



SERN

General Assembly 2023

**11-12 MAY 2023
Cervia**



COMUNE
DI CERVIA

LOCAL GREEN DEALS
CITY PLANNING AND CLIMATE ADAPTATION

**Planning strategies
for city resilience**

Caterina Girelli
Municipality of Cervia

The strategy

re-orientation of spatial planning in the direction of environmental, economic and social sustainability

PSC - RUE

2017

COVENANT OF MAYORS

- Baseline Emission Inventory
- Risk Assessment and Vulnerability to Climate Change

2017

SECAP

2nd in Emilia-Romagna region

2017

PUG

2018

1st in Emilia-Romagna region

2019

ADRIADAPT

- Interreg Project Italy-Croatia:
- Resilience of the territory
 - Adaptation to Climate Change

2019

SECAP MONITORING:
ACTION REPORT

Plan monitoring

2021

SECAP MONITORING:
FULL REPORT

- Emission Inventory
- Plan update

2022

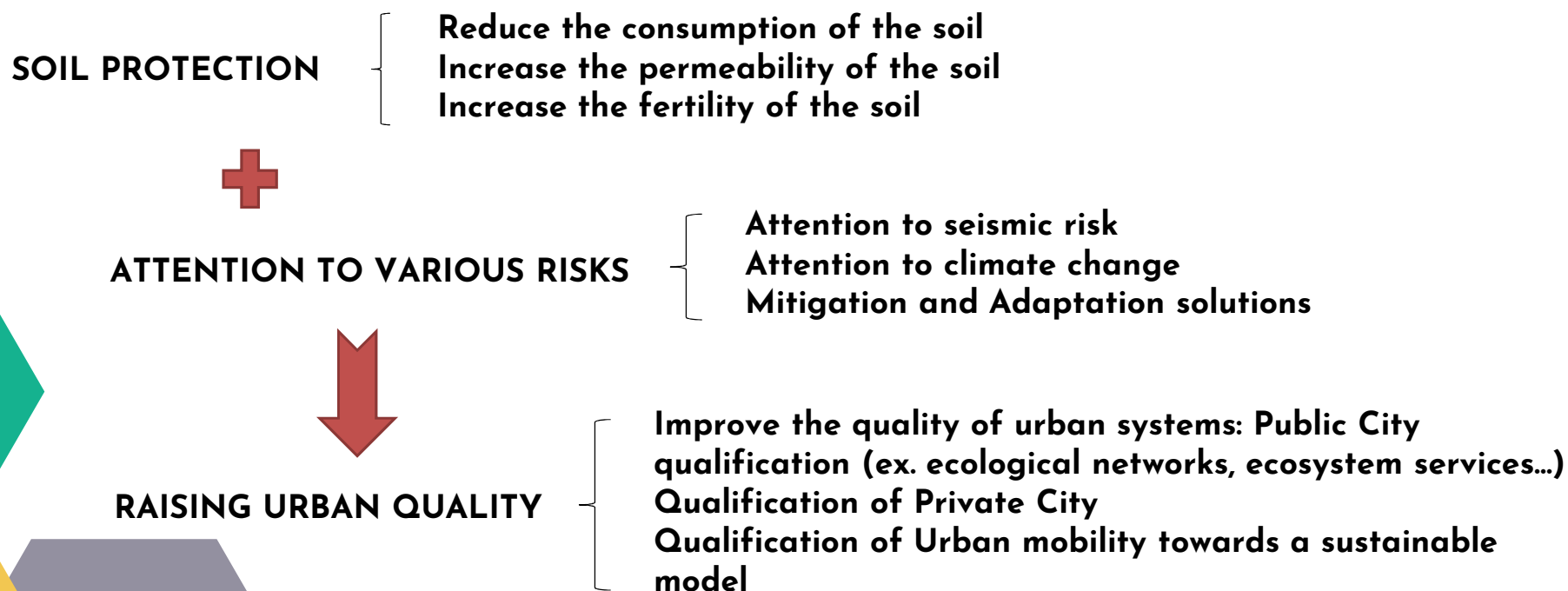
SUMP

Focus on Sustainable Mobility



The strategy

The most important aspects are...



**A NEW SENSITIVITY IN URBAN TRANSFORMATION...
TO BUILD CLIMATE PROOF CITIES**

The strategy - SECAP- mitigation actions

SETTORE	CODICE ID	TITOLO	
EDIFICI COMUNALI	EC01	CLIMATIZZARE MEGLIO	★
	EC02	ILLUMINARE MEGLIO	★
	EC03	PILOTA NZEB	★
	EC04	SPENDIAMO VERDE	★
	PIAN01	SGA, EMAS e....	★
	PIAN02	VOCE DI BILANCIO "RISPARMIO ENERGETICO"	★
	PIAN03	SISTEMA DI GESTIONE DELL'ENERGIA	★
PARCO AUTO COMUNALE	TRACOM01	RAZIONALIZZARE I TRASPORTI	★
	TRACOM02	AUTO MENO INQUINANTI	★
ILLUMINAZIONE PUBBLICA	IP01	ILLUMINAZIONE UTILE	★
EDIFICI RESIDENZIALI	RES01	RI-QUALIFICATI!	★

SETTORE	CODICE ID	TITOLO	
	RES02	SCOPRIAMO L'ACQUA CALDA	
	RES03	CERVELLI SMART!	
TERZIARIO	TER01	DECALOGO DEGLI ECO-EVENTI	★
	TER02	OSPEDALE EFFICIENTE	★
	TER03	E-CENSIMENTO	
	TER04	NEGOZI E UFFICI A LED	
	TER05	PORTO PULITO	★
	TER06	SMART BEACH	★
	TER07	SMART RECEPTION	★
INDUSTRIA	PRO01	DIAGNOSI ENERGETICHE E SGE	
TRASPORTI	TRA 01	CERVIA IN MOVIMENTO	★
	TRA 02	CERVIA PEDALA	★
	TRA 03	A SCUOLA.... SENZA INQUINARE	★

SETTORE	CODICE ID	TITOLO	
	TRA 04	MUOVERSI PIÙ LEGGERI	★
	TRA 05	AL MARE SENZ'AUTO	★
PRODUZIONE LOCALE DI ENERGIA	FER 01	FOTOVOLTAICO SU EDIFICI COMUNALI	★
	FER 02	USIAMO IL SOLE	★
ALTRO	INF01	SPORTELLO ENERGIA	
	INF02	BATTI IL CHIODO	★
	INF03	IMPARARE LE ALTERNATIVE	★
	INF04	CLIMA-L-CINEMA	★

★ Implemented Action
 ★ Launched Action

The strategy - SECAP - adaptation actions

The SECAP provides mitigation and adaptation actions dealing with social, economic, environmental sustainability, production, tertiary, urban planning, to achieve these goals:

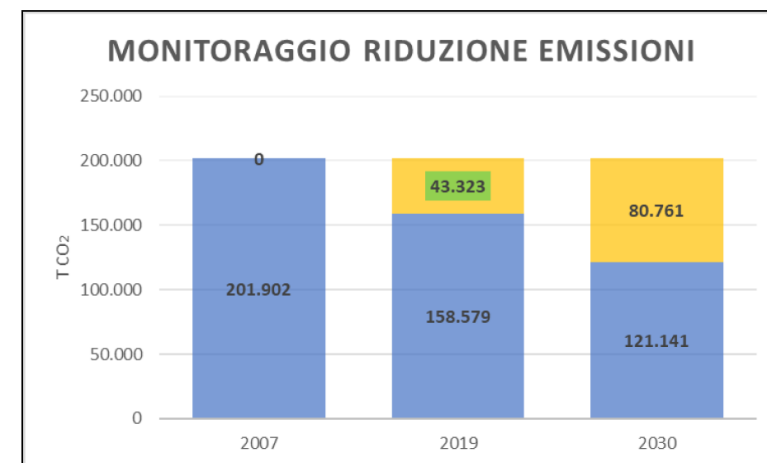
- strengthen the ability to adapt
- ensuring citizens access to safe, sustainable and affordable energy
- accelerate the decarbonisation of territories
- approach to climate neutrality

SETTORE	CODICE ID	TITOLO	
Turismo	ADAPT 01	CARTA DI CERVIA	★
Acqua	ADAPT 02	PIÙ PERMEABILITÀ	★
Protezione civile e Soccorso	ADAPT 03	ALLERTA METEO	★
Agricoltura e silvicoltura	ADAPT 04	LUNGA VITA ALLA PINETA	★
Agricoltura e silvicoltura	ADAPT 05	PRONTI AL FUOCO	★
Ambiente e biodiversità	ADAPT 06	PIANO DI GESTIONE SALINA DI CERVIA	★
Ambiente e biodiversità	ADAPT 07	CERVIA VEDE VERDE	★
Acqua	ADAPT 08	LITORALE PROTETTO	★
Acqua	ADAPT 09	NUOVO POTABILIZZATORE ROMAGNA ACQUE	★

★ Implemented Action

★ Launched Action

The monitoring activity allows to quantify the decreasing emission



2007 → 2019 **GOAL** → 2030

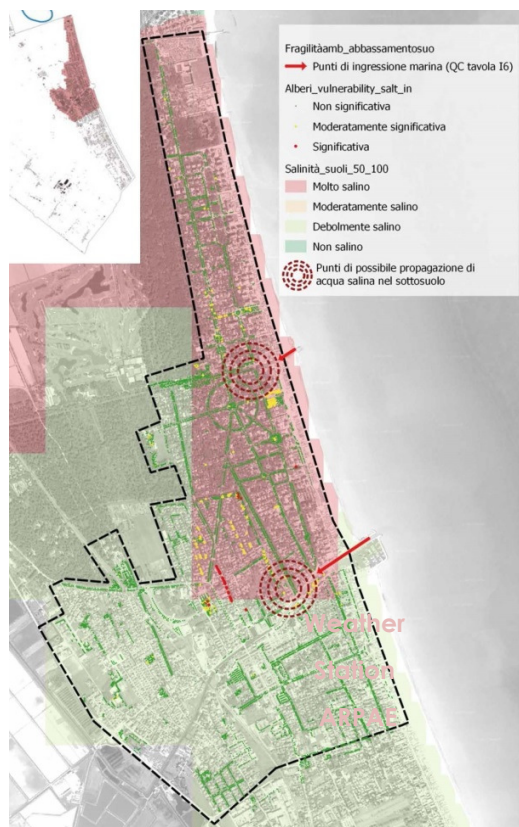
CO₂

- 43.323 t

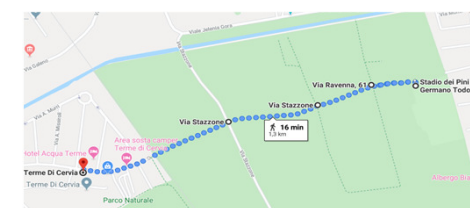
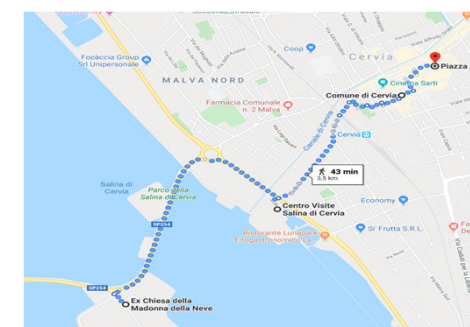
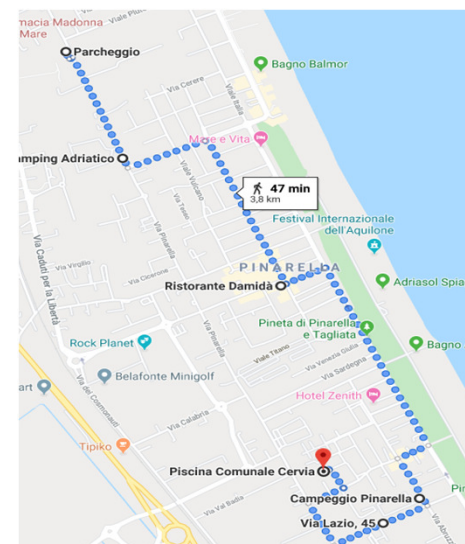
- 37.438 t

Investigating impacts and making vulnerability analysis:

- heat islands
- run-off
- sea level rise
- salt-intrusion



Urban mesoclimate and microclimate monitoring



MESOCLIMATE



URBAN HEAT ISLANDS

6 temporary weather stations, detecting:

- Temperature
- Relative Humidity

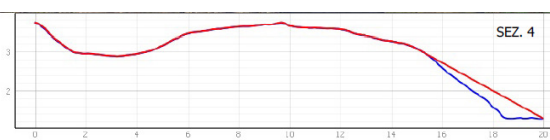
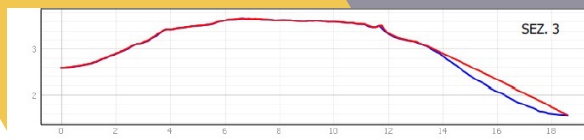
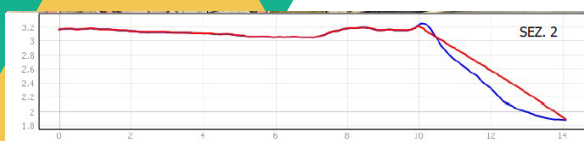
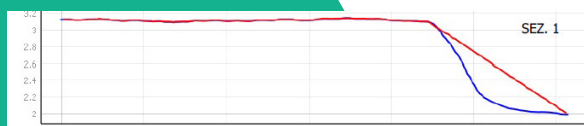
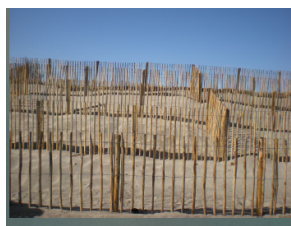
1 permanent weather station, detecting:

- Temperature
- Relative Humidity
- Wind speed
- Wind direction
- Pressure
- Rainfalls
- Sun radiation

Marine ingression

Pilot project: reconstruction of the dune trough naturalistic engineering intervention to defence against:

- erosion
- marine ingression
- salinization of groundwater



Salt intrusion

Collection of saline wedge data

INSTALLATION
OF
A PIEZOMETER

+

MEASUREMENT
CAMPAIGN

Salinization



Soil
Infertility



Analysis



Planting suitable
species



Reforestation



Urban floodings

SEA FLOODING
Waterfront, Cervia

CURRENT STATUS without a sand dune to protect the buildings

Coastal flood modeling
(Safer_COAST)
200 years return period
Extreme Sea Level = 2,5 m

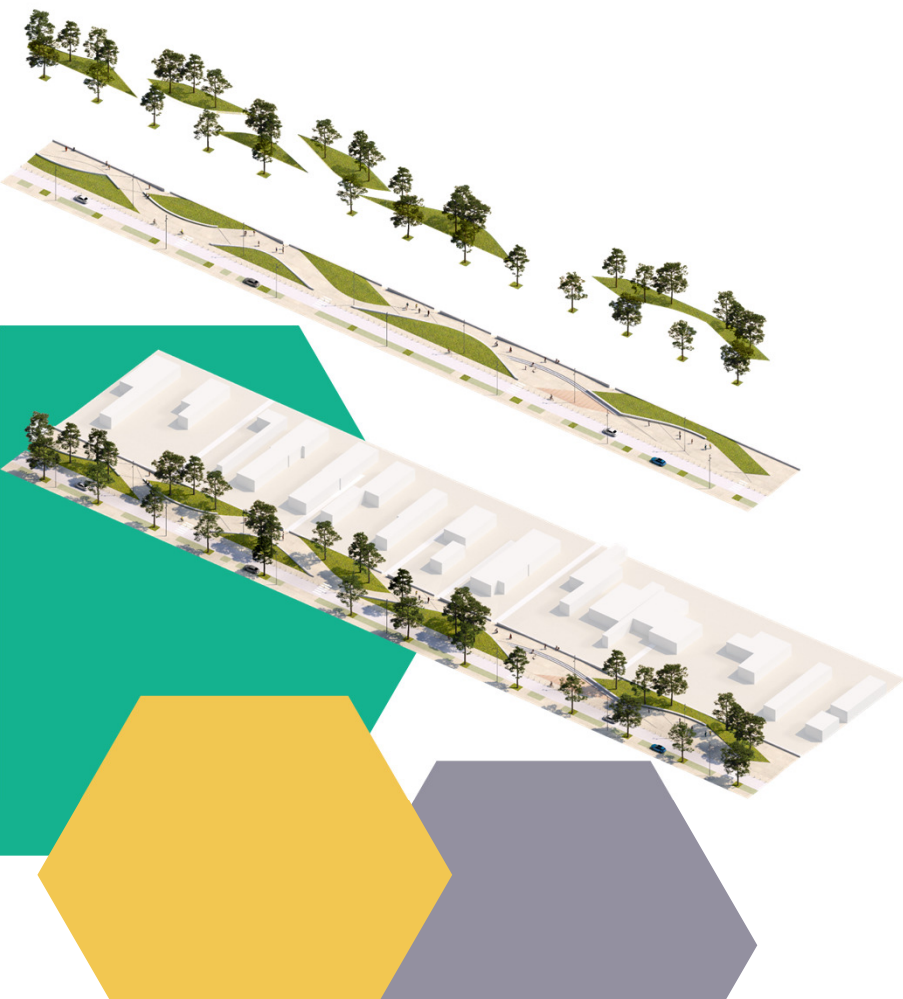


New regeneration intervention planned



Need of a hydraulic hazard mapping

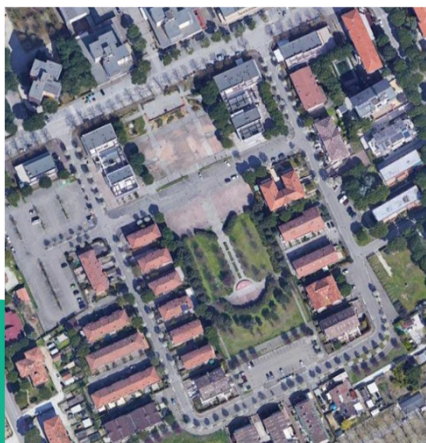
PROJECT with a sand dune to protect the buildings



Rain flood modeling
(Safer_RAIN)
200 years return period
Extreme Sea Level = 2,5 m



RAIN FLOODING
Premi Nobel Square, Pinarella



CURRENT STATUS



PROJECT

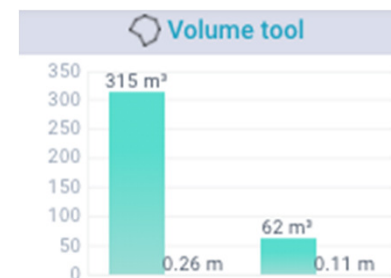


Rain 50 mm - 425 mc - duration 6h



New Scenario

RAINFALL EVENTS						
Tag	Upload	D(h)	Vol(m³)	Draw	Inf	Add
RAIN_EVENT3		6	433	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
RAIN_EVENT4		6	419	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	



From words to action

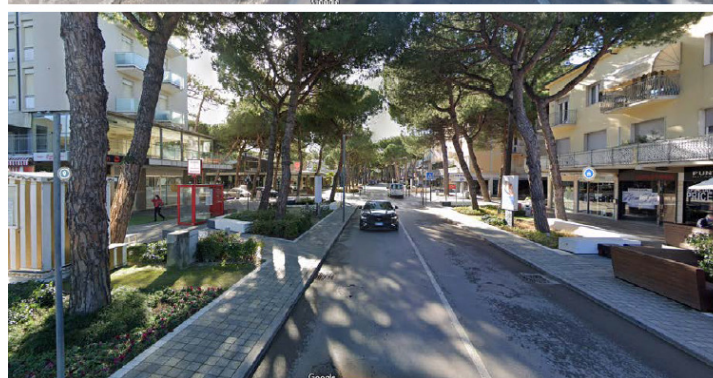
Milano Marittima - waterfront



Milano Marittima - city center



Cervia - Borgomarina



The issue of safety covers the entire territory and requires the collaboration of public and private to be put in the foreground, ensuring solidity and resilience to the city through redevelopment and urban regeneration.

For example, the in-depth study on Hydraulic Risk focused on the design of the Public City and found confirmation in the redevelopment of the waterfronts of Milano Marittima, Cervia and Pinarella-Tagliata, Viale Matteotti and Borgo Marina urban regeneration, where urban furniture and the adoption of Nature Based Solutions act as a safety measure against floods, combining the aesthetic component with the functional one.



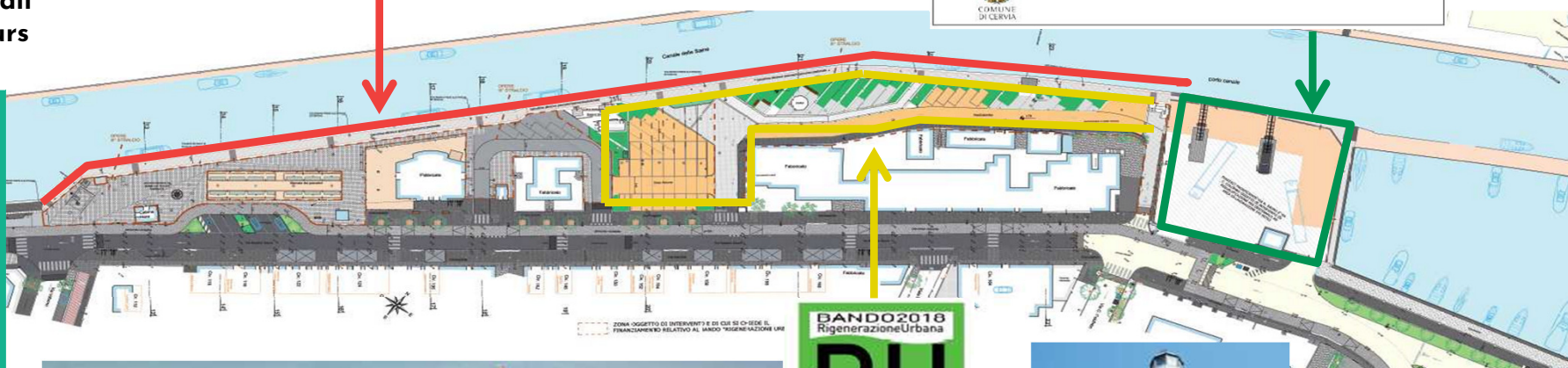
The strategy of the Municipality of Cervia for the regeneration of places of identity consists of funding as a vehicle for innovation and development



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LOCAL GREEN DEALS - CITY PLANNING AND CLIMATE ADATAPTION

Development of a common tourist product, based on the recovery, conservation and enhancement of the rich cultural heritage linked to the sea and the small Adriatic harbours



recovery and enhancement of the historical-identity elements of the area, increasing its attractiveness from the tourist point of view and the social and economic value

Stakeholders and community engagement - La Battigia Eco-accessibile

"Battigia eco-accessibile" is part of the path of creation of territorial laboratories for the sustainability of businesses promoted by the Emilia-Romagna Region through the L.R.14/2014, for the implementation of the 2030 Agenda

The path promotes business innovation through public-private collaboration, to foster a low-carbon economic model, based on the circular economy and resilient to climate change

Beneficiary and coordinator: Municipality of Cervia

Partners:

- Centro per l'Innovazione della Fondazione Flaminia - CIFLA
- Clust-ER Greentech
- Cooperativa Bagnini di Cervia

Project duration: April 2020 - December 2021

Budget: 44.000 €



Co-design of pilot actions for the transition to a sustainable destination

Awareness raising and promotion campaigns

Organisation of co-design laboratories for the definition of innovative pilot projects under the following themes:

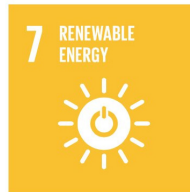
Sustainable mobility and logistics of the last mile for the supply of goods

Energy communities and possible applications in the territory

Educational workshops for children to raise awareness of the Agenda 2030 Objectives

Promotion campaign "Eco-accessible waterfront" and its results

Final public event for stakeholders and citizens





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Stakeholders and community engagement - Enercom

"EnerCom" is part of the implementation of territorial laboratories for the sustainability of businesses promoted by the Emilia-Romagna Region through the L.R.14/2014, for the implementation of the 2030 Agenda

The path promotes business innovation through public-private collaboration, a project of production and consumption of energy from renewable sources according to the model CER (Renewable Energy Community) which brings together community services and private entrepreneurs

Beneficiary and coordinator: Municipality of Cervia

Partners:

- AGENZIA PER L'ENERGIA LO SVILUPPO SOSTENIBILE -AESS
- Clust-ER Greentech
- Confcommercio ASCOM
- Confesercenti
- CNA
- Confartigianato
- Cooperativa Bagnini di Cervia

Project duration : Marzo 2022 - Dicembre 2023

Budget: 70.000



Stakeholders and community engagement - Enercom

Training and co-design laboratories

Organization of training and information meetings. Stakeholders involvement aimed at the definition of a Renewable Energy Community model and sharing knowledge

Preliminary technical and economic feasibility analysis of the REC

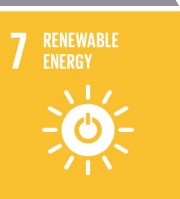
Inspections, analysis of energy requirements, technical and economic feasibility, definition a model for the coastal REC

Legal and administrative documentation for the REC

Preparation of legal and administrative documents and checks to define the establishment of the REC

Promotion and communication activities

Promotion and dissemination actions through awareness campaigns and organization of information moments addressed to businesses, citizens, tourists



LOCAL GREEN DEALS
CITY PLANNING AND CLIMATE ADAPTATION

Thank you

Caterina Girelli
Municipality of Cervia