

Mediterranean Science, Policy, Research & Innovation Gateway

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The Mediterranean Science, Policy, Research and Innovation Gateway (MEDSPRING) is a Coordination Action financed by the INCO-Net instrument under the FP7 - Capacities Programme. The aim of the Project is to contribute to the quality of the Euro-Mediterranean research area, with a particular focus on the bi-regional Euro-Mediterranean S&T cooperation, research and innovation, policy dialogue and cooperation monitoring.

Welcome to the 3rd MEDSPRING E-Newsletter!

Dear readers, welcome to the third issue of the MEDSPRING E-Newsletter, which has the purpose of informing and involving researchers, students, active citizens, policy makers and governmental officers in a renewed strategy for the Euro-Mediterranean partnership, with a particular focus on the Euro-Mediterranean Science & Technology cooperation.

Our recent activities

- **MEDSPRING invited to attend the TRANSMED Meeting**

MEDSPRING was invited to participate in TRANSMED, organized by ANR (France), from September 19th to 20th, 2013 in Montpellier, France.

- **MEDSPRING invited to attend the Final Workshop of EARN**

MEDSPRING was invited to participate in the final workshop of EARN (Euro-Algerian research network) in Algiers, Algeria, from September 25th to 26th, 2013.

- **Call for Innovative Ideas**

With views to the next MEDSPRING Brokerage event, and aiming at creating new opportunities, *18 entrepreneurs*

have been selected and invited to present their ideas to potential investors and discuss further developments with other researchers and stakeholders during the brokerage event.

- **MEDSPRING project survey of Euro-Mediterranean Observatories**

The aim of this survey was therefore to elaborate a state of the art of existing thematic observatories acting in the region, their functionalities and dynamics in order to understand their needs and role in the regional cooperation.

- **MEDSPRING invited to attend the ERANETMED Kick Off Meeting**

MEDSPRING project was invited to participate in the Kick Off meeting of ERANETMED project, from 4th to 5th November 2013 in Istanbul, Turkey.



- **MEDSPRING Training on H2020 for Mediterranean NCPs**

With the idea of carrying out a "Training for Trainers", this event organized in Amman (Jordan), from 9th to 11th December 2013, aimed at providing Mediterranean-NCPs with fresh knowledge and insight of H2020.



- **MEDSPRING 1st Observatory Networking Meeting**

The aim of this meeting, organized in Paris (France) last 19th December 2013, was to support the development of collaborative links between Observatories of both sides of the Mediterranean; to develop a shared vision to build a "platform" of Euro-Mediterranean Observatories, and to pave the way for future networking activities.

- **MEDSPRING 1st Thematic Pamphlet**

Our first thematic pamphlet describes in an introductory way the three societal challenges selected in MEDSPRING.



Also in the pipeline!

We publish news in the Mediterranean area related to R&D and the societal challenges, so you can check them at: www.medspring.eu/news-and-opportunities. Please find below a selection of them:

- **FETRIC project: The new BILAT Project in Tunisia**

FETRIC aims to strengthen the bilateral cooperation between the EU and Tunisia, by enhancing synergies between S&T EU and Tunisian actors, projects, and programmes. FETRIC will tackle the Horizon 2020 societal challenges through a challenge-based approach in order to examine and answer societal problems in both Tunisia and the EU, especially in the fields of scarcity of resources, energy with a focus on renewable energy and energy saving, and high quality affordable food.



- **SCOW Project Conference on "Reducing and Recycling waste in tourist and agricultural areas"**

The aim of SCOW, funded by the ENPI CBCMED Programme, is to develop low cost, technically simple and high quality biowaste collection and recycling models in territories with touristic areas and agricultural activity. SCOW wants to build up a sustainable, innovative and local treatment of the biowaste in decentralized small-scale composting plants.



- **17th MoCo Meeting**

The 17th MoCo meeting took place in Brussels on 18th December 2013.

- **ENPI CBC MED Publication: 56 projects to tell the story of a Mediterranean which cooperates**

By consulting these two brochures on the 56 running cross-border projects, you will get access to key information on partnerships, funding, objectives, target groups, main activities and expected results.

- **Strengthening economic cooperation: First Economic Forum of the Western Mediterranean - Dialogue 5+5**

The event brought together ten Ministers of Foreign Affairs and Presidents of employers' associations of Algeria, France, Italy, Libya, Malta, Mauritania, Morocco, Portugal, Spain and Tunisia, as well as 200 business leaders from the region.

- **MAGHRENOV Project Kick Off Meeting**

MAGHRENOV aims to support innovation in the Renewable Energy & Energy Efficiency (RE&EE) sector in the Mediterranean basin. The Consortium brings together partners from Europe and MAGHREB countries, whose shared goal is to establish a common Euro-Mediterranean innovation space.



- **H2020 Open to the World**

Please find the video with the opening words of the "H2020 - Open to the world" event.



- **HORIZON 2020: Launch event in the Med Region - Meeting EuroMed Common Challenges**

The European Commission's DG Research and Innovation is organising a regional Conference to promote and present H2020 in the EuroMed region. The conference aims to discuss the future of international cooperation in Research and Innovation in the EuroMed region under Horizon 2020. International cooperation, especially with its neighbouring countries and the Mediterranean region, is a key priority of EU research and innovation funding.

- **Info day 2014 Horizon 2020 - Societal Challenge 2 and LEIT Biotechnology**

The INFO DAY on Horizon 2020 Societal Challenge 2 (Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy) took place in Brussels on 17th January 2014.

- **HORIZON 2020 is Here!**

Last 11th December 2013 the first Calls for Proposals of the new Horizon 2020 Programme were officially launched.

Our main future activities

- **Deepening on H2020 topics, relevant to Euro-Mediterranean cooperation on Research and Innovation**

MEDSPRING is organizing a regional event called "Networking and brokerage on H2020 topics, relevant to Euro-Mediterranean cooperation on Research and Innovation" in Cairo, Egypt next 8th February 2014. This event will be organised back to back to the regional event Horizon 2020 Conference Meeting *EuroMed Common Challenges*, which is an event organised by the European Commission on 9th February also in Cairo, Egypt.

- **MEDSPRING project annual meeting**

MEDSPRING will organize its annual meeting in Cairo, Egypt, from 9th to 11th February 2014. The Annual Meeting will be the occasion to take stock of project activities and results, planning the future as well as having a constructive exchange with the External Advisory Board.

- **1st Euro-Mediterranean Brokerage Event on Research and Innovation**

MEDSPRING is organizing a regional brokerage event in Cairo, Egypt, from 12th to 13th February 2014. The meeting will support networking among researchers, SMEs and research stakeholders from different South Mediterranean and European countries. During the meeting, participants will take stock of the opportunities offered by the European programmes, like for example Horizon 2020 for research and innovation and identify common research themes of interest to start cooperation.

- **2nd EMEG meeting on research policies**

MEDSPRING will organize next June in Tunisia the "2nd EMEG meeting on research policies". More information will be provided as soon as possible in the project website.

Meet our Partners - The Ministry of Higher Education and Scientific Research (MHESR), Tunisia



MHESR is responsible and supervise the National programmes on Scientific Research and coordinate the National Contact Point for the FP7 INCO Programme. Through a specific research Directorate General, they support the execution of the research programmes inside research laboratories and units, softening the procedures outlining the use of allocated funds to scientific activities of these structures. They are in charge of the promotion of innovation and technological development by supporting innovative firms and underlining the results of research, strengthening partnership between research structures and firms, giving birth to an ambitious programme for the setting-up of techno parks and nurseries of firms, and mobilizing financial resources coming from the public and private sectors, and international cooperation to the benefit of the sector.

MHESR is involved in the adoption of measures that would further involve Tunisian scientific competencies abroad in the identification, execution and evaluation of research programmes of priority. Furthermore, and through the International Cooperation Directorate General, they participate in the research and innovation policy dialogue within MoCo.

The organization works as InP (Information Point) since the Spring of 2005 within the framework of the *Euro-MEDANet project*, and is also involved as a partner in several FP6 projects such as *EUROMEDANET*, *FOODNCO*, *PROMEDACCESS*, *IDEATLIST* and *ERAMED*. In FP7 MHESR coordinated the Bilateral project *ETC* and is an active partner in *MIRA*, *MEDSPRING*, *ERANETMED* and *ARIMNET2*. They are currently coordinating the FP7 *FETRIC project*.

Focus on Energy

The Energy picture in the Mediterranean areas is relatively different in the northern and southern zones. Climatic, geographic and demographic characteristics are different among North and South and must be taken into account when defining common topics and solutions. Also market opportunities and level of partnerships differ very much from north to south Mediterranean.



In the South, the real opportunities for development and creation of jobs depends on the large number of small communities in remote locations, of various sizes, making connection to the conventional electricity grids difficult or very expensive. This leads to the need for the development of decentralized, local, integrated, sustainable solutions for energy production based on appropriate renewable and hybrid energy solutions, including smart micro-grids, power production and storage. These solutions would also constitute interesting market and development opportunity in remote or decentralized communities in southern Europe, including small islands, where supply and demand must be balanced through smart management techniques.

While the above solutions address the question of supply, the important aspect of demand also needs to be tackled. Communities served by such a local energy system should also be sustainable and efficient. So, the aim is to develop solutions for sustainable and smart remote communities, minimizing energy consumption in buildings and promoting recycling and energy recovery, moving towards nearly-zero energy buildings through design, regulations, materials and special solar (and other) energy components that shall take into full account the local heritage and traditions, ensuring the harmonious integration and social acceptance by the local population. A special attention shall be given to cooling technologies or components.

Three major topics/niches can be extrapolated:

- System integration: system hybridization and integration (renewable energy, decentralized solutions).
- Energy efficiency in sustainable and smart communities/districts under Mediterranean climate and uses, including raising awareness and considering sustainable participation / involvement of industry.
- Solar energy, storage and smart micro grid (CSP, PV, CPV, thermal)

In relation to the above topics, specific solutions / results have been identified:

- Appropriate renewable and hybrid energy solutions, including storage, smart micro-grids, power production.
- Minimizing energy consumption in buildings and promoting recycling and energy recovery, moving towards nearly-zero energy buildings through design, regulations, materials and special energy components with emphasis on cooling technologies. Accounting the local heritage and traditions, ensuring a harmonious integration and social acceptance by the local population.
- Penetration of decentralized grid-connected renewable energy sources, namely PV and CSP. This will require the development of special components and technologies based on local resources, using mature technologies, including affordable storage solutions.

The above solutions will create business opportunities for a host of players in decentralized communities, including:

- Manufacturers of RES equipment and integrated systems, including energy management and monitoring systems.
- ESCOs and energy suppliers.
- Local manufacturers of special solar components.
- Building designers and consultancy firms.
- Recycling firms.

This shall also create opportunities for training and awareness raising, addressing social issues and promoting acceptance by the population, involving:

- Research and training institutions.
- Consumer associations.
- NGOs.
- Utilities.
- Local authorities.

Mobility (e.g., through the production and use of biofuels and other renewable alternatives) and industry also need to be addressed.

Most of the population lives, however, in cities and developed areas with strong cultural traditions. The aim here would be to promote the penetration of decentralized grid-connected renewable energy sources, namely PV and CSP. This will require the development of special components and technologies based on local resources, using known mature technologies, including affordable storage solutions.

This will create market opportunities for, among others:

- SMEs.
- Local entities, e.g., NGOs and Government (regulations, awareness campaigns).
- Training institutions for developing the skills of professionals and young people.
- Building designers.

Please find the article also in the project website: *Focus on energy*.

The future of energy in Med countries: It is a marathon, not a sprint

by DR. NESTOR FYLAKTOS, POST DOCTORAL FELLOW AT EEWRC (THE CYPRUS INSTITUTE), AND EMEG EXPERT

It is quite well known by now that there are two main themes of the relationship between energy and everyday life. The first affected many people since the beginning of the industrial revolution, but only started becoming a prominent issue in the 50s, after the terrible smog that was regularly blanketing London. It's of course the environment - energy duality.

The second rushed into people's lives in the 70s during the two world oil crises. It was then that the price of oil worldwide skyrocketed due to the Iranian embargo and made people realize that the utility energy carries has a cost. Or rather a price. And as it gradually became essential in our contemporary lifestyle, cheap energy (in any of its final forms) became crucial.

Those two themes now coexist. Sometimes happily, sometimes not. Fuel availability, technology advancements and generous government backing have kept fossil fuel (and nuclear, to an extent) prices down and within reach of businesses and individuals. Who would want more expensive energy? But local pollution and - most importantly - climate change have ushered the collective need for protection of the environment, ourselves and future generations from harm. Scientists and policy makers have gone in great lengths to tackle those problem individually or at once. Nonetheless the vision remains universal: Clean, affordable energy for everyone.

Solving this problem however is no trivial matter. Various countries have taken different steps in dealing with energy issues, ranging from export-oriented oil-rich OPEC countries, to large consumers such as the US and China, to geopolitics-minded Russia, even to nuclear powered France. The Med region has naturally its own unique climatic characteristics, but it does not exhibit a uniform demand or infrastructural profile. The region comprises of dynamic but unstable Northern African countries, recession-hit southern Europeans and the resource-hungry middle East. Is there a uniform solution for everyone? No, certainly not. But they all share the same vision.

This vision invariably treads through the three themes highlighted by the recent energy group discussion during the MEDSPRING meeting in Lisbon: Energy efficiency, renewable energy and system integration. These are inter-linked and championing one over the other will lead to incomplete solutions destined to become a half-measure, or worse, a failure. But they require large investments, huge efforts, organisation and patience. For example energy efficiency would require the amendment of building regulations, the advancement of energy saving technologies and behavioural shifts of the local population, which is projected to increase substantially in the next 30-40 years. But energy efficiency alone will only dampen the trajectory of future energy consumption - it has the theoretical potential to reverse it, but history has shown that this is not the case.

Renewables on the other hand can benefit from the abundant sunlight the region receives. This is a major advantage over Northern countries that rely mostly on wind for their RES penetration. Sunlight in the Med region gives PV and CSP systems the right ingredients to succeed not only in isolated and confined markets, but to have a meaningful contribution to a country's electricity production, displacing traditional fossil-fuel powered generation. The prices of PV modules and system installation have been greatly reduced lately allowing for very large systems being built and connected to the grid. This has pushed large swaths of renewable electricity to reach homes through the network during hours of operation. Nighttime on the other hand requires a traditional baseload generator or some sort of storage facility that would store energy produced during the day. An alternative to this would be the storage of thermal energy produced from CSP units, and systems like these make their way from the drawing board to the market - with Spain leading the way.

The third component is system integration, or putting all this to work together. And this is a major challenge, especially for countries with less mature and less dense grids, and with a future outlook that predicts steady increases in demand for years to come. The challenge here is two-fold: First make the existing infrastructure as accommodating as possible to stochastic generation, and second push for technologies that can displace base-load power in a cost-effective manner. The paradigm of Germany shows that with enough public and government support renewable penetration now is much higher than even the most optimists thought a few years ago. And the grid still works. Similar scenarios for Italy and Greece show that it's possible to have a high percentage of PV in the energy mix, and it is something manageable. The displacement of base-load will be tougher. Right now this can be achieved only through some kind of storage (discounting hydroelectricity that has a finite potential in the region, mostly tapped)

that proves to be rather costly and difficult to implement.

It's therefore imperative that careful and concerted efforts are made to develop all of the above. The drivers are there; the world is realizing just how serious energy use can be for the environment, and that energy is a commodity that fuels our livelihoods, and therefore cannot be out of economic reach for no one. Get those two working together and the future looks bright - but change cannot happen overnight. Our goal is far; there is no way we can sustain a sprint. We need to run a marathon: prepare well, use our minds and conserve our energy. This way that goal gets closer by the day.

Please find the article also in the project website: *The future of energy in Med countries: It is a marathon, not a sprint.*

Colophon: This E-Newsletter has been developed within the framework of the MEDSPRING Project (FP7-INCO.Net 311780). For further information about the project please visit the official website: <http://www.medspring.eu>. Edited/Written by MEDSPRING WP3 Team, MEDSPRING Coordination team and Dr. Nestor Fylaktos, from the Cyprus Institute. Images by MEDSPRING, European Commission, Pixabay and Wikipedia.