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DAFNI

Network of Sustainable Aegean and Ionian Islands The Smart Islands Initiative

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DAFNI – Network of Sustainable Aegean and Ionian Islands

The DAFNI network

- ❖ DAFNI is a network of island local authorities
- ❖ DAFNI is a non profit organisation
- ❖ DAFNI has 33 Municipal and 2 Regional members
- ❖ DAFNI promotes sustainable development in Greek islands through integrated actions in the fields of energy, water, waste, mobility, environment and local development
- ❖ DAFNI is founding member of the Pact of Islands, initiative promoting sustainability in EU islands through local energy planning and engagement of local authorities and citizens
- ❖ DAFNI is the coordinator of the Smart Islands Initiative promoting synergies beyond infrastructures in islands



Network of Sustainable
Aegean and Ionian Islands



Sustainable islands of Europe



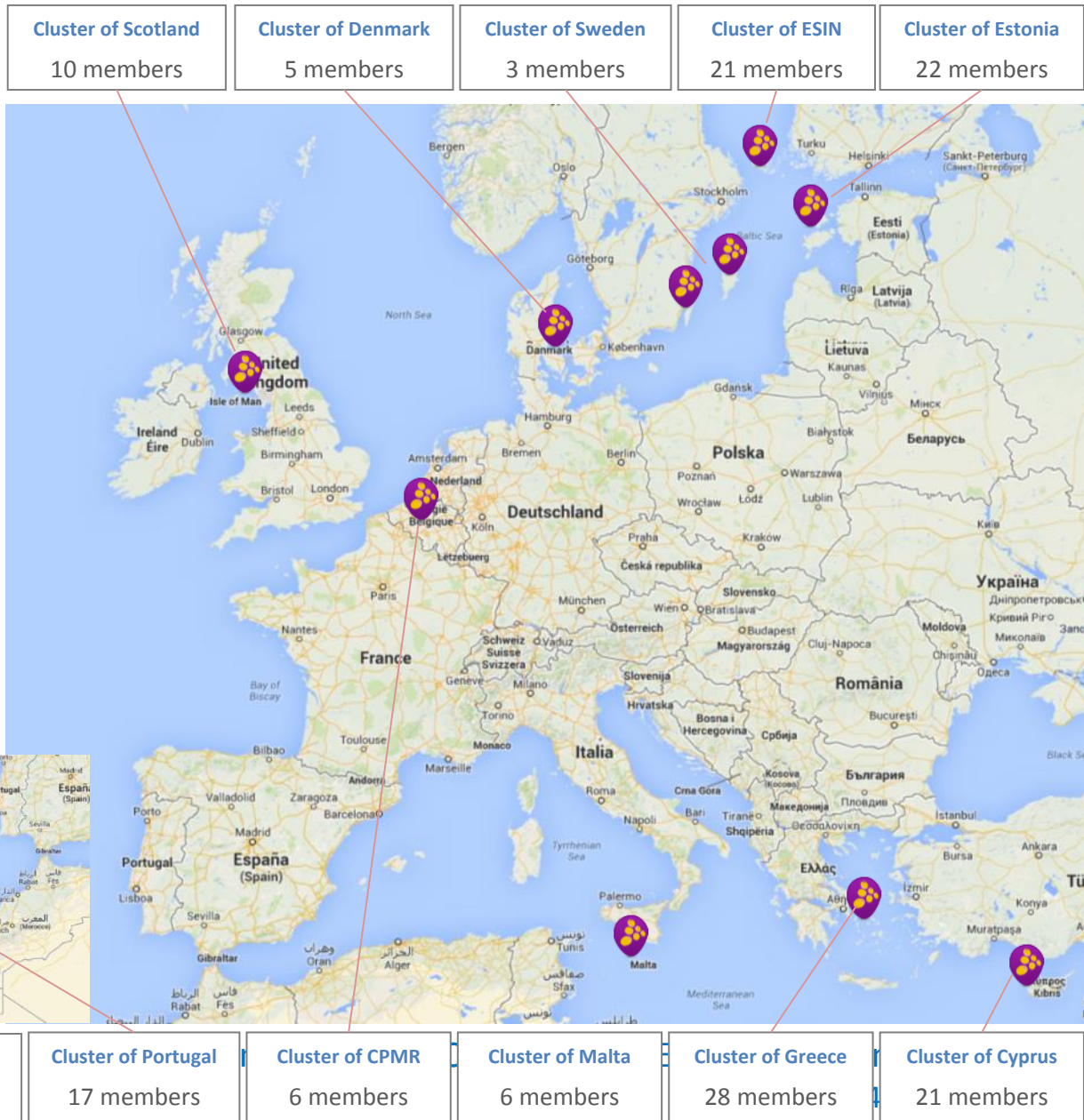
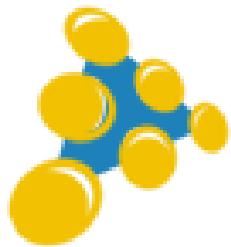
www.sustainableislands.eu

150 members

11 clusters

250 trainees

61 bankable projects



Examples of projects under development

- ❖ **Municipal wind park, Lesvos:** Repowering and extension of a licenced wind park with parallel operation of an environmental and RES park.
- ❖ **Municipal wind park, Kos:** Unlocking license and financing processes of an existing installation license
- ❖ **Kythnos Smart Island:** Master plan for the integrated infrastructures' management in Kythnos island reviving the rich energy test-bed history of the island
- ❖ **Geothermal district heating, Lesvos:** Reoperation and extension of a geothermal pilot district heating network to heat private houses, a poultry farm and several greenhouses.
- ❖ **Energy efficiency in street lighting (5 islands):** LED lighting and smart control applications.
- ❖ **Smart Grid infrastructure (5 islands):** Installation of energy control centres in the thermal power plants and smart meters at the end-users
- ❖ **Desalination with RES:** Promotion of systems combining desalination plants with installation of RES plants.
- ❖ **Biogas plant, Naxos:** Feasibility study for the exploitation of the local farming residuals.

EU projects

1. H2020 LCE-02-2016: Demonstration of smart grid, storage and system integration technologies with increasing share of renewables: distribution system
 - ❑ **WiseGRID** – Wide scale demonstration of Integrated Solutions and business models for European smartGRID
2. Interreg MED:
 - ❑ **STEPPING** (EPC) - Supporting The EPC Public Procurement IN Going-beyond
 - ❑ **MOTIVATE** (MOBILITY) - Promoting citizens' active involvement in the development of Sustainable Travel Plans in Med Cities with Seasonal Demand
 - ❑ **JASMINE** (RES) - Joint Actions for the uptake of local renewable energy through a Sustainable Mediterranean Islands Network in Europe
3. Balkan MED (under evaluation):
 - ❑ **Green Infra** (ADAPTATION) - Green Infrastructures connecting Green / Blue Areas with Neighbouring Inhabited Areas
4. Interreg EL-CY (under evaluation):
 - ❑ 6 proposals in energy efficiency, RES, smart metering, biogas/waste, mobility
5. H2020 EE-09-2016: Engaging and activating public authorities
 - ❑ 2 proposals on improving local energy planning through quality management and certification and enhanced MLG

Pact of Islands – How it all started



- ❖ EU supported initiative launched in 2011 under the ISLE-PACT project, co-funded by DG-ENERGY, to promote local sustainable energy planning taking into account the special characteristics of islands
- ❖ An initiative in liaison to the Covenant of Mayors but focusing on the islands' special characteristics
- ❖ Island Sustainable Energy Action Plans (iSEAPs) produced for the signatories
- ❖ Methodologies and tools for planning and monitoring the iSEAPs provided to the signatories

64 signatories from:

- ✓ Cyprus
- ✓ Denmark
- ✓ Estonia
- ✓ Greece
- ✓ Italy
- ✓ Malta
- ✓ Spain
- ✓ Sweden
- ✓ Portugal
- ✓ United Kingdom

Commitments

- ❖ To submit an iSEAP one year after signing the PoI
- ❖ To monitor and update the iSEAP at least every 2 years
- ❖ To realise projects contributing to the EU2020 KPIs

Current Pol Signatories

Signatories = Islands

- ❖ Cyprus – **16** municipalities
- ❖ Denmark – **1** island
- ❖ Estonia – **3** islands
- ❖ Finland – **4** islands
- ❖ France – **5** islands
- ❖ Greece – **32** islands
- ❖ Ireland – **1** island
- ❖ Italy – **11** islands
- ❖ Malta – **5** municipalities
- ❖ Portugal – **11** islands
- ❖ Spain – **11** islands
- ❖ Sweden – **11** islands
- ❖ UK – **1** island
- ❖ Cape Verde – **10** islands

117 islands have signed the
Pact of Islands as of today

What is special about Islands

Political dimension

- ❖ Recognition of insularity by European Treaties (Article 174 of the Lisbon Treaty) and in the European Directives
- ❖ Political support from the European Parliament
 - ❑ Musotto Declaration (2007), Written Declaration 37 (2011)
- ❖ Call for tenders of the European Commission – Preparatory Action for Islands (2008)
- ❖ Political support and Declaration from major island authorities and regions (through the Islands Commission of the CPMR)
- ❖ “Smart Islands“ is the new strategy for the European Islands (September 2013) – drawing inspiration from Smart Cities and Communities
- ❖ “Smart Islands“ is an own-opinion by the European Economic and Social Committee (March 2015)

What is special about Islands

Structural handicaps related to energy

- ❖ Energy planning based on seasonality
- ❖ High reliance on hydrocarbons, high potential for emissions reduction
- ❖ Obstacles to reduce emissions for interconnected islands due to low capacity cables that do not allow high RES penetration
- ❖ Obstacles to reduce emissions for non-interconnected (NI) islands due to technical restrictions in the grid that does not allow high RES penetration
- ❖ First line of defence and most severe impact from climate change compared to continental regions
- ❖ Difficulty to introduce natural gas in the islands' energy market
- ❖ Cost of energy is significantly higher due to transportation costs
- ❖ Often scarce water resources – Energy intensive desalination plants

What is special about Islands

Opportunities

- ❖ Many islands regions (NI ones), unlike mainland regions, are locally producing CO2 emissions in their territories and can commit to reduce them.
- ❖ Islands host locally all the energy, water, waste and waste water management utilities. The integrated management of these infrastructures may create interesting paradigms and accumulated results.
- ❖ Insularity issues faced by islands are in many cases similar with the insularity issues faced by mountainous and geographically isolated areas of continental Europe. The experiences of islands can be easily replicated and transferred to these areas too.
- ❖ Investments such as smart grids, energy storage and efficiency have a much higher impact on islands; especially non-interconnected ones.
- ❖ Islands can function as test beds for different innovative technologies in the sustainability area which then can be scaled up to towns and cities of continental Europe

What is special about Islands

EURELECTRIC report – June 2012

“EU islands: Towards a sustainable energy future”

The report makes the following recommendations to national and European policymakers to incentivise the transition towards a sustainable energy future

- 1. Set up an EU Island Sustainable Energy Action Plan 2020*
- 2. Improve security of supply through diversification of power generation technologies, as well as interconnection where possible*
- 3. Use islands as a priority test-bed for innovative technologies such as storage, smart grids and RES. Foster RD&D on islands*
- 4. Use exemptions appropriately and address the market failures that often occur as a result of limited size and isolation*

What's next?

Smart Islands Initiative

Is inspired by the Smart Cities and Communities initiative of the European Commission and seeks to demonstrate that islands can host pilot projects and produce knowledge on smart and efficient resource and infrastructure management, which may be then transferred in mountainous, rural and generally geographically isolated areas but also scaled-up in big cities of continental Europe and beyond

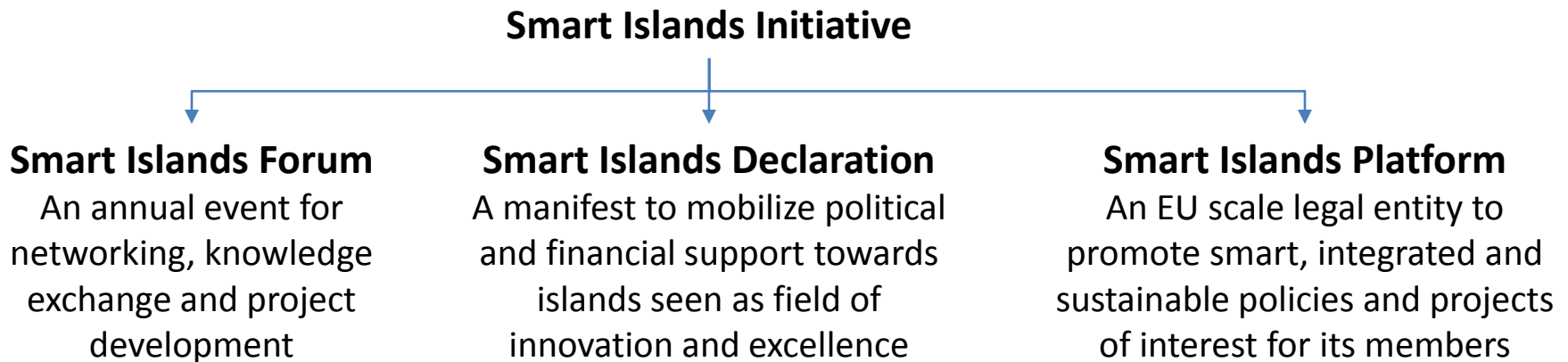
SI Initiative advocates in favour of a place-based, transformative development agenda that taps into islands' competitive advantages, generates local growth and prosperity and contributes to EU policy goals in the fields of

- ❑ energy, climate,
- ❑ innovation, circular economy,
- ❑ transport and mobility,
- ❑ blue growth, and
- ❑ the digital agenda

Smart Islands Initiative

- ❖ **Smart Island** refers to an insular territory that creates local sustainable economic development and a high quality of life for the local population by putting in place smart and integrated solutions to the management of infrastructures and natural resources, namely energy, transport and mobility, waste and water, all while promoting the use of innovative and socially inclusive governance and financing schemes.
- ❖ **Smart** is used to refer to the adoption of an integrated approach to the management of islands' infrastructure and natural resources and thus create an enabling environment for sustainable economic activities to flourish.

The Smart Islands initiative unfolds in three main directions



Smart Islands Initiative

Where we stand today

1. **1st Smart Islands Forum** took place in Athens in June 2016 with the participation of over 40 island representatives from Croatia, Cyprus, Denmark, Finland, France, Germany, Greece, Italy, Malta, Spain, Sweden, the Netherlands and the UK setting the foundations for the Initiative
2. **Smart Islands Own Declaration** is currently being signed by local island authorities and Letters of Support to the Initiative are signed by representatives of the Quadruple Helix
3. **Smart Islands Event: Creating new pathways for EU islands** is planned and organised for February 2017 as an outgoing Brussels event with the support of MEPs to present to key stakeholders the Initiative

Thank you

**KEEP CALM
AND
THINK ABOUT
THE ISLANDS**

For more information

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