

Innovative governance and RES Penetration at regional level: ENERMED - Decision Support Tool

Laore Sardegna

E. Tritopoulou, G. Kyriakarakos, K. Patlitzianas, M. Damasiotis, D. Papastefanakis, Center for Renewable Energy Sources and Saving (CRES)

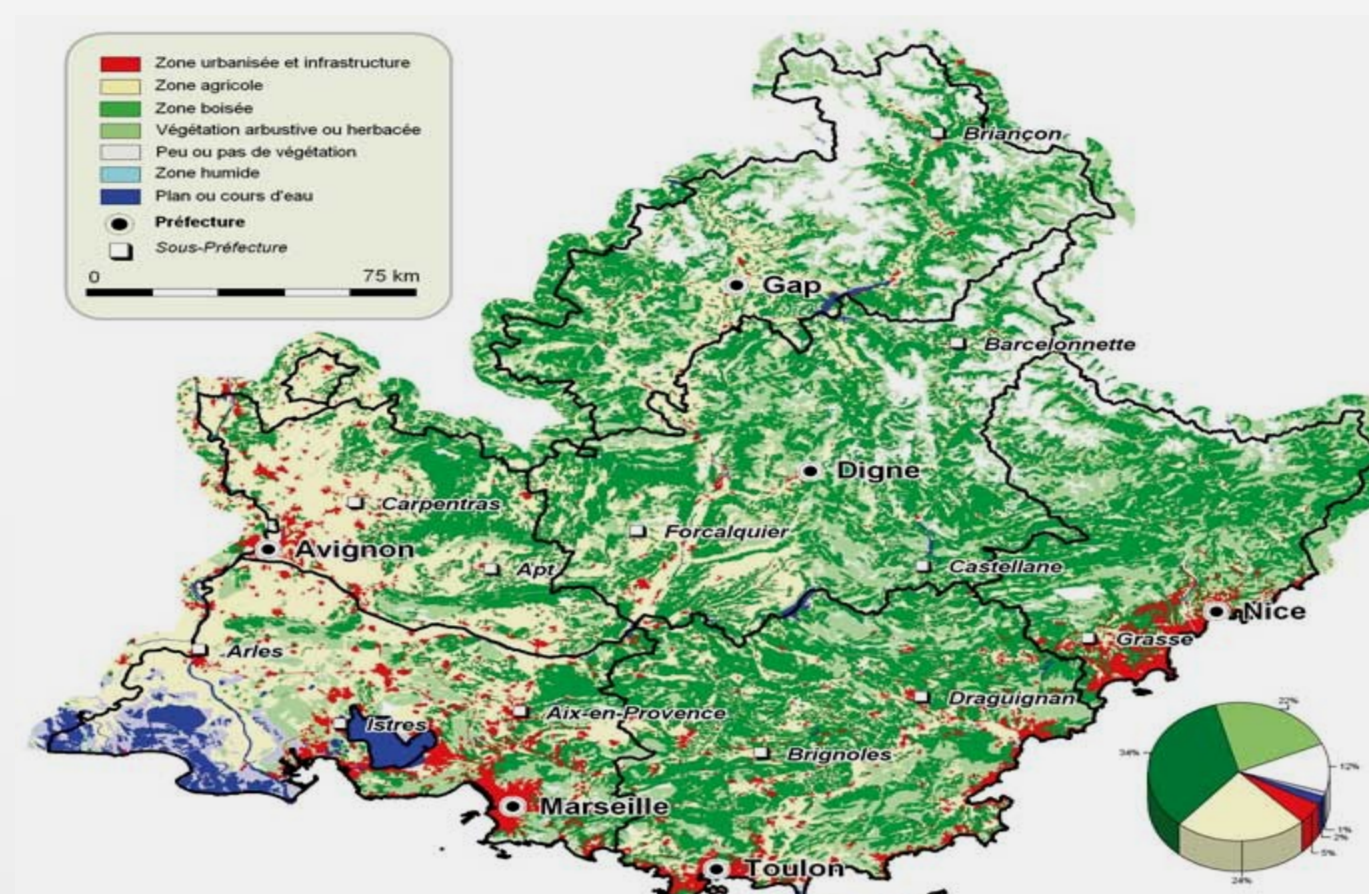
N. Zografakis, Region of Crete - Regional Energy Agency (REAC)

V. Ketikidis, P. Grammelis, Centre for Research and Technology Hellas (CERTH)

<http://www.enermedproject.eu> - enermed.project@gmail.com



Croatia: Public Building Roofs Exchange in Primorje-Gorski kotar County



PACA region (France): Feasibility Study on biomass of PACA region



Sardinia region (Italy): The creation of a demonstrative kiosk for the development of the renewable

ENERMED is a transnational cooperation project implemented in the MED program, and co-financed by the European Regional Development Fund, which aims to improve and bring coherence to the Mediterranean regional policies on renewable energy and brings for this reason together local authorities in Spain (La Poble de Benissa and the Community of Valencia), French regions (PACA), Greece (Crete), Italy (Tuscany, Sardinia) and research institutes in the field of energy policies and sustainable development: Institut de la Méditerranée, Scuola Superiore Santa Anna in Pisa, Laore, E-Zavod, CERTH, Centre for Renewable Energy (CRES), Institute of Energy Hrvoje Pozar (EIHP).

ENERMED has a strong operational dimension. It indeed not only aim at analysing the contribution of regional authorities to the definition and implementation of European and national policies on RES, it also aims at contributing to the effective improvement of public decision and expertise processes by experimenting innovative features of governance (in the broad meaning of the word) through the implementation of territorial Pilot Projects.

The main objective of Pilot Projects is the experimentation of innovative features of governance supporting the development of Renewable Energies (RE). Pilot Project will be evaluated according to a set of local and transnational criteria like Partnership and key actors, Networking, Innovation in terms of practices, outputs and results of the PPs, financing and creation of new political perspectives for RES policies and strategies in the Mediterranean region, Integration-Mainstreaming into national/regional RES policies, Governance, Sustainability and Transferability of results to other MED territories.

The Pilot Projects should meet the following characteristics:

- Innovation in governance through the implementation of various functions supporting renewable energy
- Transferability to other territories: rural area, urbanized area; Potential for cross-border and macro-regional level.
- Project respects the principles of sustainable development: environmental and economic
- Experimental dimension for the achievement of investment: Studies, analyses precedent, Innovative financial mobilization.

Eight (8) pilot projects were selected and validated from the Steering Committee:

- ◆ Municipality of Benissa (Spain): Promotion of solar thermal energy at existing homes in the municipality of Benissa
- ◆ Tuscany region (Italy): The governance of the biomass energy in Tuscany: issues and opportunities
- ◆ Slovenia: North African catfish farming by using RES
- ◆ Municipality of La Poble de Valbonna (Spain): Creation of Renewable Energies Structure
- ◆ Sardinia region (Italy): The creation of a demonstrative kiosk for the development of the renewable energies (RE)
- ◆ Creta (Greece): Elaboration and Experimentation of a “Toolkit for the evaluation of RES Investments towards RES Strategy”
- ◆ PACA region (France): Feasibility Study on biomass of PACA region
- ◆ Croatia: Public Building Roofs Exchange in Primorje-Gorski kotar County

“Toolkit for the evaluation of RES Investments towards RES Strategy”

Involved partners: **CERTH, CRES and REAC**

<http://enermed.cres.gr>, gk@cres.gr

Main objectives

- Supporting tool for the assessment and evaluation of RES investments
- Help communities improve the quality of the regional policies in support of RE, the contribution of the RE in the energy production and the economic, social, environmental, aesthetic impact of the RE projects.
- Inform the target users (Regional Administration and Municipalities Officers) about the procedures/requirements of implementing RES investments with the ultimate goal of its integration within the target users' structures and strategies.



A set of **ON/OFF criteria** is presented to the user in the first step of the application. If one or more of these criteria applies then the user is presented with an error message.

For the Greek adaptation of the toolkit the Greek legal framework was taken into consideration along with the National Land Use Framework

The toolkit is deployed in two parts:

Part A - Society understanding

To aid Communities and end users in understanding the basics of renewable energy

RE Technologies Developments and Benefits

Policy framework, Technological Progress, Socioeconomic opportunities

Participatory Planning procedures

Creation of a “vision”, Focus group dialogue, Co-decision Planning

Financial Mechanisms

Innovative schemes (ESCOs, Voluntary Agreements,..), Loans – Funds (Structural funds, JESSICA..), National/EU programs (INTERREG, LIFE, IEE..)

Background: Fuzzy Cognitive Maps:

computational intelligence approach that evolved out of the combination of cognitive

Outputs

The implemented approach will output a single qualitative evaluation of the proposed investment that takes in consideration all of its aspects:

- High Value Investment
- Average Value Investment
- Weak Investment

Example 1:

100 kWp PV installation on Creta island on a south facing mountain that was previously unexploited with good access to road and grid networks

Outputs:

- Information regarding the examined investment
- Evaluation: High Value Investment.

Example 2:

5 GW Wind Park very close to Festos archaeological site

Output:

- Information regarding the examined investment
- Evaluation: Weak Investment.

Part B – Decision Support

◆ **Informative Section:** Parameters that affect the deployment/implementation of RES investments in the Greek investment environment.

◆ **Evaluation Section:** Qualitative Indicators are used in order for the user to be able to evaluate each Parameter that affects the investment procedure

I) Informative Section:

- It acts as an **Information Gateway** to the user, presenting in detail the Parameters that affect the deployment of RES investments in the national and international investment environment.
- All the **Parameters** are documented in detail and **Guidelines** on how and where to obtain data will be given.

Parameters Categories:

- P.1 Legal / Regulative /Administrative Context
- P.2 Financial Context
- P.3 Technical Context
- P.4 Social Context
- P.5 Environmental Context

II. Evaluation Section:

- It will be able to evaluate intuitively the submitted investment in a specified location taking into consideration the set of Parameters.
- The user will also be supplied with an overall Investment Evaluation.

Indicators

Common ground is needed for comparing different investments using qualitative and quantitative indicators.

- **Quantitative:** databases of official statistical sources, GIS systems, programs, etc.
- **Qualitative:** expertise of different key actors.

In some occasions more than one indicators are studied for a single parameter, because of its significance.