



CIrCLE 2019

Challenges for the Islands in the era of the Circular Economy

Energy in a carbon neutral society

Cristina Daniel

ENA, Energy and Environment Agency of Arrábida

Under the auspices of



SMile 2019

6th Sustainable Mobility & Intelligent Transport conference





CirCIE 2019

Challenges
for the Islands
in the era of
the Circular Economy

under the auspices of



Carbon Neutrality



energy



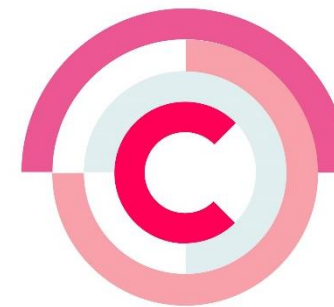
transport



residues



agriculture
forests
soil use



circular
economy

EMISSIONS AND REMOVALS OF GHG (CO₂, CH₄, N₂O, F-gases) 2050

= 0 tCO₂e

Source: RNBC 2050, APA

SMile 2019

6th Sustainable Mobility
& Intelligent Transport
conference





Possible Future(S)?

OFF TRACK



“PELTON”



“YELLOW JERSEY”



Source: RNBC 2050, APA





CirCIE 2019

**Challenges
for the Islands
in the era of
the Circular Economy**

under the auspices of



“YELLOW JERSEY”



- Portugal very competitive
- Growth of medium cities and reduction of population concentration in the Mas
- Greater degree of decentralization and digitalization of the energy system
- Greater entrepreneurship
- Greater circularity of the economy
- High penetration of new forms of mobility (shared and smooth)
- Predominance of organic production and conservation regime; valuation of externalities (ecosystem services)

Source: RNBC 2050, APA

SMile 2019

**6th Sustainable Mobility
& Intelligent Transport
conference**





CirCIE 2019

**Challenges
for the Islands
in the era of
the Circular Economy**

under the auspices of



The aim is to ensure the strategic coherence of the National Investment Program 2030, taking into account the following instruments:

1. PT 2030 - National Strategy for Portugal Post 2020

2. PNEC - Integrated National Energy and Climate Plan

3. Other (eg PNPOT - National Program of Spatial Planning Policy, RNC2050 - Roadmap for Carbon Neutrality 2050)

SMile 2019

**6th Sustainable Mobility
& Intelligent Transport
conference**





CirCIE 2019

**Challenges
for the Islands
in the era of
the Circular Economy**

under the auspices of



Prioritary objectives

1. People first

2. Innovation: development engine

3. External competitiveness and internal cohesion

4. Valorization of endogenous resources



SMile 2019

**6th Sustainable Mobility
& Intelligent Transport
conference**





CirCIE 2019

**Challenges
for the Islands
in the era of
the Circular Economy**

under the auspices of



Energy



1. Renewable Sources

2. Storage, Distribution and Transport

3. Energy Efficiency

SMile 2019

**6th Sustainable Mobility
& Intelligent Transport
conference**





Energy: key points

- 1 There is a clear commitment to renewable energy sources, which has contributed to reducing Portugal energy dependence
- 2 Portugal is on track to meet the objectives of incorporating renewable energy into final gross energy consumption -31%
- 3 Adequate level of interconnection capacity between Portugal and Spain
- 4 Portugal is on track to meet energy efficiency targets, however, with increased energy consumption due to the current pace of economic growth, it is necessary to implement measures that encourage and renovate industry, transport electrification, and energy requalification of real estate
- 5 Portugal is still highly dependent on imports of oil products
- 6 Need to increase the incorporation of renewable energies and energy efficiency in the transport sector
- 7 The continuous increase in the incorporation of intermittent renewable energies into the national electricity system creates the need to introduce storage technologies and new mechanisms that allow the network reliability and flexibility
- 8 Current level of interconnection between the Iberian Peninsula and France stands at only 2.6%, which is a greater constraint on Portugal's ability to export renewable energy to Europe



CirCIE 2019

**Challenges
for the Islands
in the era of
the Circular Economy**

under the auspices of



Local/Regional Energy Agencies

- . Think global, act local**
- . Support Local Authorities, business, industry, citizens**
- . Implement European/National/Local strategies**
- . Energy, Environment, Natural Resources, Mobility,...**

SMile 2019

**6th Sustainable Mobility
& Intelligent Transport
conference**





CirCIE 2019

**Challenges
for the Islands
in the era of
the Circular Economy**

under the auspices of



Energy Agencies in the EU: +- 350

Energy Agencies in Portugal: 22

60% of Municipalities

66% of the National Territory

80% of the Population

SMile 2019

**6th Sustainable Mobility
& Intelligent Transport
conference**

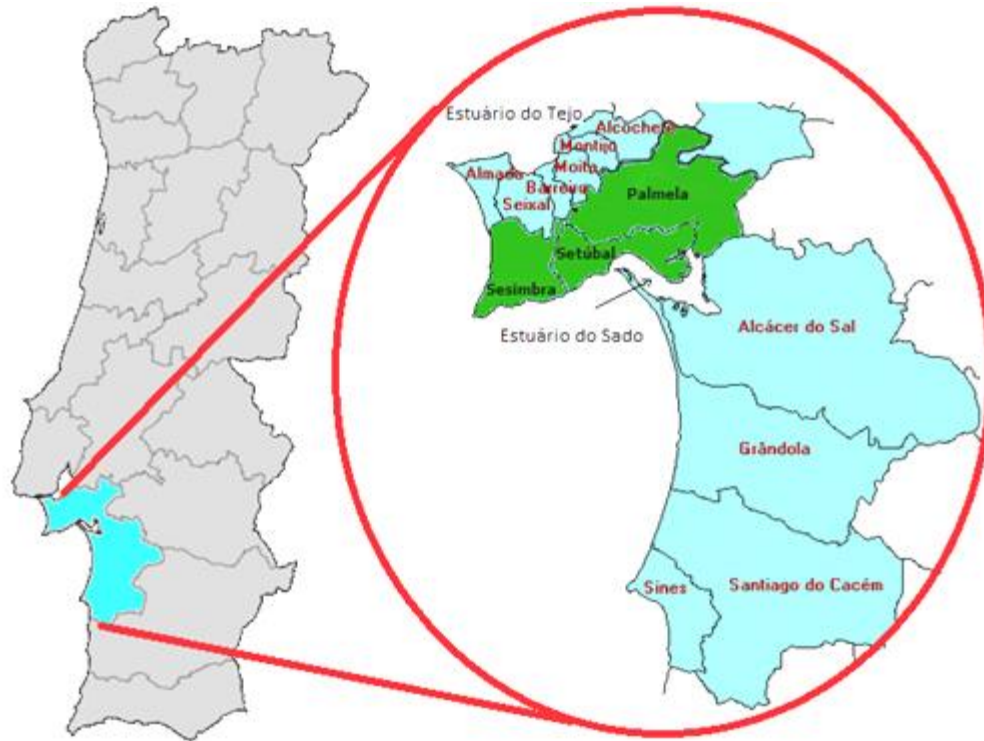




CirCIE 2019


**Challenges
for the Islands
in the era of
the Circular Economy**

under the auspices of



• **Created in 2006**

support

Intelligent Energy  **Europe**

22 associated members

3 Municipalities

Territory **890 km²**

234 000 inhabitants

2 SEAPS ongoing

SMile 2019

**6th Sustainable Mobility
& Intelligent Transport
conference**



Thank you for your attention



cristina.daniel@ena.com.pt



CIRCIE 2019
**Challenges
for the Islands
in the era of
the Circular Economy**

Thursday 28 - Friday 29 March 2019, Nicosia, Cyprus

under the auspices of



SMile 2019
**6th Sustainable Mobility
& Intelligent Transport
conference**

