



Sustainable**NOW**

WAYS TO SUCCESSFUL  
SUSTAINABLE ENERGY  
ACTION PLANNING  
IN CITIES



**Sustainable NOW**  
European Sustainable Energy  
Communities - effective Integrated  
Local Energy Action today

Publishable Report  
[www.sustainable-now.eu](http://www.sustainable-now.eu)



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## Introduction

Sustainable Energy Action Plans (SEAPs) have become a powerful tool for cities and regions to plan, implement, monitor and evaluate climate and energy policies, and in doing so contribute to global mitigation and adaptation achievements. Through SEAPs cities can implement measures in a structured and integrated way, allowing them to systematically monitor their efforts in going beyond national legislation in these fields. A SEAP is also an instrument for cities to communicate to stakeholders – both locally and beyond – the importance of energy and climate protection, and to encourage citizens and other relevant actors to take a part in the city's ambitions.

At the European Union (EU) level, policies and initiatives in the last few years have contributed to the sustainable energy momentum that an increasing number of cities in Europe have decided to pursue. The EU climate and energy package “aims to combat climate change and increase the EU's energy security while strengthening its competitiveness, [committing] Europe to transforming itself into a highly energy efficient, low carbon economy”.<sup>i</sup> The Covenant of Mayors (CoM) European initiative is in line with the climate and energy package and has an increasing number of signatories (more than 3.000 in the autumn of 2011). Its signatories commit to meeting and even exceeding the EU 20% CO<sub>2</sub> reduction objective by 2020 through increased energy efficiency and the development of sources of renewable energy.<sup>ii</sup> The Europe 2020 strategy to build a smart, sustainable, inclusive economy by the year 2020 serves as a guiding light to the efforts on energy and climate that cities undertake by developing and implementing their SEAPs.

The project European Sustainable Energy Communities - effective Integrated Local Energy Action today (Sustainable NOW), which ran between September 2008 and August 2011, aimed to provide support to five cities in four EU countries in developing their SEAPs<sup>iii</sup> and to ensure that by the end of the project SEAPs would be in the implementation stage in these communities. In this way, the Sustainable NOW project was a prelude, inspiration and a testing ground for the objectives that the CoM is now setting out to accomplish.

The Europe-wide developments towards increased sustainable energy and climate protection emerge as a reaction to an ever increasing demand for energy, its resulting green house gases (GHG) emissions, and their impact on humans, the environment and climate. Energy demand increases due to several factors, such as a growing population (mostly in cities) and higher levels of income coupled with more affluent lifestyles. These factors lead to a much greater demand for, and consumption of, resources – including energy, which threatens the sustainable development of our cities, and which has encouraged local governments and its citizens to act. Concentrating the overwhelming majority of the total European population (the urban/rural gap continues to widen), cities have a great potential to create change through local energy interventions, and thus drive the greening of their economy.

The efforts of a growing number of cities to set the example at national and international level not only show their commitment to sustainable development, but serve as an inspiration to other

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<sup>i</sup> [http://ec.europa.eu/clima/policies/package/index\\_en.htm](http://ec.europa.eu/clima/policies/package/index_en.htm)

<sup>ii</sup> [http://www.eumayors.eu/index\\_en.html](http://www.eumayors.eu/index_en.html)

<sup>iii</sup> Throughout the project the term LEAP (Local Energy Action Plan) was used instead because the term SEAP had not been coined – it started to be used when the Covenant of Mayors initiative was launched towards the end of 2008, after the start of the Sustainable NOW project. In this paper both terms are used interchangeably.

cities. They also encourage community-wide reflection and self- assessment. In engaged cities, stakeholders and regular citizens have been called upon to contribute their fair share in making the local transition to sustainable energy a reality. Cities, led by their local governments, have drawn attention to and collaborated intensively with local industry, businesses, schools, and other institutions to develop a vision and start materialising it. Citizens have been a cornerstone of this process, and their participation has contributed significantly to the positive results obtained so far.

Making institutions and individuals alike accountable for the decisions taken has the potential to dramatically change the way energy is generated, consumed and ultimately understood. It is with this frame of mind that the engaged cities – such as those that are signatories to the Covenant of Mayors, as well as many others that act ‘without affiliation’ - have approached the task.

This paper – the Publishable Report of the Sustainable NOW project – describes the journey of the five so-called ‘learning communities’ in the SEAP development process, supported by ‘expert communities’ and network and technical partners. In the next section the project, its partners, the objectives, its achieved results and lessons learnt are presented. Following, the network partners who are supporters to the CoM initiative (Covenant Supporters) share their views on a sustainable energy future, linking the CoM and the Sustainable NOW project. Then the approach and the outcomes of the project are described in detail, followed by a peek into the most representative deliverables of the project: the SEAPs of the five ‘learning communities’. Finally, lessons learned from the action, conclusions and thoughts on next steps are presented.



## The Sustainable NOW project

This section introduces the project partnership, its objectives and achieved results.

### *Partnership*

The Sustainable NOW project consortium is comprised of fifteen European partners:



#### **Project Co-ordinator:**



The European Secretariat of [ICLEI - Local Governments for Sustainability](#) (Germany) is an international association of local governments and national and regional local government organisations that have made a commitment to sustainable development. ICLEI Europe is led this project consortium.

#### **Network partners:**



[Climate Alliance](#) (Germany) is a network of European cities and municipalities with the objective of preserving the global climate. It strives for a comprehensive approach to climate change policy, based on partnerships, the commitment and diversity of the local level.



[Italian Local Agenda 21 Association](#) (Italy) is a non-profit association to spread Local Agenda 21 and promote sustainable development models. Members of the Association are those Municipalities, Provinces, Regions and other Local Authorities and all the protected areas management authorities that have promoted, adopted or intending to adopt a Local Agenda 21 Action Plan in the short term.

#### Technical partners:



[Banca Popolare Etica](#) (Italy) is the first and only Italian financial institution established in an exclusively social context, as opposed to a purely economic one. Banca Etica opened its first branch office in Padova, Italy on 8 March 1999.



[ecovision GmbH Gesellschaft für erneuerbare Energien & Umwelt](#) (Germany) promotes environmentally and socially sustainable projects in the area of renewable energy (RE). The limited company ecovision GmbH was founded by the NGO KATE e.V. - Center for Ecology & Development, Stuttgart, together with seven partners.



[Trecodome](#) (The Netherlands) is an international oriented company involved in low energy and passive buildings, offering services about energy related issues in buildings. The objective of Trecodome is to provide advice and manage processes for international networks, companies, organisations and governments in the field of sustainable development in the built environment.

### Community partners:



The [Municipality of Burgas](#) (Bulgaria) is situated in Eastern Bulgaria on the Black Sea and is the fourth largest city in Bulgaria, with 226.000 inhabitants and a territory of 48 200 hectares. The territorial division of the municipality includes 15 village municipalities, the city of Bourgas itself is divided into six territorial directorates.



The [City of Ludwigsburg](#) (Germany) is located in the centre of the "Region Stuttgart", one of the strongest economic regions in Germany with around 2.500.000 inhabitants. The city itself has 85.381 inhabitants and has 4.333 hectares. It is a city of many different faces – as a county seat of local government, with 7 suburbs, around 50 factories, 1200 craft-oriented and commercial companies and over 2000 wholesale and retail outlets.



The [City of Munich](#) (Germany), with a population of about 1.3 mio, is the third largest city in Germany. The gross domestic product amounts to about 65.000 mio. €, the purchasing power to about 22.000 € per capita. Statistically - more than every second citizen drives a car – indicating not only economic wealth. In Munich, the foundations of a committed municipal policy of promoting renewable sources of energy were laid in the late 1980s, when the energy saving concept was drawn up.



The [City of Miskolc](#) (Hungary) is the third largest city of Hungary, and is famous for its attractive natural and historical attractions. Miskolc has 180.000 inhabitants. The main economic areas of the city are trade, services, financial, scientific and educational function. The city went through a heavy industrial revolution in the last period which resulted in severe impacts on the environment.



Comunità Montana - Associazione dei Comuni  
Trasimeno - Medio Tevere

The [Mountain Community - Municipalities Association "Trasimeno-Middle Tiber"](#) (Italy) is a public body established among thirteen municipalities. According to its Statute one of the main objectives of Comunità Montana is to share the conception of the multi-annual plan for economic and social development, the regional development plan, in order to contribute to protect the soil, preserve the nature and promote development integrated politics able to make closer the mountain to the plain areas.



The [Municipality of Bologna](#) (Italy) is a city of nearly 400.000 inhabitants. It is also home to one of the oldest universities in Europe (90.000 students). The Municipality plays a leading role in national environmental policies and has frequently received international acknowledgement for its achievements.



Provincia di Siena

The [Province of Siena](#) (Italy) is a local authority gathering together 36 municipalities in its jurisdiction. As per Italian law, jurisdiction of the provincial administration ranges from economic, to social and cultural development, as well as environmental protection and the valorization of local resources. As such it may initiate policies and actions favouring economic, social, and cultural development and the pursuit of the protection of the environment of the provincial territory as its institutional mission.



The [Rosignano Marittimo Municipality](#) (Italy) has been since many years engaged in the field of the correct Environmental management and in fact the first results have been lately collected. After having reached the EMAS Certification (Eco-Management and Audit Scheme, that is the environmental check and management system) the municipality has obtained from the Certifying Institute (Certiquality) the conformity certification to the international standards UNI EN ISO 14001:2004.





The [Woking Borough Council](#) (United Kingdom) provides services for over 93,000 residents and businesses, from local firms to leading international companies. Woking Borough Council and Surrey County Council work together to provide a wide range of services every day from refuse collection and street cleaning to the provision of schooling and day centres. To date, the Council has achieved a 51% reduction in its own energy consumption since 1991/92 and a 36% improvement in the energy efficiency of the Borough's public and private sector housing since 1996.

The five 'learning communities' were Burgas, Comunita Montana Lago Trasimeno-Middle Tiber, Ludwigsburg, Miskolc and Rosignano Marittimo.<sup>iv</sup> Bologna, Munich, the Province of Siena and Woking were the 'expert communities'. The learning communities are also referred to in this paper as Circle of Learners, or COL, and the expert communities as Circle of Excellence, or COE.

## Objectives

The project set out to achieve the following objectives:

- Develop an in-depth strategy and involve local and regional partners in the process, to strengthen the role of local and provincial governments as political and administrative bodies guiding their communities in the sustainable energy transition period. This is done by creating a supportive environment for qualitative and peer-to-peer exchanges for advanced and learning communities; with capacity development to advance implementation knowledge. Communities can learn from one another as well as from experts from the financing, local government and sustainable energy sectors.
- Create instruments that build on state-of-the-art Local Energy Action Plan (SEAP or LEAP) developments, develop a user-friendly LEAP wizard, which contains both a process management landscape tool (PMT) and a decision support system (DSS), and which can be used to support the actors in planning, decision-making and implementation of integrated energy concepts, climate protection actions and securing local energy supply.
- Develop a platform that can be used to make the results widely through a 'one-stop-access-point' on sustainable energy communities that centralises useful instruments and information.
- Guide LEAP development and implementation in selected learning (Circle of Learning - COL) communities, addressing the use of local resources, stakeholder involvement and public awareness-raising, as well as monitoring actions.

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<sup>iv</sup> Ludwigsburg and Comunita Montana Lago Trasimeno-Middle Tiber were considered to cover aspects of 'learning' and aspects of 'expert' communities.

- Improve the capacity of Local Governments, using constructive interactions of learning and frontrunner communities, peer-to-peer exchanges, study visits, capacity development workshops, and staff trainee programmes.
- Improve the awareness of citizens, stakeholders & local politicians on sustainable energy.
- Disseminate the project outcomes and philosophy widely across Europe, with a special focus on Bulgaria, Hungary, Italy, Germany and the United Kingdom.

## ***Achieved results***

After the completion of the project, the partnership considers all of the project's major objectives achieved, including:

- Project management and communication flow among all partners was achieved successfully through the tools developed as well as through more conventional channels. Face-to-face meetings were invariably combined with other meetings and events to maximise the efficiency of the meeting and reduce the total GHG emissions generated due to project travel.
- Capacity development for the COL-partners was continuously supported through COE-COL Talks, COE-COL twinning partnerships (as a special support feature), study visits, project meetings and methodological as well as instrumental support. Additional tailor-made on-site events were conducted to support capacity development with COL partners facing specific challenges. Staff trainee programmes (STP) were implemented by all twin partnerships, in the form of trainings between twinned cities. All STPs opened the doors to even closer cooperation and partnership that will last after the completion of the project.
- The LEAP wizard software concept was fully developed. It consists of two parts: a decision support system (DSS) and a process management landscape tool (PMT) to support cities – within the partnership and now across Europe and beyond – in managing their sustainable energy transition and in analysing best practices and their potential applicability in a specific location.
- The dissemination material produced – in the five project languages: Bulgarian, English, German, Hungarian and Italian – was well received and distributed widely. It includes a project leaflet, a standard presentation, newsletters and a 20-page results brochure, in addition to media articles and press releases. In addition there were a number of relevant dissemination events involving the community and stakeholders, especially Energy Weeks and National Conferences (the latter in Bulgaria, Hungary and Italy). The project was endorsed by the European Commission's Sustainable Energy Europe Campaign as an Official Partner.
- Community partners captured their energy-relevant status (Partner Profiles) and assessed their needs (Needs Assessment Profile). Further to this, they defined their organisational set-up, defined proper teams in their administration; and identified priorities for action. They decided on their time schedule, and benefitted from the input and evaluation of other partners' experiences, as identified during the COL / COE Talks and COL-COE Exchange activities.

- COL partners developed their LEAPs and started their implementation. Political commitment in the 5 COL has been ensured through the official approval by the highest political levels of the local government authorities, in addition to the support offered to the working groups throughout the LEAP development process.
- Case studies were developed by COE partners. These have allowed COL partners to study best practices in detail (in cases even visiting them in study tours, project meetings and staff trainee programmes), and, through their dissemination in the project website and in the LEAP wizard DSS, also serve as sources of inspiration for cities throughout Europe.

## ***Lessons learnt***

The main lessons learnt from the project are described below:

- The experiences of LGs from several different European countries have led to an enriched work atmosphere, with a keen interest to learn from one another and benefit from different experiences – despite obvious contextual (national) differences that do not necessarily allow a close replication of actions. The learning experience benefits communities in three ways, with the COL partners learning from one another as well as the COE partners and experts, while the COE partners also benefit from their peer-exchange. Opportunities to explore in detail partners' good practices provide inspiration, and support LEAP development.
- Strong project and work package (WP) leadership is necessary to unfold project potentials and identify relevant developments to benefit the overall work programme. The twin approach for community partnerships has helped to strengthen links between communities, and further offers an excellent opportunity for in-depth learning to extract lessons from established integrated processes of the COE partner that are not necessarily obvious from a superficial survey. The LG networks and expert partners add value from their different perspectives, providing tailor-made theoretical and practical knowledge that supports process development and implementation in the COL communities.
- The capacity development package was very well received by community partners and worked wonderfully. The twin approach for community partnerships helped to strengthen links between communities, and further offered an excellent opportunity for in-depth learning to extract lessons from established integrated processes of the COE partners. It also provided an invaluable opportunity for transferring best practice ideas and measures. The twinning approach was complemented adequately by staff trainee programmes, study tours and interactive workshops, with interaction opportunities in large and small groups. The LG networks and expert partners contributed significantly to the 'hands-on' city activities from their different perspectives, particularly by providing a framework under which to bring together all the new knowledge and by professionally facilitating these processes.
- Regular and frank communication throughout the local process remains a core pillar in the successful development and implementing LEAP. Communication is necessary within the local government (LG) involving staff and political leaders, as well as local stakeholders and citizens, as valuable sources of information and new ideas, and for generating co-ownership of the final LEAP and particularly the implementation of agreed actions. Likewise, communication between the project partners is essential to optimise the flow of the project, to exploit synergies and to enhance the overall learning experience. This allows the coordinator

(and all project partners) to identify potential problems early enough for pre-emptive action, and to improve inter-cultural understanding in a large consortium as this one.

- To enhance a regular flow of communication between partners one lesson learnt is that deliverables should be directly and clearly linked to activities, events, and dates to ensure regular engagement and that voices of all partners are heard and discussed. For example, the results of a workshop must be compiled in a document X which will be used for implementation phase Y, task Z. Another example: An active, user-friendly and moderated web-discussion forum with inputs (eg. at least 3 new ideas/full answer to another entry entries per partner per month) listed as deliverables could also be adequate. This would serve also as a tool for partners to know how they are with respect to others. This tool should be designed and implemented professionally.
- Having technical organisations as outsourced/outsourcable expertise instead of as partners could be a win-win solution. This would mean that an “Expert Bank” is listed in the proposal, from which resources may be pulled by the partnership during the project, as the partnership sees fit (e.g. to deliver a seminar, or to assist partner X & Y in one given task, etc). A budget should be assigned to the Expert Bank from start (negotiation stage with EACI), and it will be assigned on a competitive basis as needs arise. The idea behind this suggestion is that technical/expert organisations would deliver solutions in a more targeted way and to what the consortium identifies as a requirement at any given time. It would also encourage community partners to get support for issues that could not have been (or were not) identified at the time of the proposal writing – and for which expert partners were not recruited.
- The requirements and interactions between twinning partners (COL and COE) could be made more standardized in order to be able to compare the outcomes of different collaborations more easily, and draw lessons from them. This may also simplify the preparation by each COE and guarantee a certain and fair degree of commitment from COEs. Likewise, as mentioned in the ‘management’ section above, linking deliverables as much as possible would ensure that project partners are highly engaged in the project developments and that the project takes the fullest possible advantage of the resources invested. On the other hand, this makes coordination and management a more challenging task – which is a fair price to pay compared to the potential positive outcomes.

## **Sustainable NOW and the Covenant of Mayors**

The three network partners of Sustainable NOW (ICLEI, Climate Alliance and the Italian Local Agenda 21 Association) have a close relation to the CoM – each is a Covenant Supporter.<sup>v</sup> Covenant Supporters are “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 their signatories”.<sup>vi</sup> This is not at all surprising, as the Sustainable NOW project and the CoM initiative have been closely linked since they came into existence.

Each of these three Covenant Supporters shares their thoughts on the experience of the Sustainable NOW project and the future of the CoM and sustainable energy practices in cities across Europe.

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<sup>v</sup> In addition, Climate Alliance manages the Covenant of Mayors Office in partnership with several other local government networks.

<sup>vi</sup> [http://www.eumayors.eu/index\\_en.html](http://www.eumayors.eu/index_en.html)



## ***Message from ICLEI***

### **Together we are stronger**

The Covenant of Mayors (CoM) is an important initiative bringing together committed communities that report on local climate and energy action. ICLEI Europe is a Covenant Supporter, and encourages all local governments across Europe to join this initiative. Together we are stronger! All local governments are in a position to address climate change and sustainable energy: when offering municipal services, as owners and operators of infrastructure, as well as leaders of a community. Local governments can shape change among people, in policy, using technology and finances appropriately.

### **Sustainability at the core**

ICLEI Europe is engaged in the CoM process as a unique European local government network. It is the only network explicitly addressing sustainability, and also forms part of a global network that deals with this topic in many countries at the local level.

ICLEI has been active in climate protection since 1991, and started its global Cities for Climate Protection (CCP) Campaign in 1993. It actively encourages cities and towns to engage in urgently needed climate change mitigation, with energy addressed as a key element. However, ICLEI goes one step further – it encourages municipalities to explore integrated sustainability approaches - to optimise processes and use resources efficiently, when addressing any topic.

### **ICLEI Europe's role in the CoM**

ICLEI Europe, as Covenant Supporter, engages in 5 different ways in the CoM:

- (i) **Encouraging its members and partners to become involved in the CoM**, and explores existing needs and challenges in this regard, for example in:
  - a. *LG Action project results – incl. [LG Action 3<sup>rd</sup> Positioning Paper](#)*
  - b. *[Brief needs analysis of Covenant Coordinators & Supporters](#)*
- (ii) **Offering multi-disciplinary guidance and a wide range of services to local governments** to enable proper planning, engagement and monitoring (e.g. greenhouse gas inventory tools, integrated management guidance, etc..).
- (iii) **Supporting organisations that work with local governments**, such as sub-national governments (provinces, regions) and networks of municipalities, by offering them training to more effectively assist their local partners.
  - a. *[Basic guidelines for Covenant Coordinators and Supporters](#)*
- (iv) **Linking to global processes**, such as the UN climate negotiations and the [carbonn Cities Climate Registry](#) (an international monitoring initiative of local climate action)
- (v) **Commenting on CoM guidance and material**, dealing directly with the CoM Office and the Joint Research Centre, which offers CoM technical support.

Our involvement in the CoM is mostly linked to two active campaigns, namely the [CCP Europe](#) (climate change mitigation and adaptation) and [Procura+](#) (sustainable procurement) Campaigns – as long-standing ICLEI campaigns that offer practical support which can help local governments

sign up to the CoM. We also use and promote relevant project results that can support local action.

This in turn all links to the foundation campaign for sustainable development in Europe, namely the [European Sustainable Cities and Towns Campaign \(ESCTC\)](#).

We invite you to share our commitment to sustainable energy!

A handwritten signature in blue ink that reads "Gino Van Begin".

Gino van Begin  
Regional Director for Europe  
ICLEI European Secretariat

## ***Message from Climate Alliance***

### **Committed local authorities paving the way for a sustainable energy future**

Over the last three years, the Covenant of Mayors has become the flagship European movement in the field of climate and energy issues. Local authorities understand that contributing to the EU's '3x20' energy and climate objectives is not only beneficial for the planet and our next generations, but also a powerful instrument to improve quality of life and create local jobs.

The 'Sustainable NOW' project supported local authorities in translating their commitments into practice by facilitating networking and providing a platform of exchange and collaboration. It offered a great opportunity to network, receive extensive support, acquire know-how and transfer best practices.

Based on its long-standing experience in local climate and energy policies, Climate Alliance helped local authorities to become active by providing the basis for development and implementation of both their CO<sub>2</sub> emissions inventory and their Local Energy Action Plans (LEAPs). Guidance was provided to local governments, from pioneers to beginners, from decision-makers to municipal staff.

The twinning approach proposed within the project, complemented by staff trainee exercises, study tours and interactive capacity-building workshops, worked wonderfully. We are particularly proud of what has been achieved. All community partners have been able to deliver their Local Energy Action Plan at the end of the project period –and, for those municipalities that are not signatories yet, they are now ready to join the movement!

These local initiatives considerably contribute to reaching European targets and to ensuring a sustainable future for all. Together we have invented a new, synergetic way of collaboration and we hope that all community partners will be able to continue this adventure. The twinning approach has opened the doors to even closer cooperation and partnership that will last after the completion of the project!



Ms Ulrike Janssen  
Executive Director of Climate Alliance

## ***Message from the Italian Local Agenda 21 Association***

Now more than ever, the global financial, energy and climate challenges require a solid commitment to find and enact innovative, progressive and sustainable responses. National governments must reach the objectives that the acceleration of climate change has imposed upon us. They have the opportunity to direct investments in a way that will contribute to a green economy.

Local Authorities also have a distinct political will and a territorial commitment that places them in a prime position for a true change of practice. The climate battle will be won in cities - a strong role for Local Authorities is now unavoidable. As part of this, Local Authorities would like national governments to provide an enabling framework for Green Urban Economies. All sectors of society need to be equally committed, and made responsible, according to their roles. Local Authorities have the ability to be the guiding actors in the process of awareness raising and starting the shift from the dominant energy paradigm towards more efficient and sustainable scenarios. In this frame, the principles of Local Agenda 21 - despite being conceived 20 years ago at the Rio Conference on Sustainable Development - continue to show their validity. The paths that cities choose to take in the next years can make the global transition to a green and sustainable economy.

The Sustainable NOW project results demonstrate how to develop an in-depth strategy and build capacity to strengthen the role of local and provincial governments as political and administrative bodies guiding communities in the sustainable energy transition.

Peer-to-peer review, study visits, best experiences exchange and support from technical experts of the energy efficiency sector are the training instruments used through the project to help “circle of learners” Local Authorities to overcome non-technological barriers and create an environment of visible, tangible results for local and regional actors.

Two fields, even if already addressed during the project, need to be explored more deeply:

- How to promote, in cooperation with the banking system, specific financial instruments to energy efficiency and requalification investments and to foster Local Energy Action Plan implementation
- How to create local partnerships for energy conservation and efficiency and renewable energy production between small and medium enterprises, local public institutions and citizen associations

These crucial topics are to be investigated in greater depth in the next Sustainable NOW project!



Emanuele Burgin  
President of the Italian Local Agenda 21 Association

## Approach and outcomes of Sustainable NOW

In this section we take a look at the skeleton of the project and answer some questions about the approach taken by the project, such as: What methods and tools helped the five ‘learning communities’ go through the demanding process of developing and starting the implementation of a SEAP? How were the capabilities of the partnership used to deliver the end result efficiently and comprehensively? Have the foundations for a long-term SEAP implementation been laid? What are some success stories of the ‘learning communities’? How do these local efforts fit in the bigger picture – are these efforts really worth it?

### *Methodological approach*

Preparing a SEAP – as well as implementing it later – is a challenge. It will require dedication from several departments of the city (i.e. of the local government) and their interaction with a number of stakeholders. The SEAP coordinator, who will often be a senior member of the environment, sustainability, climate or energy department of a city, will need to work with a team formed by different city departments and a range of stakeholders. This person will strive to put together the pieces of a rather complex puzzle, including: channelling, satisfying and rejecting demands generated in-house and by stakeholders, managing limited budget and resources, bringing together conflicting mandates and priorities of different actors, etc. And this task must be conducted in a way that those contributing to the outcome of the SEAP remain interested, satisfied and...contributing, while the objective of the SEAP remains in line with the city’s and its own; for example the 20/20/20 targets by year 2020.

So, who’s up to take the job?

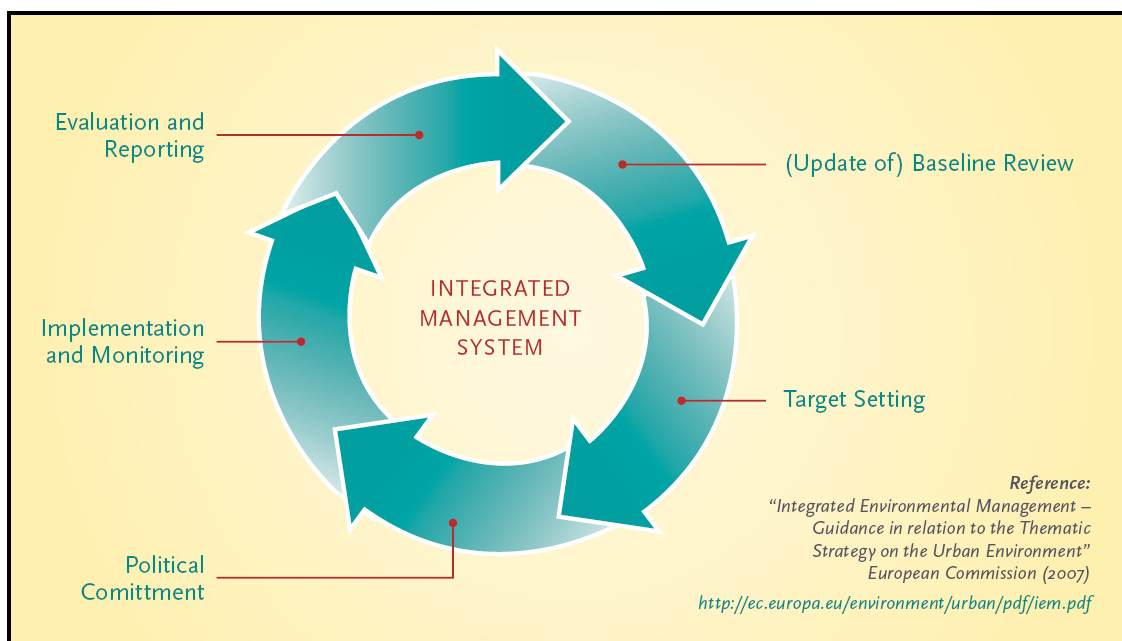
Luckily, the Covenant of Mayors has come up with a detailed guidebook on how to develop a SEAP<sup>vii</sup>, which will guide the new SEAP coordinator through the as yet uncharted waters. The experience of an increasing number of cities that are undertaking this challenge will also serve as incentive and as a source for good practice. Additionally, a network of Covenant Coordinators and Covenant Supporters existing in several European countries can further assist the efforts of the city and answer its questions.

But one point to always keep in mind, indeed a cornerstone for successfully developing and implementing a SEAP, is to follow a cyclic, integrated management process, which, repeated regularly, leads to continual learning and to the improvement of the city’s processes. Its five steps are: Baseline review, Target setting, Political commitment, Implementation & Monitoring, and Evaluation & Reporting. They are described below.

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<sup>vii</sup> [http://www.eumayors.eu/IMG/pdf/seap\\_guidelines\\_en.pdf](http://www.eumayors.eu/IMG/pdf/seap_guidelines_en.pdf)





### Integrated management system for SEAP development and implementation

Before starting with step 1, however, the local government needs to identify the resources needed from the departments that will be involved in the SEAP process, and build a team. The strength of this organisational setup will prove crucial in building a SEAP that truly reflects the linkages of energy and climate issues across departments. The members of the team will normally dedicate just a fraction of their time to the SEAP work (except, perhaps, the coordinator and his/her assistants), but this will depend on the size of the city, its resources, and the priority given to this initiative.

The cycle begins with a 'Baseline review', which aims to analyse and document the present state of emissions and the status of energy efficiency, energy consumption and renewable energy generation in the city territory. It is necessary to define the local situation by collecting historical data on energy production, distribution and use - ideally producing a greenhouse gas baseline emissions inventory to determine problem sectors when it comes to negative environmental impacts.

The second step, 'Target setting', consists of revising or developing a strategy to steer the energy work in the city - what is often referred to as the local energy, climate or environment plan. It describes the city's vision and explains how it will be attained by listing specific objectives, indicators, measurable targets, and actions for achieving them. It presents a plan of action and sets goals for the short, medium and long term. The exercise of setting targets must be based on the context and realities of the city and on the findings of the baseline review. It should serve as a bridge to achieve your city's vision.

In order to make official the targets and the visionary road-map for the municipality on energy issues, the policies, programmes and plans that have been introduced or revised should be thoroughly discussed, agreed to and approved by the City Council, in what is called the 'Political commitment' step.

In step four, ‘Implementation & Monitoring’, a set of measures have to be planned in detail and implemented in order to achieve the energy targets set in the plan approved by the City Council. During the last step of the cycle, ‘Evaluation & reporting’, an on-going assessment of the implementation of the measures and their effectiveness in reaching the set targets is conducted. This will help illuminate the extent to which the strategic objectives of the city have been attained.

This step concludes the first round of the cycle and informs - or even merges into - the baseline review of the next round.

Throughout the process, the SEAP team in the local government will need to cooperate closely with stakeholders. Appropriate and effective stakeholder involvement will help develop a SEAP that is comprehensive with respect to energy and climate areas covered, and inclusive in terms of input from different societal groups. Furthermore, involving stakeholders in the development and implementation processes will facilitate the identification of a broad spectrum of the local realities and concern areas, and in doing so enable potential synergies. Communication with stakeholders will also contribute to identifying potential conflicts, and avoiding or solving them. A feeling of ownership of the SEAP by a wide representation of stakeholders will prove a key factor in the action plan’s success.

## ***Capacity development approach***

The Sustainable NOW project has dedicated substantial efforts to improve the capacity of local governments using constructive interactions of learning and frontrunner communities, peer-to-peer exchanges, study visits, capacity development workshops, staff trainee programmes and (originally unplanned) tailor-made ‘learning community’ guidance workshops. An improved awareness of citizens and local politicians on sustainable energy issues has also been emphasised.

Learning communities mainly benefitted through improved capacity and the use of instruments that address development, implementation and evaluation of sustainable energy community concepts, which have a longer-term sustainable impact. The use of local resources, involvement of diverse stakeholder and improved community resilience from a climate protection and energy security perspective are underlying aspects of the project.

Some examples are described below:

- **Burgas** and **Ludwigsburg** have learnt a great deal from **Munich** through the direct staff training sessions. The visit of the “*Bauzentrum München*” information centre was a great source of inspiration and knowledge on how to raise awareness and directly engage local stakeholders for both learning municipalities. **Burgas** now regularly conducts stakeholder meetings, following an effective stakeholder engagement process. The peer-to-peer exchanges also provided an opportunity to discuss some possible options for making municipal buildings and street lighting more efficient and sustainable. **Ludwigsburg** is now exploring similar possibilities within its own territory. The Bauzentrum can be a very interesting role model for the



Energetikom, the competence center for energy, climate protection and ecodesign of Ludwigsburg. Also, the information about the "Munich building standard" can be used for further funding and training activities in Ludwigsburg. For improving the municipal buildings and street lightning concerning energy saving and energy efficiency the peer to peer exchange was very useful too.

- **Bologna** provided **Comunità Montana** with specific guidance on common challenges, for instance the method for conducting energy audits of buildings and other energy consuming activities, the CO2 calculation method for elaborating an emissions inventory, the experience of the "environment and energy" show-room to raise awareness amongst the general public (e.g. citizens and schools), the use of potential renewable energy sources at local level (e.g. the installation of PV panels on the roofs of residential buildings), etc.



- The experience of **Woking** with Energy Service Companies (ESCOs), has allowed **Miskolc** to familiarise itself with a much broader range of technical and financial solutions for energy savings. Opportunities to replicate some of the Woking's innovative projects in the Hungarian context are being under investigation by the municipality of Miskolc, for example: the development of flood prevention measures or the adaptation of the NI 185

methodology (using national indicators for CO2 emissions calculation and monitoring).

- The experience of the **Province of Siena** in developing a GHG emission inventory has been very helpful for **Rosignano Marittimo** in building its own.

## Tools developed

The Sustainable NOW project developed a set of tools to support the development of integrated, holistic thinking for local governments when assessing and re-assessing their energy systems and the changes needed to make them more sustainable. They support an overarching understanding of the wide-ranging impacts of the energy sector and the ways it relates to other sectors. The tools include:

- The SEAP development and implementation wizard with its process management landscape tool and decision support system, and
- The web portal: an entry point for users interested in the development of sustainable energy practices.

The **LEAP wizard** is a web-based tool that has supported the project's 'learning' cities throughout the process of developing/ improving and implementing their LEAPs (i) by providing a methodology that goes beyond energy and addresses a wider sustainability management perspective, and (ii) by providing relevant information and presenting case studies of sustainable energy actions in a way that supports optimal replication and decision making by other cities. With Sustainable NOW having reached its completion, the LEAP wizard remains a legacy for 'learning' and 'advanced' cities across Europe to engage in sustainable energy.

The LEAP wizard consists of two parts: the Process Management Landscape Tool (PMT) and the Decision Support System (DSS). The PMT gives the user access and step-by-step guidance to an integrated, cyclical, sustainable energy management methodology, providing real life examples of cities across the five step process. The DSS is a database that lists – to a considerable level of detail – sustainable energy actions implemented throughout Europe, allowing the user to identify actions that are likely applicable and potentially successful in a specific location or under specific circumstances. Notwithstanding, and for the sake of clarity, it should be stressed that the DSS does not support decision-making by producing a quantitative result or score, but rather by allowing the user to compare different actions implemented elsewhere and then judge by himself – and after considering his specific circumstances – on the potential transferability success of a given action in his city.

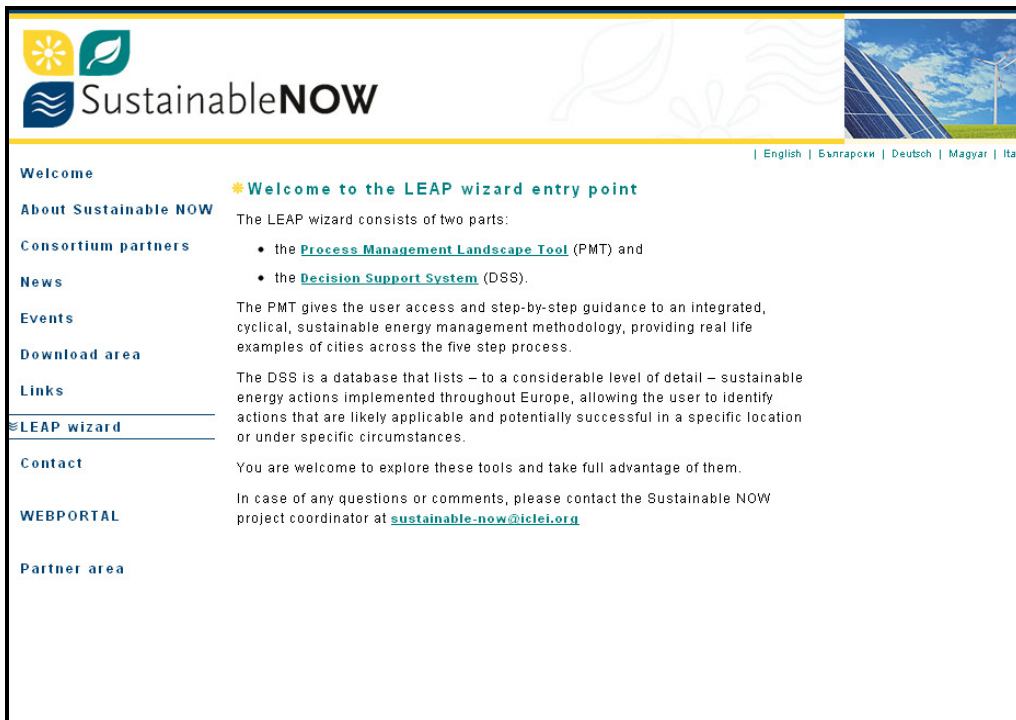
The wizard (both PMT and DSS) has the potential of serving both as an effective dissemination tool, as well as a knowledge management tool for local governments.

The project has not included a market potential analysis for the PMT. However, experience shows a need for a low cost electronic management handbook and dashboard solution particularly for smaller and medium-sized municipalities. The experience from the 'learning' cities of Sustainable NOW shows that using the methodology can bring considerable benefits to local governments, but the learning process most likely requires direct interaction between the local government and energy management experts. In other words, an online PMT without follow-up tailored support to local governments will fall short of delivering a new, improved energy management approach to local governments.

Likewise, the creation of the LEAP wizard has shown that while it was possible to gain wide acceptance of the need for structured information to reduce the risk involved in replication of good practices, it has proven difficult for local governments to provide such detailed, structured information on their actions – and to make use of it. This has to do, in part, with the fragmentation of responsibilities for actions within local governments. In addition, records are not always kept at such a level of detail.

Unfortunately, this means that not only is it hard for local governments to communicate their actions in such a way as to minimise replication risk, it is also clear that the lessons learned and capacity created during such actions are often quickly lost within the local governments themselves.

The LEAP wizard is freely available and can be accessed through the project website: [www.sustainable-now.eu](http://www.sustainable-now.eu).



**Welcome**

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**Partner area**

**Welcome to the LEAP wizard entry point**

The LEAP wizard consists of two parts:

- the [Process Management Landscape Tool](#) (PMT) and
- the [Decision Support System](#) (DSS).

The PMT gives the user access and step-by-step guidance to an integrated, cyclical, sustainable energy management methodology, providing real life examples of cities across the five step process.

The DSS is a database that lists – to a considerable level of detail – sustainable energy actions implemented throughout Europe, allowing the user to identify actions that are likely applicable and potentially successful in a specific location or under specific circumstances.

You are welcome to explore these tools and take full advantage of them.

In case of any questions or comments, please contact the Sustainable NOW project coordinator at [sustainable-now@iclei.org](mailto:sustainable-now@iclei.org)

English | Български | Deutsch | Magyar | Italiano

Entry point to the LEAP wizard



**AVANTI**

Sie sind hier: [LEAP - Local Energy Action Plan](#)

<b>LEAP Step 1: Baseline Review</b>	<b>LEAP Step 2: Target Setting</b>	<b>LEAP Step 3: Political Commitment</b>	<b>LEAP Step 4: Implementation &amp; Monitoring</b>	<b>LEAP Step 5: Evaluation &amp; Reporting</b>	<b>Continuous activities</b>
<a href="#">Baseline Inventory</a>	<a href="#">Participatory target setting</a>	<a href="#">Approval of the LEAP</a>	<a href="#">Implementation Plan</a>	<a href="#">Evaluation of Local Energy Action Plan</a>	<a href="#">Political engagement</a>
<a href="#">Review of internal organization</a>	<a href="#">Local Energy Action Plan</a>	<a href="#">Budget Allocation</a>	<a href="#">Monitoring of measures</a>	<a href="#">External Audit</a>	<a href="#">Process Management</a>
<a href="#">Stakeholder Identification &amp; analysis</a>	<a href="#">LEAP support</a>	<a href="#">LEAP Release</a>	<a href="#">Reporting (ongoing &amp; current status)</a>	<a href="#">Council Approval of LEAP Report</a>	<a href="#">Stakeholder support, engagement &amp; facilitation</a>
<a href="#">Legal Framework &amp; implications</a>			<a href="#">Improvement Program</a>		<a href="#">Public Relations</a>

Entry screen of the LEAP wizard PMT





Entry screen of the LEAP wizard DSS

The **web portal** presents a centralised, well organised solution to the huge amounts of information available to local governments, which can overwhelm them when trying to make sense of it and somehow to prioritise it. Today communities are facing many challenges: a changing climate, rising fuel prices, environmental degradation and a wide range of socio-economic pressures – in addition to challenging budget cuts. Energy is central to all these issues. We need energy every day, and we have to pay for it.

The web portal aims to not only present relevant and updated information, but also to link to existing initiatives, tools and methods for cities to successfully achieve the sustainable energy transition.



The web portal entry point

## Financial study

Another valuable tool produced by the project was a study on financial aspects of sustainable energy projects. It presents an overview of sustainable investment opportunities available to local authorities in the energy sector, providing them with knowledge with which to make informed choices. It also offers local governments valuable knowledge on how to make a sustainable energy project 'bankable', supporting cities' efforts to achieve both the energy project objectives and those of the European Union in the field of environmental protection and sustainable development.

The process for making an idea 'bankable' goes along the following lines:

To attract funding, an idea – or a sustainable energy project, or measure – needs to be presented in a realistic and positive light. Some words of advice are given here for cities looking to implement their SEAPs.

## The overall presentation of the project

Essential conditions to make a good impression to a bank are a clear identification of the investors and a clear idea of the project. For a financial institution it is important to know who exactly they will finance and to feel that the investor is well aware of the objective and potential risks of the proposed sustainable energy measure, as well as how to overcome potential problems.

## The investor

The preferable situation is to include in the investment team or consortium a strong industrial or business partner with specialised skills and know-how in the specific area of this project. Building a partnership of investors with experience in the area is important to counter potential negative events during the lifetime of the project.

A co-participation in the investment (presence of “equity”) by the investor is preferable and is a sign of commitment to the measure’s success.

### **The investment**

The precise evaluation of investment costs is an important activity that is usually underestimated, potentially leading to the erroneous exclusion of expenses that will, nonetheless, be incurred. For example, some expenses to be taken into account are: land, technology, electrical works, civil works, connection, dismantling costs, contingency and intangible assets (notary, advisors, taxes, bank fees, development, etc.)

### **Which risks to consider?**

A bad investment is a negative scenario for both the investor and the financing institution.

The changes that can occur during the lifetime of a loan are usually more than we think: it is necessary that these possible changes are studied before they take place and not when they take place.

Possible mitigation options for the risks identified should always be considered, even though these may lead to a lower estimation of revenues, higher operational costs, possible delays in the project pipeline, etc.

The main idea under this type of analysis is that the investor and the financing institution are partners in business and must have shared control of all variables during the whole period of the loan.

### **Some examples of risks and mitigations are:**

- the regulatory risk consisting of an uncertain legal framework (e.g. change in value of incentives) can be mitigated through a precautionary business plan
- the construction risk consisting of delays and rise of costs can be mitigated through an all-inclusive turn-key contract (e.g. with penalties for delays)
- the operational risk consisting of a rise in operational costs or accidents can be mitigated through all-inclusive Operation & Maintenance contracts (e.g. including the purchase of raw materials at set prices)
- the market risk consisting of changes in the price/volume of goods can be mitigated through precise purchasing contracts
- the technical risk consisting of changes of plant efficiency can be mitigated through performance bond contracts
- the financial risk consisting of the rise of the variable interest rate is mitigated by signing hedging contracts
- the environmental risk consisting of e.g. soil contamination should be analysed by and with experts, and involve the community

### **The Business Plan**

The economic and financial scenarios of the investment are presented in the business plan. It is

important that all revenues (sale of goods and services, feed – in tariffs, other contributions), costs (maintenance, insurance, land lease/rent, administrative costs and personnel, connection and contingency) and other costs (financial costs and taxes) are taken into consideration.

The business plan should demonstrate the economic and financial viability of the investment; this means turning the possible risks (e.g. one month plant breakdown due to unreliable technology) into consequences (e.g. lower revenues).

One aspect the plan must address is the need for positive cash flows: these flows must always be sufficient to repay the due debts.

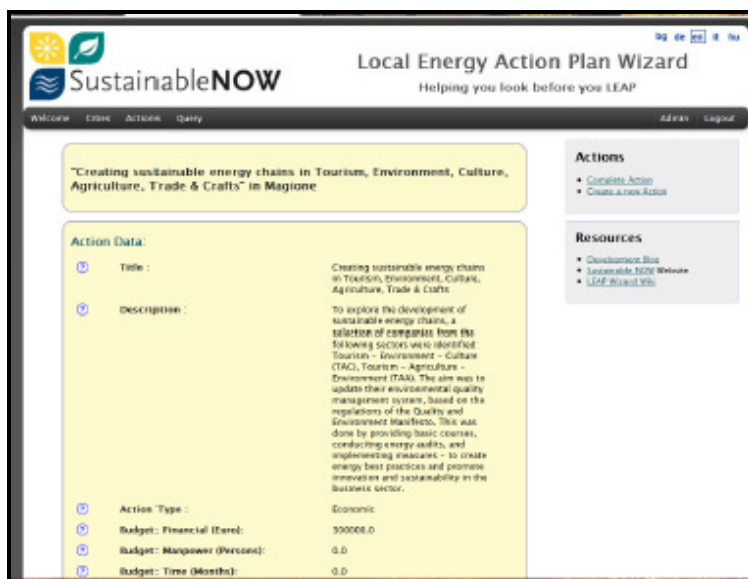
In summary, developing a solid and attractive partnership and business plan are cornerstones for securing necessary funding. Additionally, specific financial instruments to foster sustainable energy investments (including those on EE) should be made available to cities in order to support the further and widespread implementation of sustainable energy measures.

The full study is freely available in the project website.

## Case studies

A number of case studies were produced by community partners. In this section we present the process of introducing case studies into the LEAP wizard DSS (from its original text version). We use one case study prepared by Comunita Montana as an example. The example of Comunita Montana Association is used to show that a learning city is also capable of adding action examples very effectively:

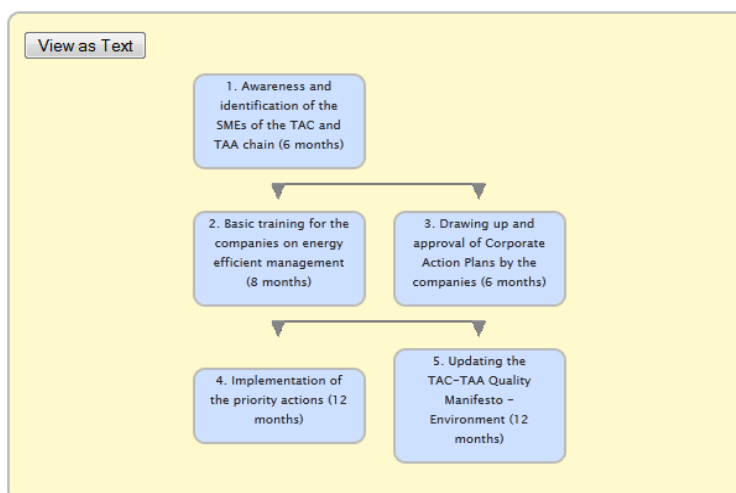
A Word template was provided to partners and used to identify relevant steps in the process (between 6 to 10 steps in chronological order, noting approximate duration in weeks or months, and any parallel steps), as well as the indicators (at least 1 per step. These should be quantifiable where possible, and shows what was used to measure or see if you were on track or not) and the behaviour of indicator (This is an attribute of the indicator - i.e. 'what it does' – to state if are you on track or not.)



The screenshot shows the 'Local Energy Action Plan Wizard' interface. The main title is 'Local Energy Action Plan Wizard' with the subtitle 'Helping you look before you LEAP'. The interface is divided into several sections:

- Header:** SustainableNOW logo and navigation links (Welcome, Cities, Actions, Query, Admin, Logout).
- Section Title:** "Creating sustainable energy chains in Tourism, Environment, Culture, Agriculture, Trade & Crafts" in Magione.
- Action Data:**
  - Title:** Creating sustainable energy chains in Tourism, Environment, Culture, Agriculture, Trade & Crafts.
  - Description:** To explore the development of sustainable energy chains, a selection of companies from the following sectors were identified: Tourism - Environment - Culture (TAG), Tourism - Agriculture - Environment (TAA). The aim was to update their environmental quality management systems, based on the regulations of the Quality and Environment standards. This was done by providing basic courses, conducting energy audits, and implementing measures - to create energy best practices and promote innovation and sustainability in the business sector.
  - Action Type:** Economic.
  - Budget: Financial (Euro):** 300000.0.
  - Budget: Manpower (Persons):** 0.0.
  - Budget: Time (Months):** 0.0.
- Actions:**
  - Complete Action
  - Create a new Action
- Resources:**
  - Checksource Bus
  - Learnable NOW Website
  - LEAP Wizard Web

The LEAP Wizard DSS then captures these elements, leading the user through a process of adding information. The LEAP Wizard DSS then presents the case as steps (showing where these take place in parallel).



## ***Success stories and good ideas for SEAP development and implementation***

Throughout the project there were many occasions when the partnership felt it had reached a cornerstone; that a particular sustainable energy action had a tremendously positive effect, for instance, or that the dialogue with stakeholders had reached a new level of understanding and commitment, or that the SEAP process was bringing together different LG departments into one unified team, or that politicians were buying into the SEAP momentum without reservations, ... In this sections we give these success stories and good ideas for SEAP development and implementation names and faces, hoping they will serve as an inspiration to other cities across Europe beginning their transition to sustainable energy communities.

### Success story 1

#### **Cooperation between community partners - winning through peer-mentoring!**

##### ▪ *Main activities*

Within the Sustainable NOW project, two circles were established: a circle of learning communities (so-called 'COL'), just starting to develop their Local Energy Action Plan (LEAP), and a circle of more experienced communities ('COE'), interested in sharing their know-how. The objective of this approach was to stimulate cooperation, mutual learning and exchange of knowledge on local sustainable energy



planning and implementation issues. Various activities were carried out to facilitate the process, such as peer-to-peer exchanges (i.e. matching one COL with one COE partner) and staff training exercises.

During these COL-COE exchanges, the learning communities had the opportunity to identify the issues they wanted to address or required advice on. They had the chance to:

- gain tailor-made assistance and support with specific, local challenges,
  - discuss in detail specific steps when handling a particular issue in the LEAP process,
  - identify replicable factors in areas where their advanced 'twin' city partner has attained particular success
- ***Lessons learnt from the Sustainable NOW project - build on successes already tested by forerunners!***

Local authorities have a keen interest in learning from other advanced communities. In the framework of the Sustainable NOW project, cooperation was the key to success. Regular, direct and frank exchanges between the peer partners were essential to identify needs, problems and replicable successes. This supportive environment enabled more detailed and in-depth learning. Despite obvious contextual (historical, administrative, geopolitical, etc.) differences that do not necessarily allow exact replication of actions, good practices & successful measures exchanged throughout the project provided great inspiration and support in their respective LEAP development process.

**The twinning approach had a real, beneficial impact on the capacity building of partner communities... and has opened the doors to even closer cooperation and partnership - that will last after the completion of the project!**

#### Success story 2

##### **Creation of tools to support the development and implementation of the LEAP process**

The tools created as a result of the project will support cities across Europe in developing and implementing their own LEAPs. These tools include:

- the LEAP wizard, with its process management landscape tool (PMT) and decision support system (DSS) components,
- the webportal
- the study on financial aspects of projects
- a series of case studies developed by the community partners

They have been developed by the network and technical partners, with direct support from community partners. The former have provided technical/management/sustainable energy expertise, while the latter have conducted a reality-check of the tools (namely the wizard and the financial study) and contributed to making them more useful to cities.

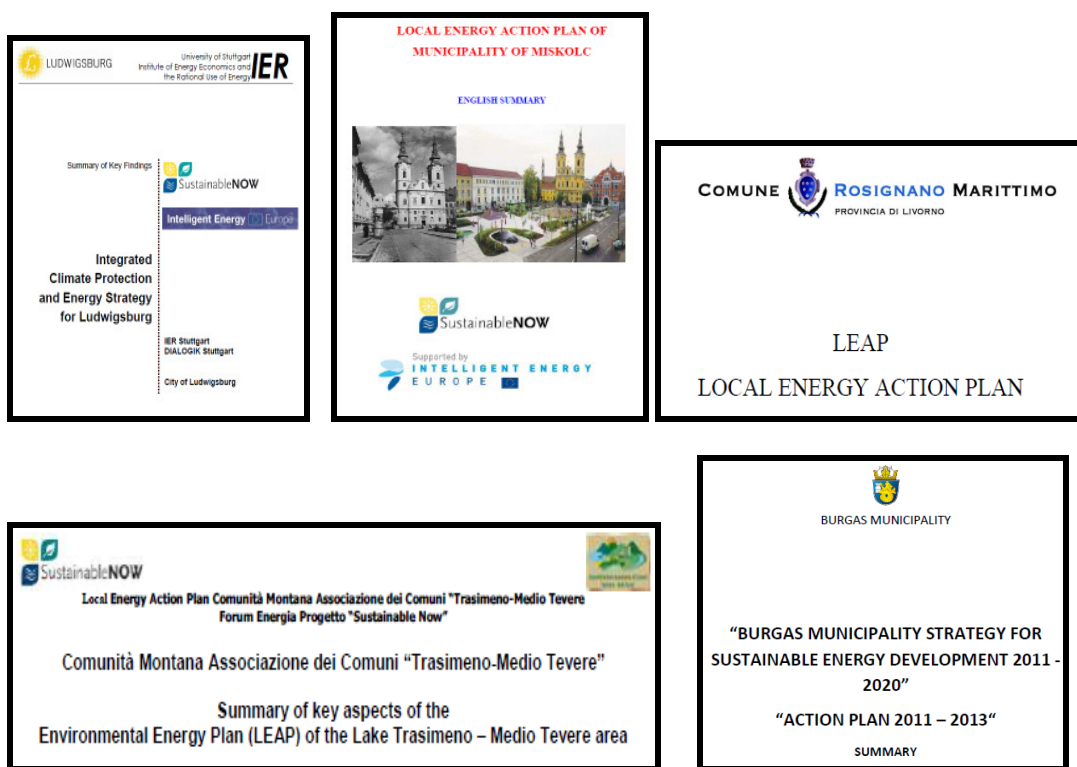
These tools are available online, free of charge, to interested cities, and reflect the experiences of the 5 COL and the 4 COE in their paths toward sustainable energy management and practice. The experience contained here is rich – and continues to grow as the tools store an increasing amount of information from contributing cities.

#### Success story 3



## Five LEAPs completed by the COL partners and their implementation started!

After three years of a collaborative effort, with ‘expert’ communities, network and technical partners supporting ‘learning’ communities in their LEAP development, the five ‘learning’ communities successfully completed and started the implementation of their LEAP. The development of the LEAP has been a key and notable achievement for the 5 COL communities and for the partners in general. This milestone also represents the beginning of a long road, the success of which will largely depend on the long-term commitment of decision-makers, citizens and stakeholders, and on a comprehensive, integrated and cyclical management approach to the implementation of the process by the LEAP coordination team of the communities, as it has been promoted throughout the project.



The targets included in the five LEAPS are the following:

### Burgas

Reduction of the CO<sub>2</sub> emissions in Burgas Municipality: 25 % to 2020.

Reduction of the energy usage in Burgas Municipality: 27 % to 2020.

RES share in the energy mix of Burgas Municipality: 26 % to 2020.

Base year: 2005.

### Comunita Montana:

Reduction of CO<sub>2</sub> emissions of 20.1% by 2020, with 2006 as the base year.

**Ludwigsburg:**

General objective to reach 20-20-20 targets by 2020. A set of measures has been developed within the LEAP and will be implemented with appropriate individual emissions reduction potentials to reach the 20-20-20 goal.

**Miskolc:**

Miskolc has set no quantitative emission reduction targets, but has established firm sustainable energy principles for management and implementation of present and future energy measures.

**Rosignano Marittimo:**

Reduction of CO<sub>2</sub> emissions of 20% by 2020, with 2008 as the base year.  
Rosignano has no data for 1990 so it cannot count 1990 as a base year.

Good idea 1**Educating citizens and students in Bologna**

In Bologna the housing sector is responsible for about 62 percent of overall emissions. This issue represents a major challenge for the city. It is clear that beyond regulation, to change existing buildings the involvement of citizens and actors from the energy and building sector is needed. The Municipality was able to involve both parties through the work of the Show-room and Info-point of Energy and Environment, and thanks to the European projects "Echo Action", "Kyoto in The Home", "Changing With The Climate", "Comenius" and of course "Sustainable NOW".

The "Energy and Environment" Show-room is an exhibition centre located in a traditional secondary technical school of the city. The principal aim is to influence behaviours and consumption habits of citizens towards energy efficiency and renewable energy sources. The goal is to lower energy demand through environmental education and information.

The principal activities at the Energy and Environment Showroom are:

- A permanent interactive exhibition entitled "EnRi's home – Renewable Energy and Energy Saving" (includes panels and exhibits and describes RES and RUE application at home, shows emissions scenarios and indicates objectives and strategies to limit greenhouse gas emissions, save energy, and improve energy efficiency and large-scale renewable energy application)
- Daily training for scholarship to teach environmental and energy issues
- Exhibition of new and innovative RES and RUE products, like a new heat pump assisted solar powered absorption system
- An info-point for citizens and families, providing information and facilitating the purchase of RES and RUE devices

The Sustainable NOW project has raised the visibility of the LEAP process through involving citizens in information activities (Energy Weeks). Moreover comparing the experiences of other COE and COL partners has allowed Bologna to gain an understanding of different possible strategies for implementing the SEAP.

In particular the meeting with Mountain Community - Municipalities Association "Trasimeno-Middle Tiber", provided Bologna with an effective way to involve the citizenship through the AG21 process.

Energy Week 2011 took place from 9 - 12 March in the centre of Bologna as part of the Green Festival ([www.greensocialfestival.it](http://www.greensocialfestival.it)). This event was attended by over 5000 students and every day hundreds of visitors experienced exhibitions, educational workshops and performances focused on environmental and social sustainability issues. Thanks to the contributions of Sustainable NOW, during Energy Week the Municipality of Bologna organised important conferences on climate change and energy sustainability, and opened the Info-Point "Energy and Environment".

In December 2008 Bologna signed the "Covenant of Mayors" as a further step in the process of involving local stakeholders. Thanks to the experience of the Community of "Trasimeno-Middle Tiber", the city has an understanding of the need for strong political commitment to accompany institutional activities with citizen involvement, in order to successfully reach sustainable energy action targets. The city's strategic target, to show that 'yes we can' and also 'yes we have done—we know how we will get there', was born from this viewpoint.

#### Good idea 2

#### **Developing a participatory process in Burgas**

Burgas Municipality joined Sustainable NOW with the aim to develop and improve the municipal capacity to implement sustainable energy practices in the community. The main focus was on outlining a Local Energy Action Plan (LEAP) and on considering an integrated management approach in this context.

In February 2009 Burgas Municipality showed the strength of their political commitment by signing the Covenant of Mayors. As part of this process several steps had to be undertaken based on plans outlined in the Sustainable NOW project, such as conducting an inventory and analysis of the energy situation, taking stock of carbon dioxide (CO<sub>2</sub>) emissions released in the community, identifying specific goals and outlining sustainable energy measures. Most importantly a LEAP had to be developed and submitted.

Before creating the LEAP Burgas Municipality sought ways for a wide public involvement recognising the positive aspects of stakeholder involvement in the decision making process. Among its advantages, greater stakeholder involvement means that policy-making is more transparent and democratic, and a greater level of knowledge and expertise is available. Increased participation in planning also ensures long-term acceptance, viability and support of the strategy and measures.

Furthermore Burgas Municipality aimed for the Strategy for sustainable energy development to serve not only the purposes of the municipal administration but to benefit society as a whole. To achieve this citizens and stakeholders were offered the opportunity to take part in the key stages of the LEAP elaboration process, which included building the vision, defining the objectives and targets, setting the priorities and so on.

A clear picture of where Burgas stands in terms of local level energy production, energy consumption and GHG emissions was achieved thanks to data shared by energy companies and

other industries. This information was used to provide accurate data on overall demand at the local level.

Identifying the main stakeholders was the first step taken by the Burgas Municipality – actors whose interests are affected by LEAP, whose activities have an affect on it, who possess information, resources and expertise needed for strategy formulation, and those whose participation is needed for successful implementation of the plan.

The Regional Environmental Inspectorate, Deputy Governor of the Burgas Region, large industrial companies in the region, such as LukOil Neftohim (petrol refinery), Toplofikatzia (regional heat supplier), EVN (regional energy supplier), BurgasBus (municipal transport company), Overgaz (natural gas supplier), Asen Zlatarov University, and NGOs are only a few of the actors that declared their interest and support for this development.

Stakeholders' involvement is the starting point for creating the behavioural changes needed to complement the technical actions embodied in the LEAP. This inclusive approach is the key to a concerted and co-ordinated way to implement the LEAP.

Transparency, cooperation and involvement of all members of society in addressing the energy and climate challenge is crucial for establishing a common vision for the future, and defining the paths that will make this vision a reality.

### Good idea 3

#### **Institutionalisation of process in the Comunita Montana Lago Trasimeno-Middle Tiber**

The Mountain Community – Association of Trasimeno – Middle Tiber (MC) Municipalities is a public authority which provides territorial management and planning services for the 13 municipalities it comprises.

It is located in Italy, in the region of Umbria and has 110,000 inhabitants. Starting in 2003, the MC activated the Local Agenda 21 process to implement the sustainable development of the territory. This process encouraged taking part in projects supporting local development, and for this reason the MC decided to take part in the IEE – Sustainable NOW project.

Energy, however, was a resource that MC did not have a lot of knowledge on. Information was needed on:

- The existing local resources
- Consumption, in terms of quantities, quality, and methods of use
- The technologies used and the innovative technologies available
- The possibilities for improving efficiency and savings, as well as those for economic development as a result
- The financial instruments usable for such purposes

The MC decided to create the conditions for enabling every Municipality to define its own sustainable strategy in the energy field, with the participation in the Sustainable NOW project, which has led to the following results:

1. The baseline CO2 emission inventory (BEI) for the entire territory of the 13 “Trasimeno – Middle Tiber” municipalities, through the identification of the territorialised

- information and the use, insofar as was possible, of the methodology developed by the JRC – Covenant of Mayors
2. The definition of the territory LEAP/SEAP, with identification of the actions to be implemented in the various economic sectors and in the lifestyles of the inhabitants, to achieve the “20-20-20” goal set by the EC
  3. The signing up of four municipalities to the Covenant of Mayors, of which two municipalities have already produced their SEAP
  4. The implementation of dissemination and communication events (Energy Weeks)
  5. The strategic governance of energy, through the implementation of Agenda 21

In carrying out the project actions, the MC working group played a role of guidance, basic education, and management support for the Municipality personnel involved.

This way, the MC also developed a pilot action focusing on creating municipal-level best practices, in order to facilitate the implementation of sustainable energy policies and thus the signing up to the Covenant of Mayors by all the territory’s municipalities.

With its participation in the Sustainable NOW project, the MC has undertaken the responsibility of being one of the CoE communities with respect to the municipalities (CoL), which includes:

- Creating knowledge of the current state of energy production and use, and therefore of the CO2 emissions (BEI), thus providing municipalities with reliable knowledge at their territorial level and facilitating their definition of governance
- Making available the knowledge of the best European practices of the Sustainable NOW project partners
- Undertaking responsibility for updating the knowledge in the energy field, working with its environmental management system in accordance with the EMAS II regulations
- Working to involve the municipalities and small and medium-sized enterprises (SMEs) in the practical implementation of the projects, suitable for permitting the achievement of the “20-20-20” goals throughout the entire Trasimeno – Middle Tiber territory
- Providing support to Municipality technicians

The main added value acquired (lessons learned) was that the energy governance of the territory is possible, through the application of the principle of subsidiarity and knowing how to share and learn from experiences at the European level.

#### Good idea 4

##### **Developing an integrated, cyclical management approach in Ludwigsburg**

In 2004 the process of the Sustainable Urban Development Strategy (SEK) “Perspectives for Ludwigsburg” was started, with opinions Collected from various stakeholders through 80 guided interviews. In 2005, during a “Future conference”, more than 128 persons from various urban spheres developed visions, goals and ideas for eleven sustainable themes, among them energy. These were developed further during the second future conference in 2006. After that the city council, which has been heavily involved in the process, adopted guiding principles and strategic objectives for the eleven themes of the SEK.

The SEK outlines the dynamic groundwork for a long-term development of Ludwigsburg that is fair for all generations. It is permanently adjusted, developed and updated.

The local energy supply is a very important part of the SEK, focusing on sustainable use of energy, energy efficiency, increasing the use of renewable energy sources (RES), and energy saving.

The strategic objectives are:

- Create and test pilot projects
- Optimise energy use in city planning and buildings
- Implement sustainable energy concepts (LEAP – Local energy action plan)
- Foster independent and decentralised energy supply
- Use intensive publicity and consultancy offers
- Support renewable energy sources from the region
- Save energy use in transport

This EU project helped Ludwigsburg realise their LEAP. It was finished at the beginning of 2011 and provided an energy concept for the whole urban area. It was developed in cooperation with the University of Stuttgart and local experts like the Ludwigsburg Energy Agency (Energetikom), a centre of excellence for energy and eco-design. The concept contains a review of energy supply and consumption in Ludwigsburg, scenarios and energy objectives, and of course measures to reach them. Finally there were 25 actions recommended by the University in the areas of heating, electricity, RES, mobility and so on. The next step will be to implement these actions.



Other advantages from Sustainable NOW include:

- Intensive exchange between all partners, providing a platform for learning from others experiences
- Site visits to Munich and Woking, which gave a wealth of information on street lighting, energy management, financing instruments and funding possibilities
- Financial support for energy weeks and participation processes like the round table / the future energy conference in 2010

For Ludwigsburg, the way of implementing the objectives of the energy strategy, such as energy saving, increasing energy efficiency and more RES was to make it part of the city's integrated urban development plan. Involving citizens, the local economy and stakeholders is essential for reaching energy objectives - providing information and advice is as important as their participation in the strategy process. Throughout the process Sustainable NOW gave Ludwigsburg excellent support.



### Good idea 5

#### **A balanced mix of sustainable energy measures implemented in Miskolc**

The importance of enacting energy efficiency measures is increasing by the day, meaning now was the perfect time to participate in the Sustainable NOW project.

The soft measures in the framework of the project have helped many people, including citizens, stakeholders, experts, children and politicians to improve their knowledge and behaviour.

In 2010 with the cooperation of the city and the municipal district heating company, “Energy-saving Regulations” were sent out to every municipal institution. Energy efficiency group composed of three to five employees from these workplaces (kindergartens, elementary and high schools, CoLleges, municipal public buildings, etc.) were set up to monitor energy consumption. According to the data Collected ideas were drawn up and recommendations made for possible measures and awareness raising education.

The new Energy Concept of Miskolc (an energy strategy specifically for the municipal institutions and companies) was approved by the City Council. This concept is a very detailed Local Energy Action Plan, which is a perfect base for improving the city’s real sustainable energy management in every aspect.

In the last few years the City of Miskolc enacted several important measures, which are contributing greatly to the city’s sustainable energy management.

The reconstruction program for prefabricated buildings is a great success at not only local but national level. After modernising works (outside insulation, new windows, new heating panels and the reconstruction of the heating system) the energy saving in these buildings (which amounts to more than 15 000 flats) is about 50 percent.

The utilisation of biogas from the recultivated city landfill in the district heating system – which also produces electricity – was awarded at national level last year.

The most promising project is the use of geothermal energy in the municipal district heating system, which could help revitalise the old and inefficient system, making it sustainable and cheap in the long term. Also an ongoing investment in the municipal district heating company is the construction of a small biomass power plant.

Beside the usual awareness raising campaigns for the citizens, the Energy Weeks during the three years of Sustainable NOW (in cooperation with local environmental NGO’s) have tried to reach the people more than ever before, especially children and students, the next generation.

A very important project in the field of energy efficient public transport is the “Green Arrow” tram project. After the extension and complete reconstruction of the existing tramway system and the purchase of a brand new tram fleet, this method of local public transport will be energy saving, more sustainable and attractive.

The local projects and initiatives in Miskolc are very much in line with the aims of the Sustainable NOW project, and the European cooperation (especially with our Circle of Excellence partner, Woking) has helped greatly to achieve a higher level of sustainable energy

management.

### Good idea 6

#### **Political leadership, the cooperation between city and utilities, and local alliances in Munich**

The city of Munich is glad to have accepted the invitation to participate in a three-year intensive co-operation between 15 partners within the EU project Sustainable NOW.

Thanks to our long-lasting experience in the field of energy and climate protection (since 1991, Munich has been a member of Climate Alliance), Munich was able to contribute to this project with a large variety of data, instruments and best-practice-examples, which – according to the view of the coordinators – justified the role of the city of Munich as a member of the circle of excellence (always aware that every good teacher should always remain a good pupil!)

What are the success factors, which helped Munich to reach this relatively advanced position in the field of environmental and climate protection standards?

- Political support / Foresight

As in every other local authority, all decisions, including budgetary decisions, affecting societal issues are taken by the local government within the city council. Therefore, the composition of the city council (progressive vs. less progressive city councillors) is of major importance for a local authority and its ability to invest in necessary structures and instruments. Luckily, the city of Munich had this political support (often regardless of party memberships) during the last years, so that important future directions were set and important investments could be implemented. The decision not to sell the local utilities – as many local authorities did in the face of high debts – and to rent a rather costly information and consulting centre, are just two examples of ground-breaking decisions.

- Economic capacity

For many years, the Munich region has been lucky to attract important economic players – large companies like Siemens, BMW, Munich Re, etc., but also small and medium-sized companies, which together contribute to economic growth. This situation results in a GDP per capita which is remarkably high compared to other German and even European regions, and which allows the city of Munich to invest in numerous technologies and structures which meet future requirements.

- Integration of Environmental / Climate Protection and Economy to Sustainability (Agenda 21)

From the beginnings of industrialisation until about the 1990s, economic and environmental conditions have been regarded as two different, contradicting areas. Economic growth, especially the exploitation of energy and other natural resources, was inseparably linked to environmental (including climate) damage. Air pollution followed by large-scale forest decline, water and soil pollution caused a dramatic (still ongoing) extinction of species and, last but not least, a series of

nuclear catastrophes, which leave landscapes devastated for millennia, illustrate this obviously unsustainable situation.

The main reason for this development is the externalisation of environmental costs and internalisation of economic profit.

For about two decades these unfavourable conditions have been changing fundamentally: The polluter-pays-principle is applied in most cases, and companies progressively recognise that due to the internalisation of external costs environmental and climate protection trigger economic profit.

Local authorities should make use of this perception. This is one reason why the city of Munich founded the local alliance “Munich for Climate Protection” including local companies and other important stakeholders in 2007 ([www.muenchenfuerklimaschutz.de](http://www.muenchenfuerklimaschutz.de)). Within this alliance, more than 30 CO<sub>2</sub> reduction projects have been developed and partly implemented by all members. Every member is obliged to prepare an internal CO<sub>2</sub> balance and to engage in at least one of the CO<sub>2</sub> reduction projects named above.

In summary, the city of Munich can make the following recommendations: First Integration and participation (of all key stakeholders), second education, and third the creation of mutually beneficial situations.

#### Good idea 7

### **Gathering and analysing data in Rosignano Marittimo**

For the City of Rosignano Marittimo, participating in the Project Sustainable NOW provided a great opportunity to discuss and share experiences with both Italian and other European partners.

As Rosignano Marittimo is a small to medium sized city, the participation in a European project has played a key role in defining instruments for the energy planning sector, through the Local Energy Action Plan (LEAP).

Invaluable CoLlaboration was received from other partners in the development and preparation of the energy plan. The twin partner relationship with the Province of Siena was particularly helpful, allowing Rosignano Marittimo to better understand the methodology of processing data in order to elaborate the baseline emission inventory, and to adapt this method to the territorial reality of the city.

In order to search for local data (electricity consumption, natural gas consumption, fossil fuels consumption, etc.) and to elaborate the baseline emission inventory, the City of Rosignano Marittimo sought the CoLlaboration of the Energy Agency of Province of Livorno (EALP).

EALP is one of the “inhouse” companies of Rosignano Marittimo Municipality. The agency has been supporting the Municipality in the Renewable Energy Sources (RES) and RUE field and has led the educational activities on energy in Rosignano Marittimo schools for many years.

Thanks to this close cooperation with EALP and with Sustainable NOW project partners a local energy plan has been developed. The plan itself contains sections dedicated to the calculation of the total primary energy consumption, the calculation of CO<sub>2</sub> emissions (due to energy

consumption, the waste sector, agricultural sector and the carbon capture & sequestration of the woods) and a section dedicated to the objectives of emission reduction. In order to elaborate the trend in emissions, the calculations were carried out over three years: 2004, 2006 and 2008.

In its first revision the energy plan proposed a method for searching and processing data. This method can be used for future updates and to evaluate the effectiveness of the actions taken by the Municipality.

The CoLLaboration with the Energy Agency has allowed the development of environmental education projects in schools, with the aim of raising the awareness of school pupils and, in doing so, their parents. The project is carried out in all primary schools. By starting from the youngest generation it is possible to make a change in energy behaviour both at home and at school.

#### Good idea 8

#### **Setting ambitious – yet realistic – targets in the Province of Siena**

The territory of Siena Province is in Tuscany, Italy, has 270,000 inhabitants divided between 36 municipalities and is the territorial local authority in charge of the planning on Energy and Climate Change in the region.

Siena Province signed the Covenant of Mayors as a support structure and is actively encouraging municipalities to sign this important document. Today the main project involving municipalities aimed at improving energy through RES and Climate Change actions is *Siena Carbon Free 2015*. The goal is to eliminate CO<sub>2</sub> emissions for the whole territory of Siena Province by developing different coordinated actions, such as increasing energy production from renewable sources, saving energy, disseminating best practices, educating citizens on reducing atmospheric pollution, facing climate change and preserving exhaustible natural resources of the planet. Through these actions Siena is going to be the first Province in Europe with a certified zero emissions balance (CO<sub>2</sub> emission absorption by forests in the province are considered in the balance).

The first action to be taken to achieve this goal is the calculation of the GHG balance. Only with a full knowledge of the current situation and accurate monitoring of emissions is it possible to make a policy to reduce the emissions. Siena Province, in cooperation with Siena University and the Provincial Agency for Energy and the Environment, makes the calculation through considering different emission sectors (Energy, Waste, AFOLU, Industry) using IPCC methodology and calculating the GHG emissions by substituting CO<sub>2</sub> emissions. The balance is certified yearly.

Balance data was necessary for the approval of the new Provincial Energy Plan (it had already been approved earlier in the procedure by the Provincial Committee). The energy plan is an important tool of planning for energy, climate change and environment actions. This plan will analyse the energy resources in the territory and will indicate possible actions to guarantee a high level of environmental sustainability and completion of the goal “Siena Carbon Free 2015”. This planning is shared with all Municipalities in order to help them implement strategies at a local level.

To achieve the goals, many actions are already active:

- Multichannel format for communication
- Energy front office in all municipalities to inform about RES Energy incentives

- Incentives to realise photovoltaic plants
- Incentives for energy diagnosis on real estate of municipalities for energy requalification
- Survey of energy potential of municipalities' public sites in territory of Siena Province
- Energy efficiency on real estate of Siena Province (energy audit)
- SIENA vegetable oil project
- Thermal plants cleaned and safe project – controls on thermal plants
- Forest fire controls – forest saving.

Some of the most important actions undertaken were to create the Scientific and Technological Complex for Renewable energy in order to promote and support research activities, to localise industries using renewable energy, and to promote the adoption of the trademark “Siena Carbon Free 2015” for activities, products and service with low levels of CO<sub>2</sub> emissions (or a low CO<sub>2</sub> impact).

#### Good idea 9

#### **Engaging with the business sector in Woking Borough Council**

Woking Borough Council (WBC) was pleased to join the Sustainable Now project as a Circle of Excellence partner. In the United Kingdom, WBC has been recognised for its long-standing commitment to tackling climate change and protecting the environment. The Council has been awarded Beacons for Sustainable Energy (2005 - 2006), Promoting Sustainable Communities through the Planning Process (2007 - 2008) and more recently the Beacon Award for Tackling Climate Change (2008 - 2009). The Beacon Scheme was set up in 1999 to share best practice in service delivery across local government. In many ways, the Sustainable Now project is similar to the Beacon scheme and Woking has enjoyed sharing its experience with project partners and learning from good practice across the European project consortium.



For around 20 years the Council has invested in energy efficiency and renewable / sustainable energy projects across the Council estate and the wider Borough of Woking. This began with small scale projects financed through a fund dedicated to energy efficiency improvements across Council buildings. In 2000, WBC established its own energy and environmental services companies (ESCOs), Thameswey Ltd and Thameswey Energy Ltd. This enabled investment in larger scale energy projects with the assistance of private finance and longer term business and financial plans. These projects contribute to the overarching aims of the Council's Climate Change Strategy which was adopted in 2002. Its key objectives are the reduction of Borough-

wide CO<sub>2</sub> equivalent emissions; adaptation to climate change; and promotion of sustainable development. The Strategy is aligned with the long term targets of the UK's Climate Change Act of at least an 80 percent cut in greenhouse gas emissions by 2050 against a 1990 baseline.

One of Woking's key activities within the Sustainable Now project is Leader for Work Package four: Implementation actions by communities. Circle of Learning (CoL) partners have committed to implementing actions on energy efficiency and renewable energy. Woking has assisted in the development of Local Energy Action Plans by CoL partners and has shared good practice case studies based on its experiences in installing sustainable and renewable energy projects.

Woking has also enjoyed its exchanges with Miskolc as part of the Staff Trainee Programme. In August 2010, Woking facilitated a four day training programme for Miskolc which included site visits to renewable energy installations and sustainable development projects around the Borough. The visit also incorporated learning around Woking's energy services company (ESCO) Thameswey Ltd and a trip to a large scale combined heat and power development project that the company is managing in Milton Keynes. Practical application of learning points was demonstrated through the development of a targeted learning document. Time was also dedicated to learning about the Council's monitoring and reporting requirements on carbon emissions and energy consumption.

### ***Real and measurable contributions to emission reductions***

The Sustainable NOW project sought to support all community partners in their delivery of energy projects and initiatives, in promoting sound implementation and monitoring, and in quantitatively measuring the impact of the measures in terms of GHG (or at least CO<sub>2</sub>) emissions. This last factor is important to determine the overall benefits – and costs – of the intervention and to promote or challenge its replication.

The project team soon acknowledged that there is no standardised approach across Europe for measuring the impact (quantitative) of energy projects, but there are a number of methods and tools that are either available or emerging. There were resources allocated within the project that sought to support the city partners towards the adoption of a suitable means to monitor their energy projects, which would capture quantitative data for energy and emissions reductions, along with renewable energy generation.

The Sustainable NOW project meetings introduced monitoring methodologies that had been developed by a range of institutions that enabled energy initiatives to be monitored on a project by project basis. Some city partners were already following particular processes, whilst some partners were seeking to adopt a recognised methodology for the first time. The project meetings and numerous other interactions enabled the partners to understand a range of options, and discuss their applicability with other city partners.

Sustainable NOW established a series of 'twin partnerships' whereby city partners were paired together for a detailed learning exchange. The subsequent study tours and information exchanges enabled cities to examine monitoring regimes that were used in their twin cities. The twin partners were selected based on geographic and situational synergies, meaning that there was a good chance that practices could be applicable to the both partners.

Two CO<sub>2</sub> monitoring workshops (hosted in Siena and Freiburg) were delivered within the Sustainable NOW project plan. Each comprised a day-long workshop for city partners to learn in detail about monitoring options and to consider their approach based on discussions about their



situations. ICLEI and Climate Alliance presented a range of options for the consideration of city partners:

- A methodology for implementing a Greenhouse Gas Inventory in the context of Local Energy Action Plans, based on ICLEI's Greenhouse Gas Inventory toolkit and the ECO Region tool.
- A detailed explanation of the Covenant of Mayors monitoring methodology as a standardised tool for monitoring energy and emissions reductions across Europe.
- A review of the methodologies advocated by the Intergovernmental Panel on Climate Change, spanning scope, boundaries and conversion factors.
- A review of the specific municipality-focussed International Local Government Emissions Analysis Protocol (<http://www.iclei.org/ghgprotocol>)

Sustainable NOW presented the city partners with an opportunity to consider and evaluate monitoring possibilities. For some partners, this was a chance to consider the effectiveness of their existing regimes. For other partners it was the chance to adopt a formal monitoring process for the first time. Sustainable NOW provided partners with an opportunity to make informed decisions about their monitoring approach. This opportunity is available to other European cities through the online project resources that are accessible through the Sustainable NOW web site.

Even though each city partner had a different starting point and level of expertise, Sustainable NOW helped to bring a level of consistency to the management and reporting of local energy outcomes. Through examining the measures implemented by the German and Italian partners (both COL and COE), it is apparent that although the approaches may be different, there are a range of local energy solutions that municipalities can deploy, all of which can result in measurable energy and emissions reductions.

Any city that is considering local sustainable energy solutions is very likely to benefit from contacting the Sustainable NOW community partners. Across the project, there are examples of almost all mainstream sustainable energy options that have been installed, managed and measured successfully, for the ultimate benefit of citizens.

Further analysis of community partners' emissions monitoring and their contributions to the national and European targets is freely available in the project website.

### ***Quotes from the project***

The protagonists of the project reflect on the three year process in the following ways:

“The knowledge and experience shared by City of Munich had a significant impact on outlining long term energy policy in Burgas and we believe that the exchange established within the Sustainable NOW project has laid the foundations of a long term cooperation between these cities”

**Atanaska Nikolova, Deputy Mayor, Municipality of Burgas**

“Even if our starting point and local context were completely different, our partnership and collaboration with the Municipality of Burgas was very fruitful! We aim to maintain this collaboration through regular exchanges”

**Hep Monatzeder, Deputy Mayor, City of Munich**

“Networking and peer-to-peer exchanges bring successful experiences to our Municipality that can be easily replicated. I would say it’s the best, fastest and cheapest solution to boost your territory and foster local actions!”

**Péter Pfliegler, Deputy Mayor, Municipality of Miskolc**

“At the beginning of the project, our Municipality had no experience in energy policy. After intense discussions with city partners on common challenges – such as how to include the transport sector in CO2 calculations, or the possibility to install PV panels on residential buildings – we now feel ready to take the right actions.”

**Louis Montagnoli, Local Agenda 21 Manager, Comunita Montana – Lago Trasimeno Middle Tiber**

“Sharing experiences in delivering local climate change and sustainable energy solutions and activities is key to the long term success of a SEAP. Woking has benefitted greatly from valuable learning exchanges and opportunities through Sustainable NOW and looks forward to future possibilities of partnership working.”

**Councillor Beryl Hunwicks, Chair of Woking Borough Council’s Climate Change Working Group**

“Energy is an important part of our integrated City Development - for reaching our goals and guaranteeing a sustainable, secure and affordable energy supply, while saving energy and enhancing energy efficiency and RES. This is our foundation and all parts of city society are working together to achieve it”

**Werner Spec, Lord Mayor, City of Ludwigsburg**

"Sustainable development should be pursued through environmental protection: ethical finance supports sustainable practices and production processes, which protect common goods."

**Ugo Biggeri, President of Banca Popolare Etica**

"The tools and strategies developed as part of the Sustainable NOW project have enabled Burgas to make a confident transition onto becoming a sustainable energy city"

**Atanaska Nikolova, Deputy Mayor, Municipality of Burgas**

“Twinning and peer-to-peer support were key factors in building administrations’ internal capacity, with our experienced 'Circle of Excellence'-Cities guiding other local authorities in a 'Circle of Learning'. "

**Holger Robrecht, Director Sustainability Management, ICLEI European Secretariat**

## The five LEAPs of Sustainable NOW

The whole process engineered within the Sustainable NOW project had one ultimate aim: at the end of the project the five ‘learning communities’ would develop, officially approve and start the implementation of their LEAPs. This aim was achieved!

Some of the learning communities had some experience on working with sustainable energy planning and had already implemented some measures. These communities focused on re-thinking its strategy, inserting it into a more holistic approach of city development and delivering a more integrated, improved result for long-term implementation. Other learning communities had had very little experience in dealing with energy issues – more so from a sustainability perspective. These communities focused on ‘starting from scratch’ and, as in every COL and COE community partner; developing knowledge within local governments as well as raising the awareness of citizens.

This section presents a quick look into the LEAPs of the five learning communities: Burgas, Comunita Montana Lago Trasimeno-Middle Tiber, Ludwigsburg, Miskolc and Rosignano Marittimo. Reviewing the LEAPS will reveal how the traditions, values and philosophies of different communities contribute to shaping each LEAP in a unique way.

The full versions of their LEAPs are freely available in the project website.

### Notes from Burgas’ LEAP

With increasing decentralization, municipalities in Bulgaria are playing a more significant role in the management of their regional energy supply and usage. Efficient use of energy resources is a major concern for all municipal authorities and during the last decade concerns regarding the effect of greenhouse gases on climate change and the responsibility of authorities to control their “carbon footprint” has grown. Therefore, energy planning and ensuring energy independence has become a major component of each municipality’s sustainable energy development policy.

Through the development and use of renewable energy resources and the promotion of energy efficiency measures, the Municipality of Burgas has the potential to support a significant proportion of its local residential, industrial and commercial total energy requirements.

In 2009, Burgas Municipality joined the Covenant of Mayors Initiative - an initiative of the European Community that recognizes the leading role of local authorities in achieving a 20% reduction in CO2 emissions by 2020. The municipality is committed to develop a Local Action Plan to increase energy efficiency and utilize the possibilities of renewable energy sources.

As a local authority, the Municipality of Burgas determines local sustainable energy policy and defines priorities in its development and creates conditions for the implementation of local energy initiatives as:

- Consumer and service provider;
- Key factor in local policy decision-making and ratifying energy efficiency standards;
- Model for energy behavior;
- Beneficiary and implementers of projects in the sphere of energy efficiency and alternative energy.

The LEAP of the Municipality of Burgas has six priority areas. They are: (i) Building and developing sustainable infrastructure, (ii) Development of systems for sustainable urban mobility, (iii) Utilisation of renewable resources, (iv) Support for changing consumer behaviour towards energy, and (v) Strengthen local capacity for sustainable energy development.

### **Notes from Comunita Montana Lago Trasimeno-Middle Tiber's LEAP**

One cannot live without energy, and one cannot live badly - that is life with little energy: every person, every family, every territory needs to not only safeguard the level of one's quality of life, but also constantly improve it.

Energy is therefore a primary resource: it is essential that we have it, use it and enhance it to the maximum.

This is a fact of life and, at the same time, a problem and an opportunity that every person, every group, every company, every territory must face and learn to manage, that is must be able to use to improve their standard of living.

Science, technology, economy, good governance and citizen responsibility are the primary tools that should be used to best govern the complexity of the issue and identify the required solutions to then implement and manage them so that they can yield concrete and lasting economic, environmental and social benefits, thereby improving the quality of life of the Lake Trasimeno - Medio Tevere area.

To this end, the following planning process was adopted:

- a) Being informed in order to understand
- b) Understanding in order to assess
- c) Assessing in order to decide
- d) Deciding in order to act
- e) Acting in order to achieve constant improvement over time

in order to produce the Lake Trasimeno - Medio Tevere area's Energy and Environmental Plan (LEAP), exploiting the knowledge, experiences, best practices and results of the work carried out in cooperation with Italian and European partners, thanks to the European project Sustainable\_Now ([www.sustainable-now.eu](http://www.sustainable-now.eu)).

In 2008 the Comunità Montana (the Italian administrative body that coordinates the municipalities located in the mountainous areas) – Associazione dei Comuni “Trasimeno – Medio Tevere” joined the European transnational cooperation Sustainable\_NOW project, which is co-financed by the European ‘Intelligent Energy Europe’ programme, to define the Lake Trasimeno - Medio Tevere area's Environmental Energy Plan (LEAP), in pursuit of the ongoing goal of sustainable development in the area.

### **Notes from Ludwigsburg's LEAP**

Since the beginning of 2004, Ludwigsburg has been putting a City Development Strategy into action under the slogan „Opportunities for Ludwigsburg“.

The Ludwigsburg city council decided at a meeting on the 28th of June, 2006 which principles and strategic objectives would govern the 11 thematic areas of the City Development Strategy.

These thematic areas included economy and employment, and mobility and energy, amongst others. The guiding principle for the thematic area of energy was reviewed during the development of the Overall Energy Strategy and a slight modification was made. This guiding principle for the thematic area of “Energy” for the City Development Strategy for Ludwigsburg has been revised and approved by the local council and states: Energy management will be sustainable. This will be achieved by saving energy and using energy efficiently, placing greater emphasis on adopting renewable energy and increasing capacity building in this area. This will have benefits for the general climate development and the local air quality. Energy security will increase, growth in the local and regional economy will be promoted and job security in a progressive field will be created. The 7 strategic goals for the thematic area of energy are the foundation of the measures and recommended action in the Overall Energy Strategy. Within one of the strategic objectives, a call for the development and implementation of an Overall Energy Strategy is explicitly expressed.

#### Strategic objectives:

1. Landmark projects are implemented in the field of renewable energy, especially efficient equipment and examples of energy saving measures in new and existing buildings.
2. The optimisation of energy is an important foundation for building plans and also for routine city building plans.
3. The Overall Energy Strategy is implemented and regularly monitored and developed further for its performance.
4. The independent and decentralised energy supply from the city utility reinforces the regional form.
5. Intensive publicity and consultation opportunities for citizens and commerce are a natural part of the sustainable use of energy.
6. The options for renewable energy carriers, energy services and innovative energy technologies from the region are extensive and an important location factor for Ludwigsburg.
7. Through integrated city and transport planning, behavioural changes and alternative engine technologies, significant energy savings in transport are achieved, thereby also considerably reducing the noise and toxic pollutant impact in the city.

Through the participation in the EU Project Sustainable NOW, Ludwigsburg has committed itself to adhere to the 20 / 20 / 20 targets of the EU, i.e. by 2020 the share of renewable energy of the gross domestic consumption in the EU should be 20%, 20% of the primary energy demand should be saved from a previously agreed upon forecasted energy demand development, and the CO<sub>2</sub> emissions should be reduced by 20% compared to 1990.

#### **Notes from Miskolc’s LEAP**

The medium-term objectives regarding energy and environmental protection in Miskolc are:

- Protection of environmental status and rehabilitation of green areas, improving public hygiene considerably, especially in the vicinity of residential areas and waste storage facilities.
- Reduction in energy consumption; to that end, large scale prefabricated concrete block reconstruction programs are implemented, and the district heating system in Miskolc should be rationalized, including installation of boiler house and gas engines units to make use of the landfill gas produced at the one-time refuse site at Nádasrét.

- Rehabilitation of neglected inconvenient residential areas or demolition thereof in a few cases.
- Starting rehabilitation of brown-field lands or buildings in unutilized built-up areas, resulting in new communal or commercial functions, and, after their renewal, some part of these areas can provide land for modern small-scale industrial enterprises.
- Motivating economic and service delivery activities which contribute to energy savings and environmental awareness and protection.
- Utilization of renewable energy sources for energy purposes, renewal of neglected areas and buildings and pollutant emission reductions at the companies should be motivated by municipal regulations, for example with tax allowances (building tax or local business tax).

### **Notes from Rosignano Marittimo's LEAP**

Preparing a LEAP in Rosignano Marittimo involved a major commitment of resources both in terms of knowledge acquisition (data) and in terms of setting its ambitious yet realistic goals. It has been with a multi-year path of continuous improvement that the LEAP is developed.

The main purpose is to try to standardize a method of processing data on the energy consumption of the entire territory, in order to assess the practical difficulties connected with an endeavor of this kind, such as the availability of data, and processing methods in line with those used at the international level, in order to create parallels with similar European cities.

The lack of national programming leaves the actual infrastructure needs in the energy sector unclear. At the regional and provincial levels energy planning tries to give an adequate response to meet the energy needs and, above all, the needs of environmental sustainability, social and economic setting of rules regarding the construction of power plants.

The energy scenario for 2020 in Rosignano should be characterized by a mix of production and consumption of energy composed of methane and renewable energy, with a declining presence of petroleum products. In the production of electricity in Rosignano, unlike the rest of the province, natural gas is used exclusively (also in the central-type cogeneration with heat recovery for industrial and civilian uses).

Rosignano has planned a very diverse set of energy measures to make the transition towards a sustainable energy community, starting now!



## Features of the expert partner communities

In addition to the ‘learning’ and ‘expert’ community partners and the three network partners that were part of Sustainable NOW – ICLEI, Climate Alliance and the Italian Local Agenda 21 Association – other three expert (or technical) partners had a very relevant role in the project. They are Banca Popolare Etica, ecovision and Trecodome.

In sections above the LEAP wizard and the study of financial aspects of sustainable energy measures have been presented. These deliverables were led by ecovision and by Banca Popolare Etica, respectively. The third expert partner is Trecodome, which offers practical knowledge on energy efficiency (EE) in buildings, contributing to bridging the gap between project experience, city policies and global trends towards a low carbon society.

In this section we explore how Trecodome has brought relevant knowledge to the partnership on EE, which has a tremendous potential to contribute to the energy targets of the EU – at least as much as new renewable energy generation and reduced energy consumption can achieve. Following, we look at ecovision’s innovative approach to supporting renewable energy deployment, through community ownership.

### Improving energy efficiency in buildings

What is EE in buildings? EE is about achieving comfort with less effort. Typical EE measures in buildings are insulation of walls, roofs and floors, but also improving windows, and avoiding unwanted air leakages. EE is about providing a healthy indoor climate through the use of ventilation strategies whilst minimising energy losses, and using efficient technologies.

The most far reaching EE concept in buildings is the passive house (Passivhaus) concept, which secures such a good energy performance of a building that only a minimal amount of energy is needed to heat it. Opaque elements are insulated to high levels, windows are triple glazed and therefore very comfortable. Ventilation losses are minimal because heat is recovered to the incoming fresh air. It is enough to only add low amounts of heat to this incoming fresh air. If this small amount of energy originates from a renewable energy source, one gets close to a perfectly sustainable solution.

EE is a precondition for an optimal use of renewable energy technologies. The biggest improvements in buildings have been and can be achieved by means of EE. The potential to reduce the energy demand in buildings is phenomenal. With the Passivhaus concept in both new and existing buildings it is possible to reduce the energy demand in buildings by up to 80 percent. If the remaining 20 percent is provided by renewable energy, almost zero impact results from it.

The other benefit of EE in buildings lies in the significantly lower energy costs for tenants, resulting from the high performance of buildings.

Cities demand vast amounts of energy, which result in an increasing number of emissions and environmental impacts. Shifting to renewable energy can contribute to reducing these negative impacts. If we want to achieve a high fraction of renewable energy we need to invest further in that field and, in parallel, reduce total energy demand by applying EE measures more widely.

### Community owned renewable energy projects

Ecovision is realising projects in the area of solar energy, in particular photovoltaic (PV). Such projects combine technical know-how with detailed knowledge of legal conditions and an expertise in the requirements of financing institutions and private investors.

For more than 10 years conditions in Germany have been favourable towards the model of independent power producers (IPP) and the model is widely considered a highly successful way to build PV plants. The IPP Company is owned by several investors, called limited partners. Consequently, *ecovision* has designed several IPP models.

As grid-connected PV is a highly modular technology, to build a 50MWp instead of a 50kWp plant differs by a more complex logistical schedule. Therefore, *ecovision* also offers consultancy to large projects, either for the investor or for the financing banks.

Since the feed-in law EEG came into force (2000) *ecovision* realised (or was involved in the realisation of) 14 jointly owned plants, called “Solar funds”, with a range from 60kW to 1.2 MWp. Each plant is performing even better than promised.

One of the major issues is the continuous process of adapting the new projects to the changing boundary conditions, such as the shifting legal framework, changing financial parameters and investors’ expectations. In the last two years in particular, the financial crisis pushed stricter regulations on the so called “gray market”.

One existing best practice is the cooperation with a small local utility in the south-western part of Germany – SWE Emmendingen. Mostly publicly owned, it intends to create jointly owned PV plants on roofs in the German city of Emmendingen. *Ecovision* realised three solar funds, where *ecovision* is the experienced consultant and liable partner. Moreover, *ecovision* operates and administrates the funds. SWE negotiates with the Municipality and prepares and carries out the marketing to its clients. This win-win situation results in very attractive small projects, which are sold to the joint owners within a few days. There is a continuous demand for more projects from SWE’s electricity consumers.

The model of jointly owned plants can easily be applied to other renewable energies such as wind energy, water energy and, with some adaptations, also to the biogas/biomass sector.

## Conclusions and next steps

The LEAP process – developing and implementing it – requires tremendous dedication and resources, both within the local governments and in their interactions with stakeholders and citizens. In Sustainable NOW the focus of the COLs was mostly in developing their LEAP, in cases almost from scratch (e.g. Comunita Montana, Burgas). One clear lesson from the project is that the support required from cities is considerable, and that generous resources and support are needed to produce a valuable LEAP. Throughout the capacity development process, a face-to-face, tailored approach must be prioritised. In other words, the value of a workshop on LEAP development/ implementation issues will fall short if a close follow-up by the LEAP developer and dedicated interactions with the community and non-community partners is not conducted.

The tools developed in this project (especially the LEAP wizard) have a great potential to forward sustainable energy management and measure implementation throughout Europe, but by themselves should not be heavily depended on by a city to develop its LEAP. Here, though, is where Covenant Supporters can play a key role.

The requirements and interactions between twinning partners (COL and COE) could be made more standardized in order to be able to compare the outcomes of different collaborations more easily, and draw lessons from them. This may also simplify the preparation by each COE and guarantee a certain and fair degree of commitment from COEs. Likewise, as mentioned in the ‘management’ section above, linking deliverables as much as possible would ensure that project partners are highly engaged in the project developments and that the project takes the fullest possible advantage of the resources invested. On the other hand, this makes coordination and management a more challenging task – which is a fair price to pay compared to the potential positive outcomes.

Looking at the bigger picture, much of the philosophy, obstacles and drivers encountered by the Sustainable NOW project partners during this action can easily be applied elsewhere, especially within Europe.

Now more than ever, the global energy and climate challenges require a solid commitment to find and enact innovative, progressive and sustainable responses. Local governments are in a position to steer change and generate considerable impact through effective awareness raising and through the implementation of more efficient and sustainable energy solutions.

The energy and climate battle will be won in cities. The paths that cities choose to take in the next years can lead the global transition to a green and sustainable economy. This process already shows impressive progress – over a period of three years the Covenant of Mayors has become a successful and well established initiative – and illustrates that cities are acknowledging their responsibility, as well as the great potential they have to affect and improve the environment and social conditions in their territories.

An increasing number of cities are dedicating resources to going beyond regulatory requirements in terms of energy and climate, again highlighting that it pays to be climate smart. These efforts go hand in hand with the objectives of the Europe 2020 strategy, such as the flagship initiative addressing a resource efficient Europe. A low carbon, efficient economy leads to sustainable, green and smart growth.

At the same time, it is necessary to closely monitor the progress and effectiveness of the implementation of SEAPs by cities, and to properly guide them in making these local energy transition processes relevant and efficient – avoiding that the SEAP process becomes merely a vehicle for self-advertisement. The Covenant of Mayors and its supporting structures need to assist cities to ensure that SEAPs truly become long-term commitments to sustainable energy management.

Through interaction between cities there is great potential to take advantage of the large and increasing number of players embracing sustainable energy practices. A strong learning and exchange component of the SEAP development and implementation processes can ensure that lessons learned are disseminated widely and that the energy discussion goes beyond the circle of ‘energy experts’ of local governments. Considering the strategic relevance of energy supply systems, which feed many other city systems, they need to be made efficient and reliable. Reliability will partly depend on a city’s ability to generate by itself – between the local government, businesses and citizens – a fair amount of the energy that the city consumes. RES offer great potential for achieving local energy security and energy independence.

Fostering the implementation of sustainable energy systems and managing them following sustainability criteria is a way to secure long-term energy supply and in parallel increase the quality of life of citizens, e.g. through improved air quality, or through the sustainable management of ecosystems. Stressors, such as climate change impacts and anthropogenic effects, including demographic changes and increasing per capita consumption, land use and urban spatial planning, may challenge the feasibility of fully sustainable energy systems. Innovative solutions, awareness-raising campaigns and an integrated, cyclical and adaptive management of the SEAP will be effective counter forces.

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