



## FINAL RESULTS REPORT

Sustainable revalorization of the natural heritage and development of low-carbon tourism initiatives in the Canary Islands and Cape Verde



This document is part of the European project SOSTURMAC, co-financed by the INTERREG MAC 2014-2020 Programme (<http://www.mac-interreg.org/>), within its 1st Call in Strategic Axis 4 "Conserving and protecting the environment and promoting resource efficiency". The contents of this document are the sole responsibility of the project partners and do not necessarily reflect the views of the European Union. Neither the European Commission nor any other person acting on its behalf is responsible for the use of the information contained in this publication.

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**Other Participating Entities:**

*ITER – Instituto Tecnológico y de Energías Renovables, S.A.*

*CICOP – Fundación Centro Internacional para la Conservación del Patrimonio*

*DNA – Direção Nacional do Ambiente (Ministério da Agricultura e Ambiente)*

*IPC – Instituto de Patrimonio Cultural*

*UNICV – Universidade de Cabo Verde*

*INIDA – Instituto Nacional de Investigação e Desenvolvimento Agrário*

*CMSF – Câmara Municipal de São Filipe. Ilha do Fogo*

*PNF – Parque Natural de Fogo*

This document presents the results of the Execution activities of the SOSTURMAC project, which aims to promote sustainable actions that put in value the natural and architectural heritage of the Canary Islands and Cape Verde, favoring its conservation and providing added values to its offer of sustainable and scientific tourism. Its dissemination by third parties would contribute to increase its efficiency, so it can be reproduced and distributed freely, in whole or in part, always providing that the authorship of the same is the SOSTURMAC Project (PCT-MAC 2014-2020) and it is for non-commercial uses. Other project documents available in <http://sosturmac.iter.es>



# The project:

## **SOSTURMAC**

The SOSTURMAC project was created with the main objective of revaluing the natural and architectural heritage of the Canary Islands and Cape Verde, from the energy and environmental point of view, favoring its conservation and providing added values to its sustainable and cultural tourism offer. To this end, specific actions have been taken for the preservation, conservation, enhancement, promotion and dissemination of the heritage of both regions.

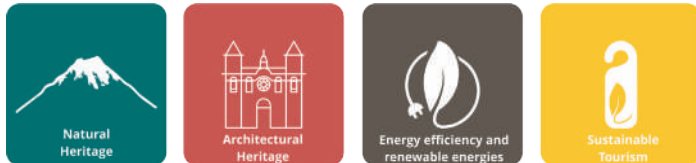
SOSTURMAC, co-financed by the European INTERREG MAC 2014 – 2020 Programme, presents an innovative approach by linking heritage conservation, promotion and development with cultural and scientific tourism, energy efficiency and the use of renewable energies, establishing criteria and methodologies ranging from heritage management to final tourism products.

The project partners are reference entities in the specific fields that concern the project both in the Canary Islands and Cape Verde as well as in their immediate surroundings, which has been key to the success in the execution of the planned activities. The Institute of Technology and Renewable Energies (ITER) leads this project, transferring its experience in the development of low-carbon technologies, as well as in the tourist management of a Zero CO2 accommodation, the ITER Bioclimatic Houses. Also participating in the project are the International Centre for Heritage Conservation Foundation (CICOP) and the Tenerife Island Energy Agency (AIET), as Canarian partners; and the Direção Nacional de Ambiente (DNA, Ministério de Agricultura e Ambiente de Cabo Verde), the Instituto do Património Cultural (IPC), the Instituto Nacional de Investigação e Desenvolvimento Agrário (INIDA), the Universidade de Cabo Verde (UNICV), the Câmara Municipal de São Filipe – Fogo (CMSF) and the Parque Natural do Fogo (PNF), as Cape Verdean partners.

The actions carried out foster a tourist activity that includes energy efficiency and the use of renewable energy sources as a way to achieve economic competitiveness and the reduction of energy dependence, together with the importance of unifying heritage revaluation with its conservation and with the promotion of cultural and sustainable tourism. The results obtained contribute to position the Canary Islands and Cape Verde as innovative tourist destinations consolidated on a technological infrastructure, guaranteeing sustainable development and making the visitor participant in the heritage conservation and dissemination.



# SOSTURMAC AT A GLANCE



## Main FEDER beneficiary

ITER – Instituto Tecnológico y de Energía Renovables, S.A

## Partners

AJET- Agencia Insular de Energía, Fundación Canaria  
CICOP – Fundación Centro Internacional Conservación del Patrimonio  
DNA – MAA – Dirección Nacional de Ambiente  
IPC – Instituto do Património Cultural  
UniCV – Universidade de Cabo Verde  
INIDA – Inst. Nacional de Investigación y Desarrollo Agrícola  
PNF – Parque Natural de Fogo  
CMSF – Câmara Municipal de São Felipe



## Duration

January 2017 – June 2021

## Total project budget

935.567,26 €

## Co-financing Interreg MAC 2014-2020

795.232,18 €

# Objective and activities

*Promote sustainable actions that put in value the natural and architectural heritage of the cooperation area, favouring its conservation and providing added values to its sustainable and cultural tourism and scientific offer.*

Detection of key architectural resources and their interpretation from an energy perspective to create a "heritage manager" tool.

Establish intervention criteria for architectural restoration of the heritage sustainable

Sustainable intervention to improve the heritage environment of the city of São Filipe, in the island of Fogo

Design of the "Zero CO2 modular enclosure" and its possible configurations

Identification and optimization of suitable ICT tools for the management and marketing of "Zero CO2" tourist accommodation

Design and execution of an energy sustainability improvement project at the tourist information point and administrative headquarters of the Fogo Natural Park

Design of complementary activities and materials for the touristic promotion of the products developed and their integration into the tourist offer

Foster the conservation of the heritage values in both regions through dissemination and training actions



# INTERNATIONAL RECOGNITIONS



SOSTURMAC awareness campaign included in the Official Programme of the International Year of Sustainable Tourism for Development 2017 (#IY2017)

**World Tourism Organization (UNWTO), year 2017**



SOSTURMAC as "Good practice to achieve greater energy sustainability by local administrations"

**European Covenant of Mayors for Climate and Energy of the island of Tenerife (Cabildo de Tenerife), year 2017**



SOSTURMAC as "Innovative European project in the renewable energy sector"

**EUREC Agency (European Agency of Renewable Energy Research Centres), year 2017**



SOSTURMAC as "Good practice of INTERREG projects related to cultural heritage within the European Year of Cultural Heritage 2018"

**EU INTERact Programme and DG REGIO, year 2018**



SOSTURMAC as "Good practice and representative project of R&D in Cape Verde in the areas of environment and rural development"

**SKAN Platform (Sharing Knowledge Agrifoods Networks), year 2019**



SOSTURMAC in the process of preparing the Canary Islands Plan for Tourism 2025

**Government of the Canary Islands and the Cabildo de Tenerife, year 2018**

SOSTURMAC as a success story of the Tenerife Tender program,

**Tenerife Licitia, año 2018**



The publication SOSTURMAC "Cuaderno de divulgación CICOP nº 16 - El camino largo: La Laguna, Tenerife", Juan Julio prize of the National Public Gardening Awards

**Spanish Association of Parks and Public Gardens, 2018**



SOSTURMAC in the evaluation process of SEGITTUR that culminated in the award to the island of Tenerife of the distinction as a Smart Tourist Destination, year 2020



SOSTURMAC awareness campaign included in the Official Programme of the European Sustainable Energy Week (EUSEW)

**European Commission, years 2017, 2018, 2019 and 2020**



SOSTURMAC as an initiative that contributes to the achievement of the Sustainable Development Goals

**Panel of actions ODS of the European Week of Quality in Tenerife, years 2017, 2018 and 2020**



SOSTURMAC as "Good practice in projects of the INTERREG programmes of the Ultra Peripheral Regions

**INTERREG MAC Programme 2014 – 2020 and INTERact European Commission Programme, year 2021**



SOSTURMAC as "Good practice in responding to the needs of Cape Verde and example of agreement of funds in INTERREG MAC projects 2014 – 2020"

**HEXAGONE strategic project (MAC/5.11a/216), year 2021**



# RAVALUING THE PATRIMONIAL HERITAGE

from the sustainable  
point of view

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ICT tools "**Cultural Heritage Managers of the Canary Islands and Cape Verde**", available in 8 languages

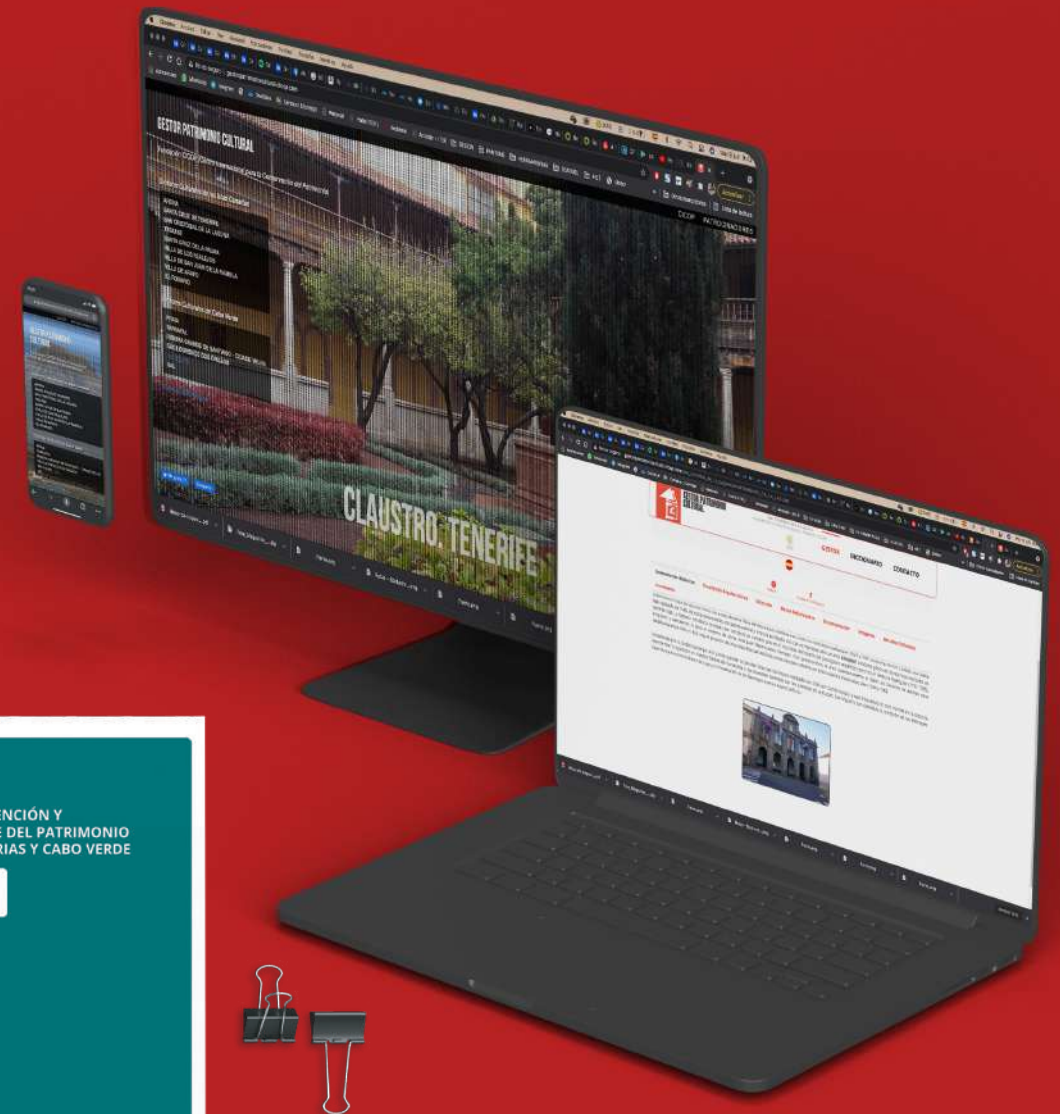
**30 SOSTURMAC Fact SHEETS of energy interpretation** of the key heritage elements in the Canary Islands and Cape Verde

**Thematic routes** about historical heritage included in heritage managers

**University Practices Programme** linked to the Heritage Manager of the Canary Islands

**Consolidation of the sustainable accommodation Bioclimatic Houses ITER (Tenerife)** as Living Lab and tourism product

**Guide "Criteria for intervention and sustainable conservation of the architectural heritage of the Canary Islands and Cape Verde"** (Spanish and Portuguese)





# Sustainable intervention

to improve the heritage environment of the city of São Filipe, in the island of Fogo

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Pilot intervention to improve energy sustainability at the headquarters of the Câmara Municipal de São Filipe, a building of national heritage interest, which highlights the viability of this type of action and its contribution to its conservation and revaluation:

*Improvement of the energy efficiency of its envelope*

*Installation of a photovoltaic solar plant on the roof*

*Energy resources use optimization - intelligent and compact weather stations "MeteoINT" (SOSTURMAC)*





# REVALUING THE NATURAL HERITAGE

from the sustainable  
point of view and foster  
the development of low  
carbon touristic products

Design of the **"Zero CO2 SOSTURMAC Modular tourist accommodation"** as a new eco-innovative tourism product for high natural value locations

**Complementary studies for the future implementation of tourism products "Zero CO2"** in protected areas of the Canary Islands and Cape Verde

**Specific proposal for the implementation of the "Zero CO2 SOSTURMAC Modular tourist accommodation"** in the Natural Park of Fogo and in the island of Brava

**Optimization of ICT tools** for the management and marketing of "Zero CO2" tourist accommodation





# Intervention to improve

energy sustainability at the tourist information point and administrative headquarters of the Fogo Natural Park in Chã das Caldeiras

Pilot intervention at the headquarters of the Fogo Natural Park that has transformed it into an example of sustainable infrastructure in protected natural areas, with a 100 % sustainable energy consumption, improving its energy efficiency and creating a new outdoor space that enhances its use for tourism and for the local community.

*New services for the population and tourists with 100% renewable energy*

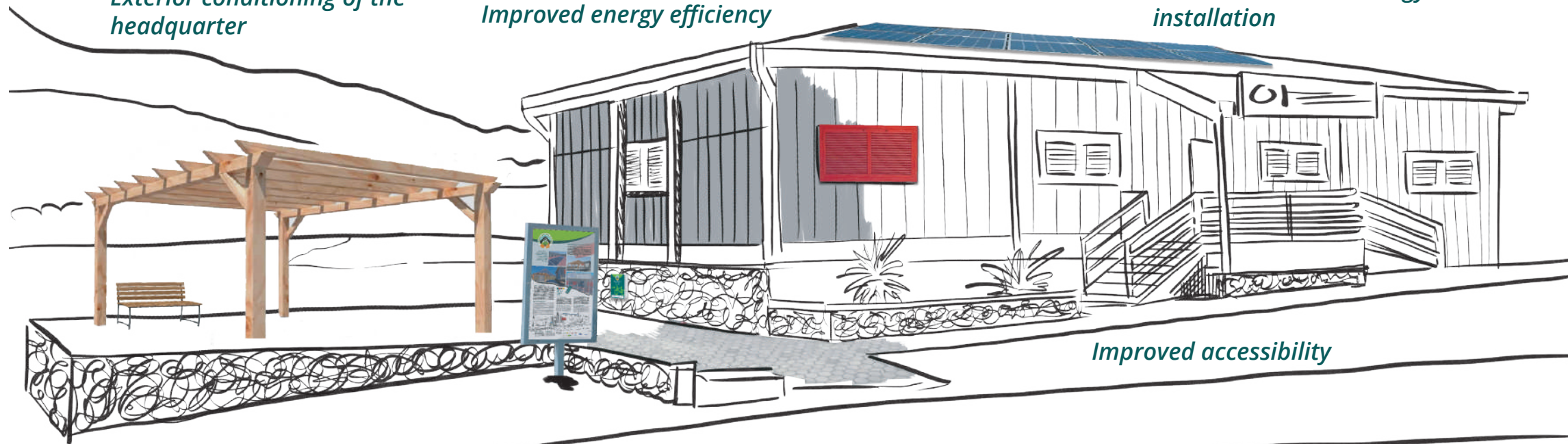
*Exterior conditioning of the headquarter*

*Improved energy efficiency*

*Optimization of energy resource consumption  
intelligent and compact weather station "MeteoINT"  
(SOSTURMAC)*

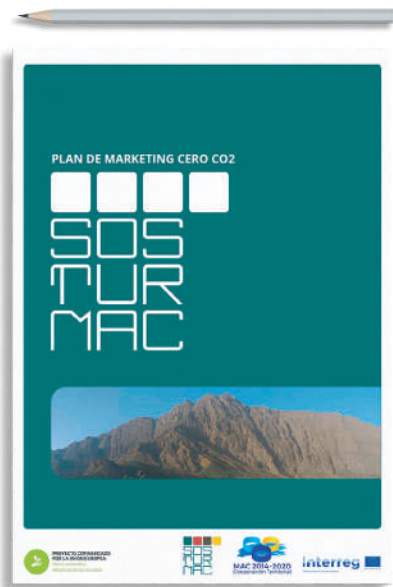
*Photovoltaic solar energy installation*

*Improved accessibility*



# PROMOTING THE TURISTIC INTEGRATION

of Zero CO2 products



**Positioning and promoting** of the Canary Islands and Cape Verde as sustainable low-carbon tourist destinations strategy

**Zero CO2 Marketing Plan** (Spanish and Portuguese)

**Promotion and tourist integration** of SOSTURMAC sustainable products

**3 Mobile applications** for tourist use about cultural and heritage tourism in the Canary Islands available for download on Google Play in 7 languages

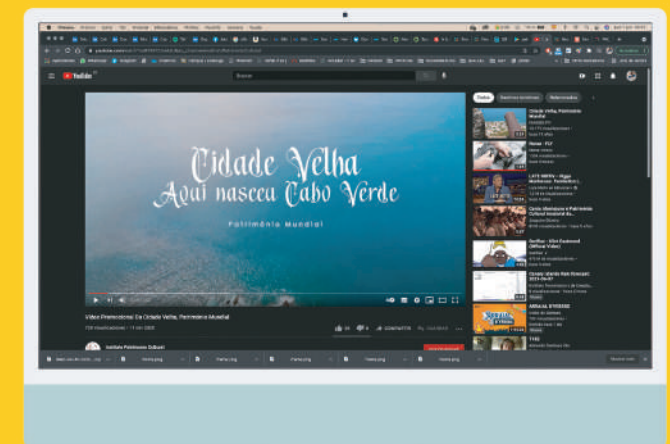
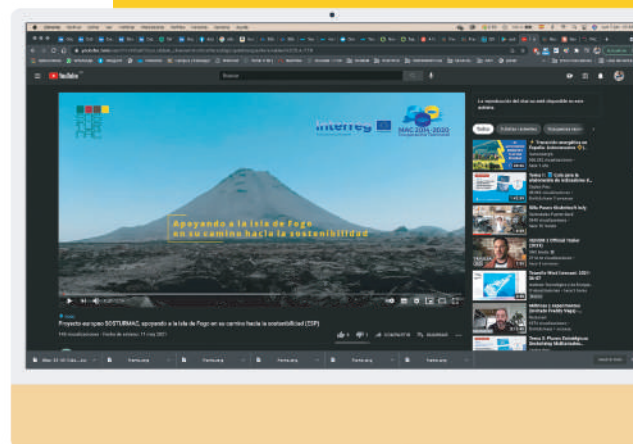
**"La Laguna", "Los Realejos" "S/C de La Palma"**



**4 Virtual Tours** linked to the Sustainable Route SOSTURMAC ITER – Montaña Pelada, Tenerife (Spanish and English)

**Promotional video** about Fogo Island and sustainable SOSTURMAC interventions (4 languages)

**Promotional Video** of Cidade Velha as a World Heritage City SOSTURMAC / IPC / UNESCO (Portuguese)





# Design of 12 SOSTURMAC Sustainable Tourist Routes

## MAIN ROUTS

Sustainable route ITER – Montaña Pelada (Island of Tenerife, Spain).

Sustainable route La Laguna – Villa Abajo Villa Arriba (Island of Tenerife, Spain).

Sustainable route in electric bicycle in Chã das Caldeiras (Island of Fogo, Cabo Verde).

Sustainable route in bicycle in São Filipe – Chã das Caldeiras Island of Fogo, Cape Verde).

Trekking Sustainable route São Filipe – Bordeira – Chã das Caldeiras (Island of Fogo, Cape Verde).

## COMPLEMENTARY ROUTS

Sustainable route Natural Monument Montaña de Ifara y los Riscos (Island of Tenerife, Spain).

Sustainable route El Médano and la Natural Reserve of Montaña Roja Island of Tenerife, Spain).

Sustainable route old town Granadilla de Abona (Island of Tenerife, Spain).

Sustainable route Camino del Hermano Pedro (Island of Tenerife, Spain).

Sustainable route Cañada Lagunera (Island of Tenerife, Spain).

Sustainable route in bicycle Brava (Isla de Brava, Cape Verde).

Sustainable route Cidade Velha (Ribeira Grande de Santiago, Isla de Santiago, Cape Verde).



## Ficha MIDE

MIDE				Ruta sostenible de senderismo ITER-Montaña Pelada	
horario	2h 40'			2	severidad del medio natural
desnivel de subida	300 m			2	orientación en el itinerario
desnivel de bajada	300 m			3	dificultad en el desplazamiento
distancia horizontal	8,0 Km			2	cantidad de esfuerzo necesario
tipo de recorrido	Circular				
Condiciones de todo el año, tiempos estimados según criterio MIDE, sin paradas. Calculado sobre datos de 2019.					

## Perfil altimétrico

El perfil altimétrico que se presenta corresponde a la 'ruta base' (no se incluyen en él las variantes opcionales).

# PROMOTING THE CONSERVATION OF HERITAGE VALUES

through dissemination  
and training actions

Dossier "**Green business ideas associated with Zero CO2 Tourism**" (Spanish and Portuguese)

**SOSTURMAC guide of good practices**, useful resources and inspiring initiatives for a more sustainable tourism (Spanish and Portuguese)

**40 human resources capacity building activities** for which 15 training manuals have been developed





# SOSTURMAC

## awareness campaign

"Promote the conservation of heritage values in the Canary Islands and Cape Verde"

**200 dissemination, training and awareness-raising actions that have reached more than 32,000 beneficiaries**

**300 collaborations** with key actors, initiatives or projects

**6 sosturmac didactic workshops** designed, produced and presented, with more than 185 own materials created

Workshop "Counterpart heritage of the Canary Islands and Cape Verde"

Workshop "Paint your heritage"

Workshop "Fotobooth, the heritage in your memory"

Workshop "Management of heritage cities"

Workshop – Game "What's that on your head?"

On-line workshop "Virtual tour SOSTURMAC: energy and heritage – Virtual tour sustainable route ITER – Montaña Pelada"

**9 telematic awareness tools** (virtual tours, heritage managers and APPs)

**21 informative materials** about the Heritage of the Canary Islands and Cape Verde (brochures, informative notebooks, books, etc.)

**23 audiovisual materials**

**460 awareness-raising actions** on the Web and Facebook SOSTURMAC

**141 informative and promotional materials** of campaign actions (leaflets; banners; posters; T-shirts; pens, etc.)



# DISSEMINATION OF THE PROJECT

## AND ITS RESULTS

### **600 media appearances (TV, radio, print and digital)**

TV Program "The Adventure of Knowledge. Universo Sostenible 2" of La 2 de Radio Televisión Española (RTVE)

TV Program "Buenos Días Canarias" (RTVC)

Rtvc and Radiotelevisão Caboverdiana newscasts

Radio Program "Doble Hélice" of Radio Televisión Española (RTVE)

Specialized magazine "Turimagazine", Cape Verde

Specialized magazine "Energy Hub" - newspaper La Opinión, Canarias

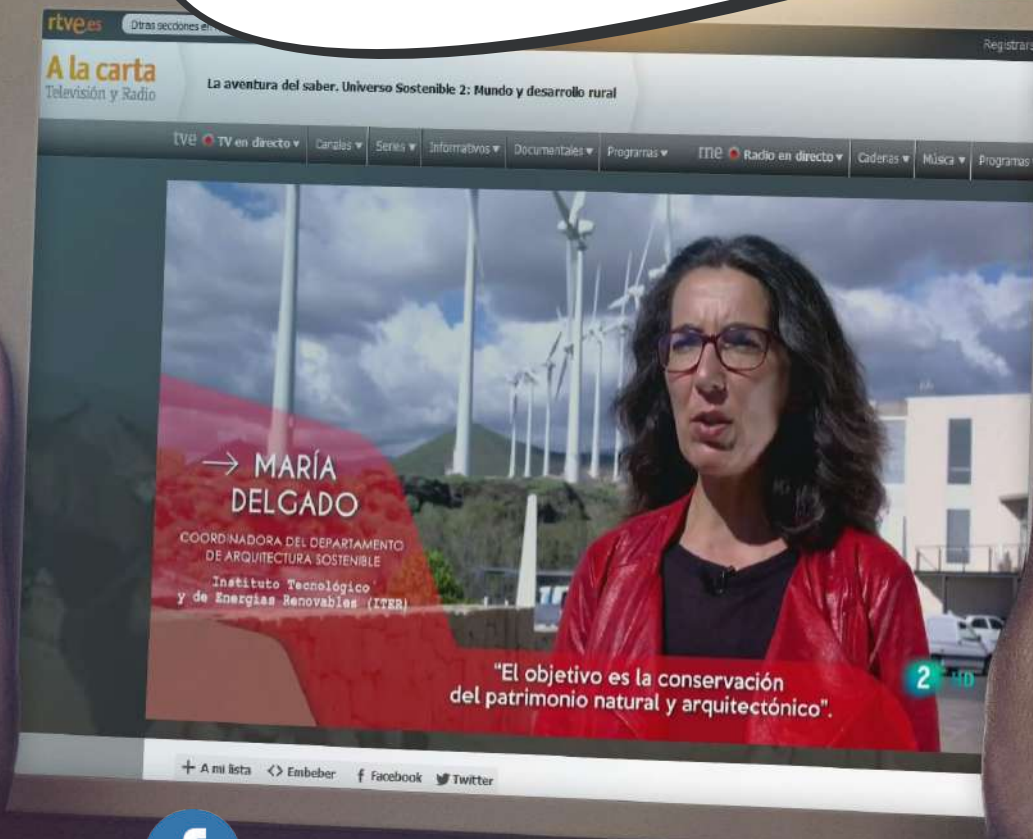
Digital magazine "Plan A" - Newspaper El Mundo, Spain

### **38 articles or scientific communications in 22 external publications of a scientific-technical or informative nature**

### **210 own communication events, in which 23,730 people have participated**

### **100 regional, national or international external events**

**1,170 dissemination actions** carried out by partners in their own and external media



**SOSTURMAC website** (<http://sosturmac.iter.es/>)

**Facebook page** (<https://www.facebook.com/SOSTURMAC>)



# SOSTURMAC NUMBERS



**PILOT ACTION:** intervention to improve the energy sustainability in the headquarters building of the Câmara de São Filipe (Fogo Island, Cape Verde).

**PILOT ACTION:** intervention to improve the energy sustainability in Fogo National Park headquarters in Chã das Caldeiras (Fogo island, Cape Verde).

**Design and own manufacture of the intelligent and compact weather station "MeteoINT".**

**Consolidation of ITER bioclimatic houses as a living lab and tourism product,** achieving its incorporation in the network of excellence RED MONITOR BIA2017-90912-REDT 2018-2020 in 2019.

**ICT management and marketing system** of the CB ITER establishment optimized, consolidated and in current operation.

**Design of the "Zero CO2 SOSTURMAC Modular tourist accommodation"** as a new eco-innovative tourism product for spaces of high natural value.

**Study of 48 protected natural areas in the Canary Islands and Cape Verde** and recognition of 583 possible locations for the Zero CO2 module.

**Proposal for the implementation of the "Zero CO2 SOSTURMAC Modular tourist accommodation"** in the Natural Park of Fogo and in the island of Brava.

**13 recognitions such as Good Practice and awards** given by referenced entities.

**1 funds agreement with UNESCO** for the development of actions in Cidade Velha, a World Heritage City.

**33 services or products created and or improved in the ecotourism sector.**

**3 Implementation projects** linked to sustainable interventions in heritage.

**9 ICT tools** to raise awareness about the architectural and cultural heritage in the Canary Islands and Cape Verde (heritage managers, mobile applications and virtual tours).

**1 University Internship Plan** linked to the Heritage Manager of the Canary Islands.

**12 SOSTURMAC Sustainable Tourist Routes** in the Canary Islands and Cape Verde.

**200 actions of the SOSTURMAC awareness campaign, reaching more than 32,000 beneficiaries.**

**6 workshops / didactic SOSTURMAC games,** for which 185 own materials have been developed

**304 SOSTURMAC Publications:**

**70 technical documents**

**85 documents of an informative nature**

**21 materials for the dissemination** of the Heritage in the Canary Islands and Cape Verde

**24 brochures – guides to SOSTURMAC sustainable routes**

**40 publications or materials** related to the courses and events held

**15 training manuals**

**21 materials for the dissemination** of the SOSTURMAC project

**28 SOSTURMAC Powerpoint presentations**

**17 articles or reviews** SOSTURMAC in specialized media.

**11 scientific communications** in 6 International Congresses of reference.

**52 promotional materials** for SOSTURMAC activities

**23 audiovisual materials edited**

**40 actions** to improve the capacities of human resources in both regions.

**3 new jobs created.**

**30 contracts with local companies.**

**300 collaborations with key actors, initiatives or projects.**

**50 transnational coordination meetings** between European and Cape Verdean partners.

**16,500 visits to the SOSTURMAC website and 320 followers on Facebook**

**44,500 people reached by the Facebook SOSTURMAC and 68,000 views.**

**1,170 actions for dissemination** in own and external media.

**160,000 views of SOSTURMAC content in the partners' RRSS.**

**600 appearances in external media** (digital, print, radio and TV).

**100 external events or key initiatives**

**210 own communication events**



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