accounting for the 75% of energy consumption and 75% of the CO_2 emissions (Centre for European Policy Studies and Greening, 2010).

The Covenant of Mayors initiative invites cities, towns or regions (called "signatories") to voluntarily commit themselves to the reduction of their Greenhouse Gas (GHG) emissions by at least 20% by the year 2020. Initially, COM was adopted by 96 cities, which were quickly joined by many others, bringing the number up to 640 in just 8 months by September 2009 (Van Staden and Musco, 2010). By February 2011, more than 2100 signatories were committed (Christoforidis et al., 2011), showing a rise of approx. 23% compared to the end of May 2010 (Radulovic et al., 2011). As of February 2012, the number rose to 3369 accounting for an almost 60% increase in a year.

However, the high number of signatories does not necessarily imply that the goals of COM will be achieved. Commitment is required by the local communities, along with the ability to find and exploit available instruments to finance the required improvements. More importantly, the Covenant of Mayors is a citizen-based initiative, as it is difficult to succeed in the aforementioned GHG emissions reductions without citizens taking decisive action, e.g. by improving the energy efficiency of their houses or by choosing more eco-friendly transportation means. Thus, the success of possible adopted measures by the local governments is heavily based on the public acceptance and the citizens' active participation. Several research efforts have illustrated the importance and variation of public opinion towards RES and climate change in general. For example, Musall and Kuik (2011) conducted a survey, which showed that different locations may present significant public opinion differences concerning the deployment of wind parks. Pollak et al., (2011) through a survey analyzed the United States' climate action plans in different states. Pollak's conclusions are important to the successful implementation of the EU's climate action plans. He suggests that any national policy to limit GHG emissions should rely on agreed strategies, but at the same time have flexibility to allow states to balance their implementation depending on their unique geographic, economic, and political circumstances. Rogers et al., (2008) suggested, through a survey, that community renewable energy projects are likely to gain public acceptance, but are unlikely to become widespread without greater institutional support.

Targeting local communities and cities for implementing climate change mitigation measures such as RES development has gained researchers' attention recently. For instance, Kennedy and Sgouridis (2011) classified the principles for low or zero Carbon Cities, Monni and Syri (2011) presented a system for GHG weekly emission calculations that may be used by municipalities and Bizzarri (2011) focused his work to the results obtained from the reduction of GHG emission in municipalities of Northern Italy. Peters et al., (2010) explored the options available to local authorities in terms of reaching and engaging their communities towards fighting climate change. Laukkonen et al., (2009) presented case studies of successful climate change adaptation and mitigation strategies and suggested that these good practices should be transferred into local contexts with the involvement of local authorities.

In the frame of this publication the authors established a survey based on Covenant of Mayors (COM) targets, in order to identify its main implementation barriers and its consequences for citizens' life in Greece. To the best of our knowledge there is no other publication dealing with COM initiative. Therefore, Section 2 is devoted to a presentation of COM initiative and its status in Europe as of February 2012, suggesting suitable factors to compare its penetration in different countries. Using as a starting point from Section 2 the relatively high number of Greek signatories, Section 3 deals with the situation in Greece related to COM initiative, discussing certain barriers that were identified through a series of personal communications and publicly available data. The survey in four Greek cities is an effort to analyze in more detail the information and communication barriers described in Section 3. The survey is presented in Section 4 and the results are collected and presented in Section 5, followed by the discussion and conclusions in Section 6.

2. Covenant of Mayors (COM) initiative description

The Covenant of Mayors initiative is open to every city or town that voluntarily commits to fight climate change. There are no deadlines, or call windows for cities to sign up. In that sense, it may be realized that the COM initiative is a long-term EU energy policy instrument. The procedures are relatively easy for a community willing to join; however, the implications are often not so clear and may bring considerable increase in the amount of work needed by each signatory.

First, the candidate city officially demonstrates its commitment. This is communicated with a formal decision by the City Council or an equivalent body. Following the signatories official commitment, a period of one year to prepare and submit the Sustainable Energy Action Plan (SEAP) is given. This plan must illustrate the applicable procedures to achieve their targets in CO_2 emission reductions. The SEAP is subject to the approval by the COM office, which is established and funded by the European Commission and is responsible for the coordination and daily management of the initiative. Once approved, regular implementation reports have to be prepared in order to showcase the progress and possible results to inform the citizens. The signatories that fail to meet the above requirements are excluded from the plan. The overall procedure is illustrated in the following Fig. 1 (Covenant of Mayors, 2012).

The first action after the adhesion should be the creation of adequate administrative structures in order to facilitate the preparation of the SEAP and its implementation. Responsibilities should be assigned to specific competent departments of the local authority and financial and human resources must be allocated.

The most important step towards the development of the SEAP is the compilation of a Baseline Emission Inventory (BEI). This inventory should depict the situation concerning the CO_2 emissions inside the territory of the Covenant signatory at a "baseline" year. The BEI contains data such as the final energy consumption (buildings, facilities, industry and transport), the CO_2 emissions, local electricity production and corresponding emissions and local district heating/cooling, Combined Heat Power (CHP) and corresponding emissions. This inventory will be used in order to check whether the signatory has succeeded in its goals.

The SEAP is the official document in which signatories state their targets in terms of CO_2 emissions reduction, either as an absolute percentage value or "per capita". The latter is particularly useful for cities that are experiencing a high rate of population increase. It should include the key actions foreseen, both in the short and long term, along with the priority areas. The SEAP must deal with organizational and financial aspects as well, from allocation of staff and involvement of citizens and stakeholders, to budget estimation, indication of possible financial sources and ways of monitoring and evaluation of the plan.

The implementation of SEAP is naturally the next step. It includes "local energy days" to involve and inform citizens, while a suitable monitoring mechanism should be activated to instruct the adaptation of the SEAP when it is necessary. An implementation report every 2 years after the SEAP submission would ensure