



DEVELOPING BLUE GROWTH POTENTIAL

Sustainable energy planning of Mediterranean islands

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Project Manager

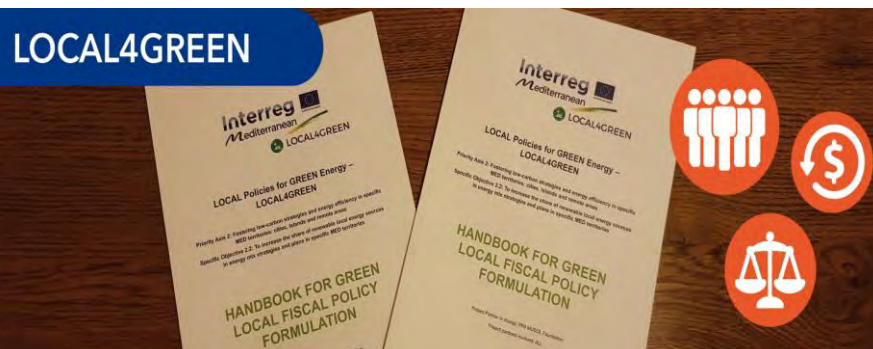
Aegean Energy and Environment Agency

Blue Growth Community – 1st Capitalization event

November 10th -11th, 2020

Interreg Mediterranean RENEWABLE ENERGY

LOCAL4GREEN



FORBIOENERGY



COMPOSE



PRISMI



StoRES



PEGASUS



Aim of the presentation

Applied Methodology
Good practices

Strategic energy transition
of Greek island

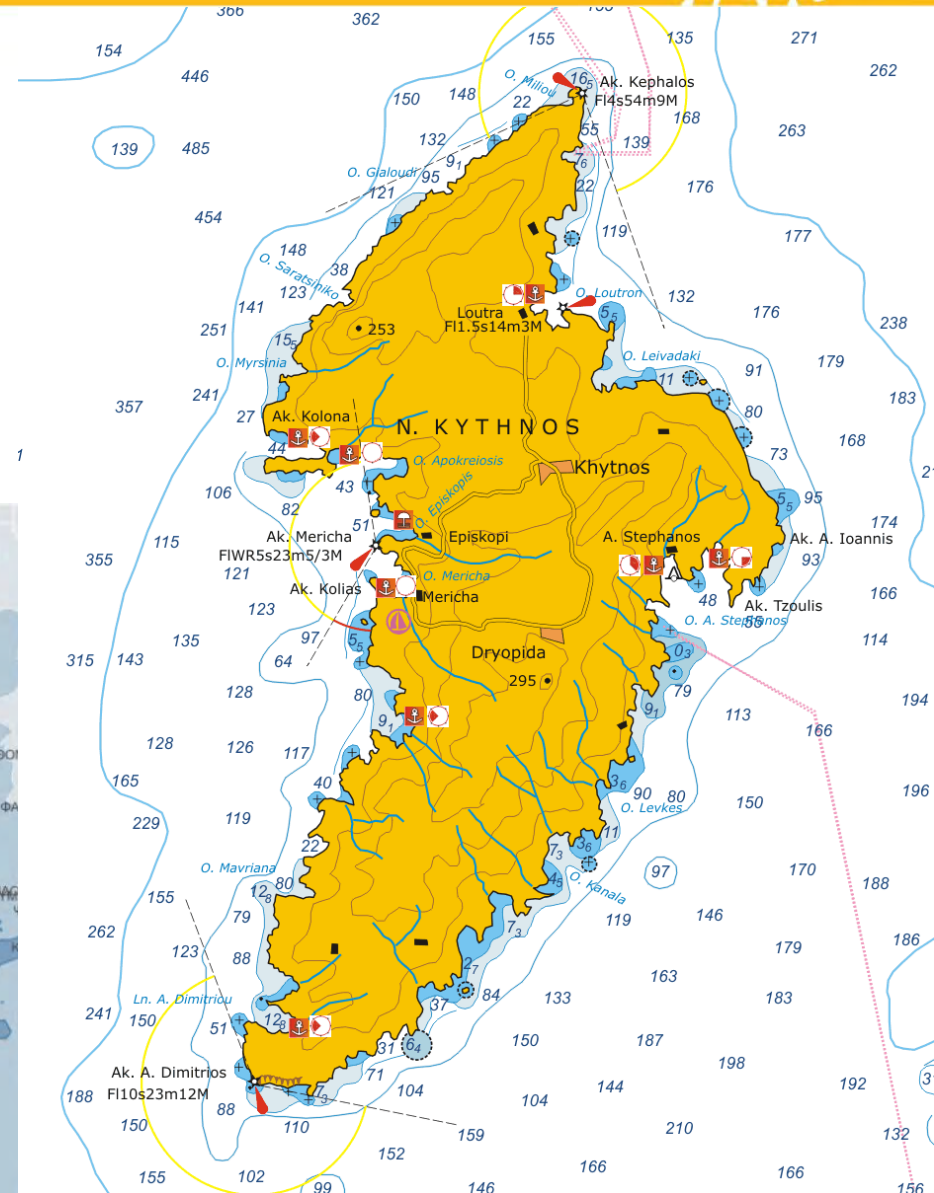
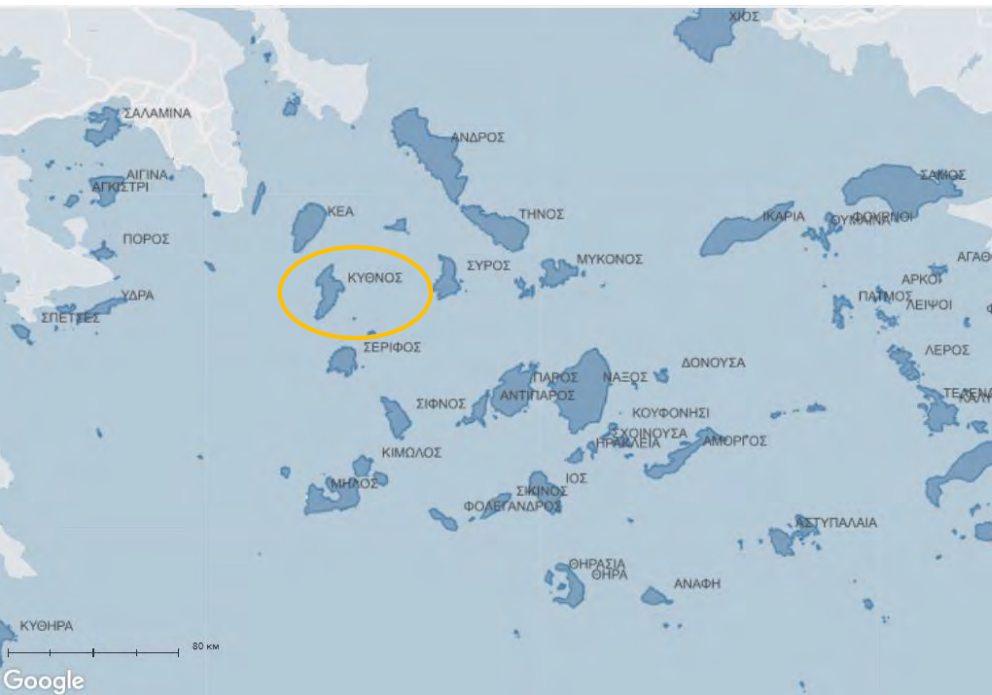


Sustainable energy planning
of Mediterranean islands



Kythnos island

- ✓ 1608 inhabitants
- ✓ 56 n.m. from Piraeus
- ✓ Non-interconnected
- ✓ Developing tourism sector



A historical test-bed for RES



1982

Installation of the 1st
wind farm in Europe
(5 x 20kW)

1983

Installation of 100kW
PV system with battery
storage (400kWh)



1989

Wind turbine
replacement (5 x 33kW)

1992

Upgrade of PV
station (inverters)



1998

Installed of wind turbine
Vestas 500kW

2000

Operation of a fully
automatic control
system



2001

Microgrid with PV



Existing situation

Initially, we supported the Municipality of Kythnos to develop an **Island Sustainable Energy Action Plan (ISEAP)** back in 2013 in the frame of the Pact of Islands initiative.



However, the interest of the local authority and stakeholders to participate and fuel the process was rather limited.



The Smart Islands Initiative

The **Smart Islands Initiative** is a **bottom-up** effort which seeks to convey the potential of islands to function as laboratories of:

- technological 
- social 
- political 
- economic 
- environmental 

Innovation 



<http://www.smartislandsinitiative.eu/>

Key areas of intervention



ENERGY



TRANSPORT



WATER



WASTE



GOVERNANCE



ICT



ECONOMY

Kythnos Smart Island

An integrated and holistic **island transition process** aiming to:

- Clean energy transition
- Efficient use of natural resources
- Sustainable tourism
- Local development



Methodology

Mapping interested stakeholders

- ✓ Identification of stakeholders and methods for their approach
- ✓ Categorization of stakeholders by their degree of involvement

Political and social support of the project

- ✓ Targeted contacts
- ✓ Activation of citizens for their participation in the actions of the project
- ✓ Establishment of a local action group
- ✓ Field visits

Participatory planning of a common local vision

- ✓ 1 open event (residents and local organizations)
- ✓ 2 workshops in targeted groups of stakeholders (Municipal Employees)

SWOT analysis of the project with the key stakeholders

- ✓ Workshop for evaluation of the proposed action plan



Action #1 (bottom-up)

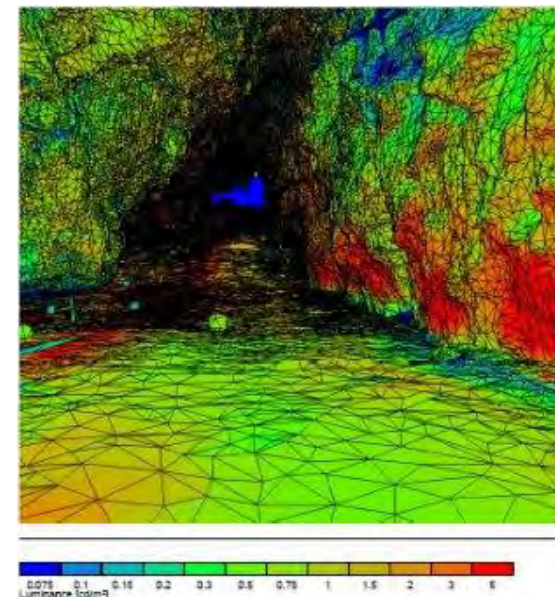
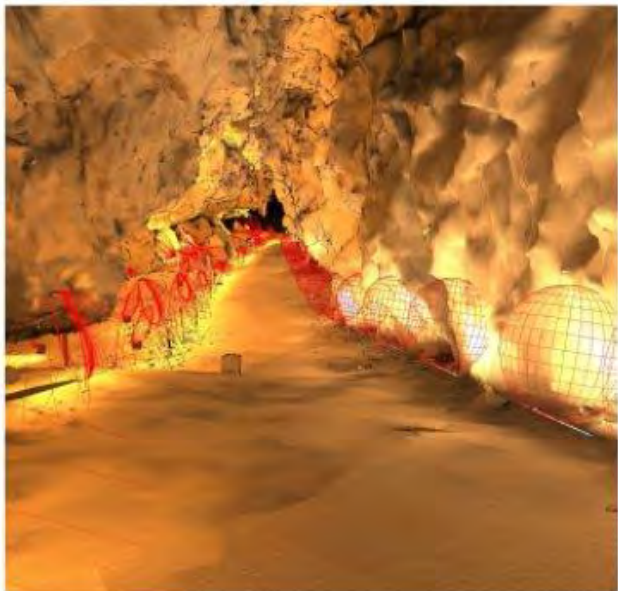
Supporting the
financing of local
development projects

THINK
OUTSIDE
THE BOX



Sustainable tourism development

- “Restoration of the "Katafiki" Cave of Dryopida, Kythnos”
- “Digital Guide to the folklore culture and the rural economy of Kythnos”
- “Cultural Route of Kythnos”



Action #2 (Top-down)

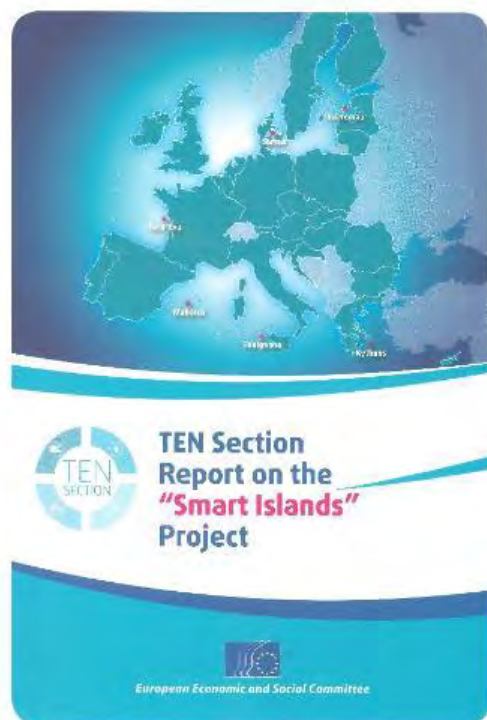


Invitation to the European Economic and Social Committee

Invitation to the EESC - May 2016



Kythnos included in the "Smart Islands" - September 2016



Presentation of the islands



Protos
1000 inhabitants
1000 inhabitants

Located in the Aegean Sea, Protos is an island and a municipality. It is 1000 inhabitants and covers an area of 1000 km². The island has a long history and is known for its beautiful beaches and its traditional architecture.

Protos is a small island with a population of 1000 inhabitants. It is known for its beautiful beaches and its traditional architecture. The island has a long history and is known for its beautiful beaches and its traditional architecture.



Kythnos
1000 inhabitants
1000 inhabitants

Kythnos is a small island with a population of 1000 inhabitants. It is known for its beautiful beaches and its traditional architecture. The island has a long history and is known for its beautiful beaches and its traditional architecture.

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Action #3 (Top-down)

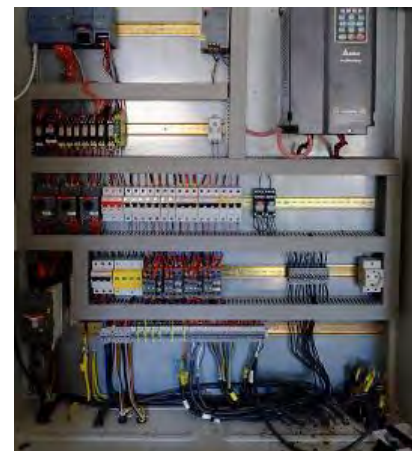
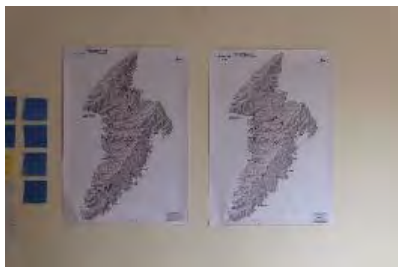
Kythnos participation as a demo site in the WISEGRID H2020 project



WISEGRID Local meeting with visitors – June 2017



Public participatory planning implementation – May 2018



Installation of batteries with local citizens – June 2019



Outcome from the actions

Financing for Kythnos Smart Island was granted!!!

KYTHNOS SMART ISLAND PROJECT

A vision for sustainable local development



Smart electric system



Smart demand response



Smart microgrids



Smart water management



Smart waste management



Smart transport & mobility



Smart street lighting

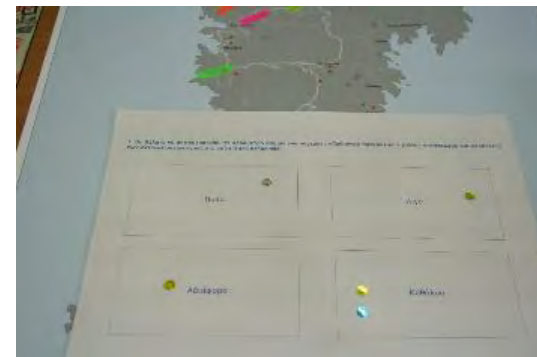
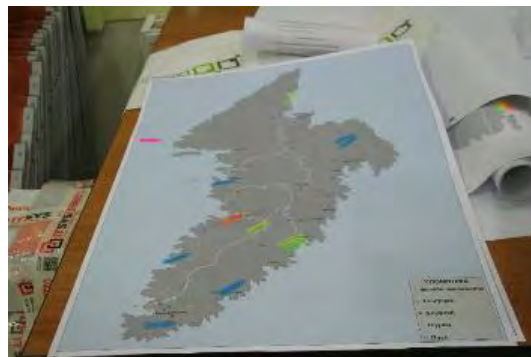


Smart Island Center

Workshop: Citizens on decision making process (KSI) - 2019



Targeting the location of interest and the transport vehicle - 2019



Takeaway from Kythnos Smart Island

Dealing in priority with local major problems of a specific territory, enhancing the livelihood of the locals, may lead to gain the trust of the residents.

Thus, stakeholders and citizens are more eager to listen to proposals and engage.



Thank you for your attention

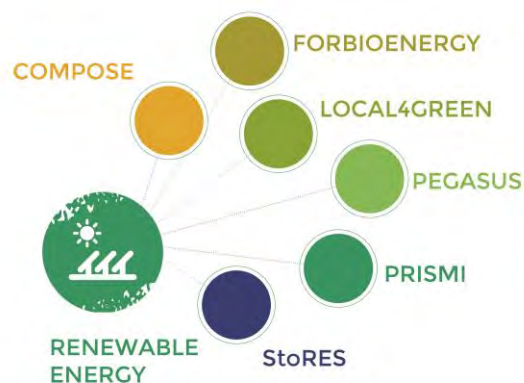
More about Kythnos Smart Island:

https://www.youtube.com/watch?v=hHDxZVZQeJI&ab_channel=DAFNINetworkDAFNI



More about MED Renewable
Energy:

<https://renewable-energies.interreg-med.eu/>



COMPOSE	Rural Communities engaged with positive energy
FORBIOENERGY	Forest Bioenergy in the Protected Mediterranean Areas
LOCAL4GREEN	Local Policies for Green Energy
PEGASUS	Promoting effective generation and sustainable uses of electricity
PRISMI	Promoting RES Integration for Smart Mediterranean Islands
STORES	Promotion of higher penetration of distributed PV through storage for all