

INTERGROUP SEAS, RIVERS, ISLANDS AND COASTAL AREAS



Enhance Climate Change Adaptation and Coastal Resilience
Capitalisation on EU project results and regional initiatives
28th February 2023

Climate Change Adaptation and Integrated Management of the Emilia-Romagna Coast - GIDAC: a participated Strategy

Adriaclim project | Emilia-Romagna Region |

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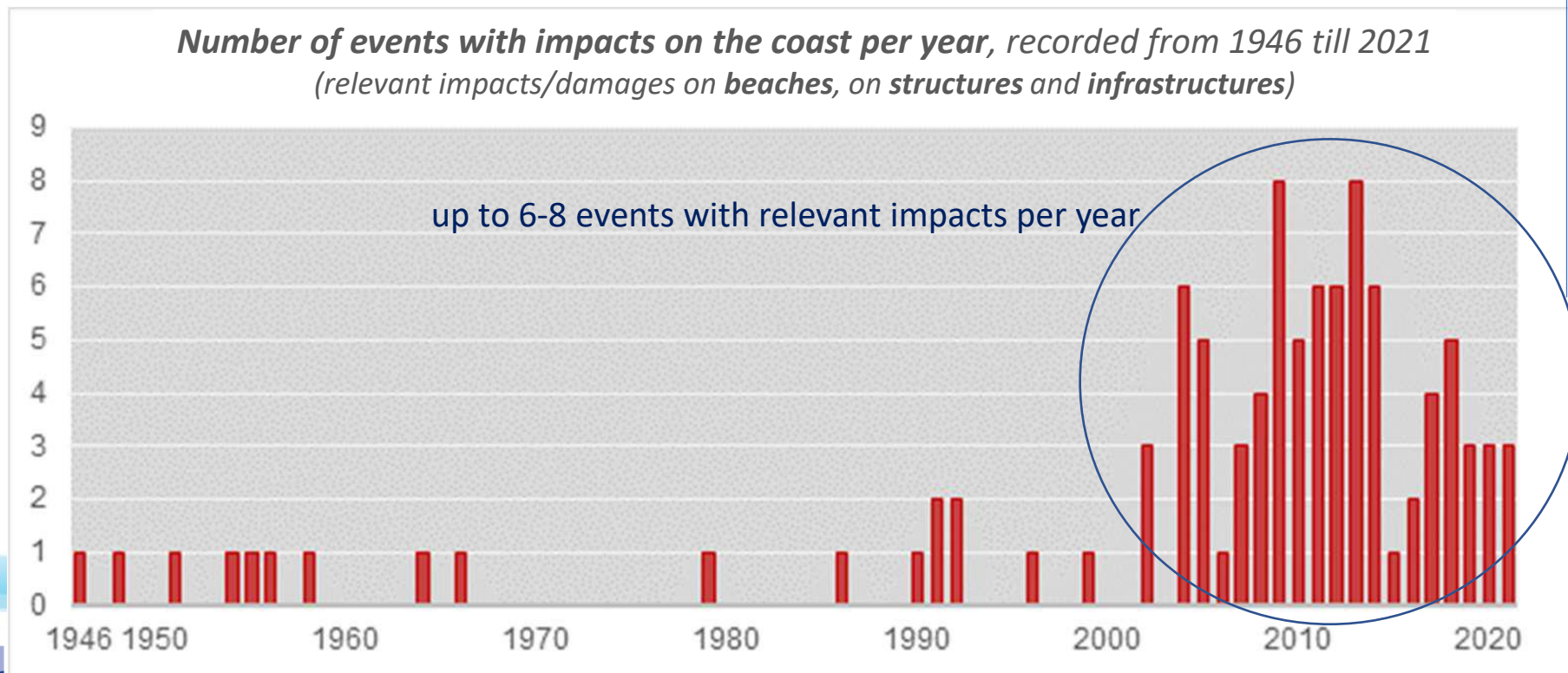


European Regional Development Fund



Motivations of the GIDAC Strategy

- 500.000 inhabitants along the 130 km of E-R coast, quite double up in the summer
- 40 millions of touristic presences in the Emilia-Romagna coast during the summer season
- 34.000 hectares of natural protected areas along the coast (national, regional, nature 2000)
- 9% of total regional GDP produced on the coast (tourism and other Blue Economy sectors)
- Vulnerability of the territory increased in the last years (lack of sediments input, coastline retreats)
- Increased number of sea storm events with relevant impacts on the coast recorded in the last 15 years (3 storm surges with relevant impacts just in the last 5 months 2022-2023)

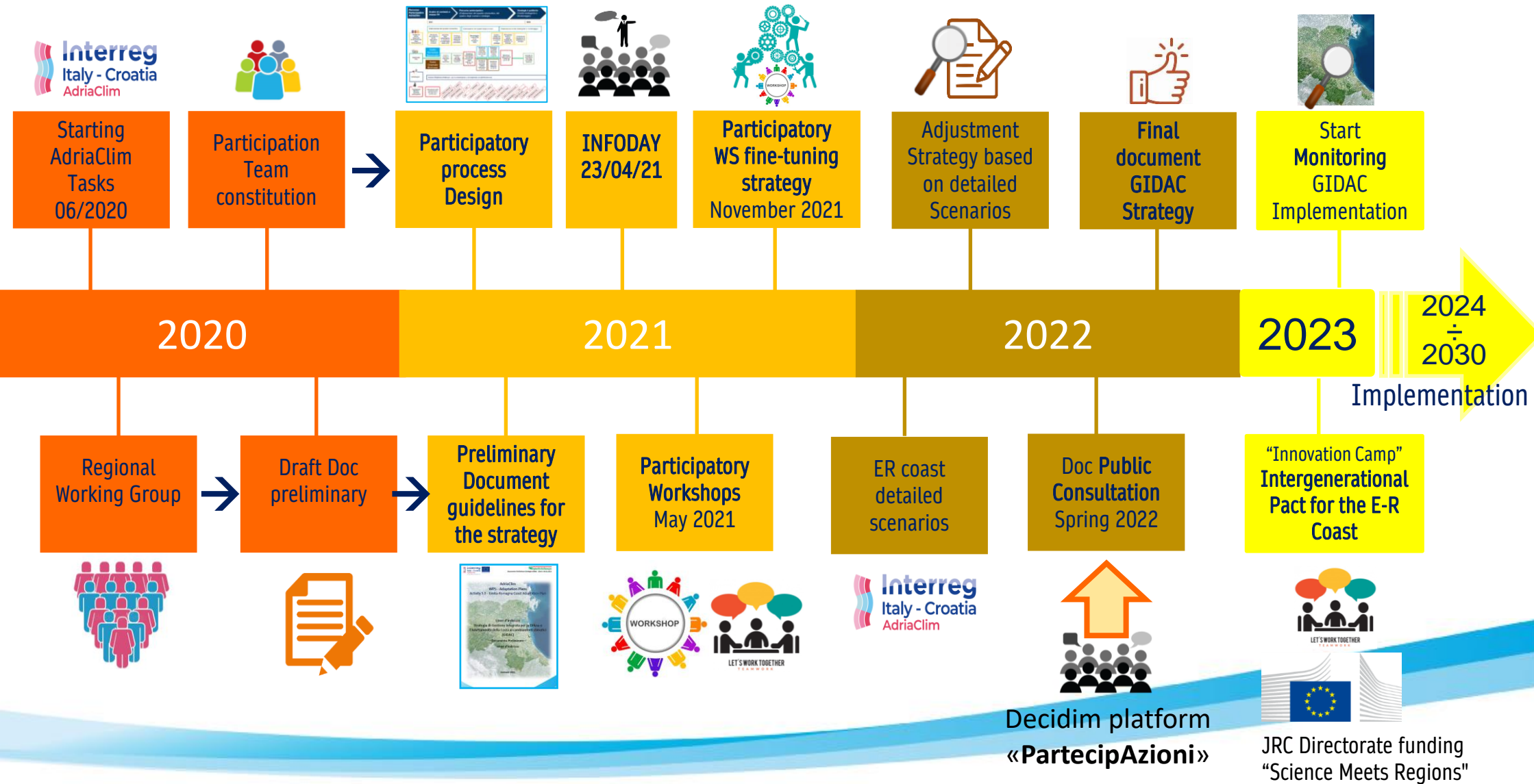


Opportunities given by the AdriaClim project



- Funding/supporting the preparation of Strategies and Plans for the Adriatic coastal areas
- Exchanging experience, sharing data and modelling, providing high resolution climate information
- Detailed climate scenarios on the Adriatic coastal and marine area
- Monitoring and forecasting tools

Timeline and milestones of the GIDAC Strategy participated construction the Participatory Process “What Coast will it be?”



GIDAC strategy reference policy framework

- **Recommendation for ICZM implementation** in Europe (2002/413/EC)
- **EUROSION** Policy Recommendations (2004)
- **Emilia-Romagna regional ICZM Guidelines** (DCR 645/2005)
- **The Flood Directive** (2007/60/EC), **Flood Risk Management Plan in E-R coastal area** (II° cycle, 2022)
- **ICZM Protocol** of the Barcelona Convention (2008)
- **Regional Law 15/2018 “Participation in the elaboration of public policies”** (Aarhus Convention 1998)
- **Regional Strategy for Mitigation and Adaptation to climate change in Emilia-Romagna** (DAL 187/2018)
- **EU Strategy for adaptation to climate change**, COM(2021) 82 final
- **Agenda 2030 of Emilia-Romagna Region** (DGR 1840/2021), goal 11, 12, 13, 15
- **The National Plan for Climate Change Adaptation** (December 2022)

GIDAC Strategy preparation
the Participatory Process *"What Coast will it be?"*

<https://partecipazioni.emr.it/processes/che-costa-sara>



What coast will it be? Results ...

PUBLIC CONSULTATION

GIDAC strategy document

46 contributions:

36 proposal of integration/modification

10 expressions of support on specific topics

32 Proposals accepted

in whole or in part

4 proposals not acceptable

Participatory
construction of
GIDAC Strategy

7 meeting
195 overall
attendance

Involved: Municipalities and other territorial bodies of the coast, associations and economic operators, universities and research institutes, environmental and local associations.

the process totaled

12.534
views

4 Pillars of the GIDAC

- 1. Free up space along the coast and keep beaches free from structures and infrastructures** creating "buffer zones" for the unfolding of the dynamics of the sea, promoting the reorganization of critical coastal stretches and the retreat or realignment of the anthropic elements where necessary.
- 2. Ensure an adequate supply of sediments to the coastal system, from the different internal and external sources**, for the purpose of restoring and maintaining the sedimentary balance for current and expected climatic conditions.
- 3. Promote the integration of coastal risks costs into decision-making processes on coastal planning transformations and investments**, through a shared approach and a correct cost/benefit assessment.
- 4. Maintain a Knowledge System always updated** on coastal and river dynamics, on management of erosion and sediment sources, on coastal phenomena and risks in a current and forecast key, on the planning and implementation of interventions and transformations along the coastal area.

GIDAC' General Objectives

1. **Reduce the vulnerability of the coastal territory** by ensuring an adequate safety asset of the coastline (beach system) in relation to its function of “first structure” for inland protection.
2. **Ensure the conservation and integrity of coastal ecosystems, landscapes and geomorphology for present and future generations.**
3. **Promote the sustainable development of the coastal zone**, with regard to a rational planning of human activities in relation to the expected scenarios of climate change.
4. **Prevent/reduce the impacts in coastal territories** of sea level rise, storm surges, erosion and marine ingression.
5. **Ensure the sustainable and coordinated use and management of the different sediment resources** useful for the nourishment and maintenance of beaches.
6. **Ensure coherence between public and private initiatives** affecting the protection and adaptation of the coastal zone, the littorals management, the use and conservation of coastal resources.

GIDAC Strategy document & Actions

<https://ambiente.regione.emilia-romagna.it/it/suolo-bacino/argomenti/difesa-della-costa/gidac/gidac-dicembre-2022>



Systemic Actions

- Integrated management of **coastal sediments**
- Improvement of **river** and coastal sediment transport
- Management and sustainable use **offshore** sediment deposits
- Management and use of sediments from **building excavations**
- Further reduction of the anthropic component of **subsidence**



Adaptation Actions

- **Urban regeneration** and transformations of the urbanized fabric with **adaptation purposes**
- Planning for the **reduction of vulnerability** in the coastal area
- Widening and elevation **adequation of the beach systems**
- Strengthening of the coastal **early warning system**



Maintenance Actions

- Beach maintenance with **nourishment**
- Maintenance and **remodeling** of detached protection works
- Maintenance and **adequation** of hard defenses and internal embankments
- **Elevation adjustment** of port fronts, docks and port channels



Transversal Actions

- Construction of a "**Pact for the Emilia-Romagna Coast**"
- Update and further development of the **Knowledge Framework**
- **Cost-benefit** assessment with **coastal risks** and environmental sustainability evaluation for the interventions on the coast

MAIN CONTENTS

PART A) **GENERAL FRAMEWORK**, PURPOSE, KNOWLEDGE FRAMEWORK, PARTICIPATED PROCESS

PART B) **STRATEGIC VISION**, OBJECTIVES, ACTIONS AND MANAGEMENT OPTIONS, SUSTAINABILITY

PART C) **ACTIONS AND IMPLEMENTATION GUIDELINES**

PART D) **COMMUNICATION, AWARENESS RAISING, PARTICIPATION** (strategies and tools, intergenerational approach and involvement)

PART E) **MONITORING & EVALUATION** (on strategy implementation and effectiveness of actions)

PART F) **MONOGRAPHIES OF PROVINCIAL COASTAL STRETCHES** (critical issues and hot spots, sustainability of coastal management, interventions and resources needed)

Innovation Camp

“Intergenerational Pact for the protection and adaptation of Emilia-Romagna coast”

IC financed by “Science Meets Regions” Program - EU DG Joint Research Centre
(March-April 2023)

Designing a “Intergenerational Pact” involving Senior and Young generations representatives of the 4Helix:
Public institutions/local bodies – Economic activities/associations - Research/University – Civil society

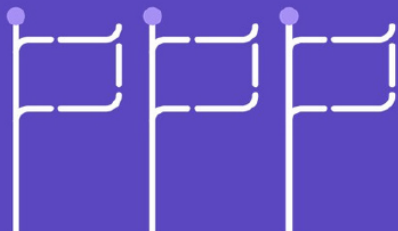
INTERGENERATIONAL PACT INNOVATION CAMP

Marzo-Aprile 2023



Chiamata all'azione per un patto intergenerazionale per la difesa e l'adattamento della costa ai cambiamenti climatici

science meets regions 2022 #EUSci4Regio



CHE COSTA SARA'?

Il cambiamento climatico è e sarà un problema con forti implicazioni sul nostro modo di vivere e lavorare nel futuro.

*Come collaborare tra le generazioni per affrontare le sfide e gli impatti del cambiamento climatico sulla costa dell'Emilia-Romagna?
Quali soluzioni possiamo trovare e sperimentare insieme?*

L'Innovation Camp per il Patto

La Regione Emilia-Romagna ha lavorato alla costruzione partecipata di una nuova strategia per la difesa e l'adattamento della costa ai cambiamenti climatici (GIDAC).

In questo ambito, la Regione vuole predisporre un Patto con il territorio come strumento di supporto all'attuazione della strategia.

Il Patto, guardando al futuro deve necessariamente coinvolgere anche le generazioni più giovani, a partire già dalla fase di co-progettazione.

Per la costruzione del Patto è previsto un ciclo di laboratori (Innovation Camp promosso dalla Direzione Generale JRC della Commissione Europea) da svolgere a marzo 2023.

Partecipazione innovativa

L'Innovation Camp è un metodo promosso dalla Commissione Europea per affrontare le sfide sociali attraverso lo sviluppo e il collaudo di prototipi di soluzioni per il futuro. Il metodo permette ai decisori e agli attori sociali di lavorare insieme per sviluppare e sperimentare idee innovative.

Partecipanti



Giovani interessati ai temi dei cambiamenti climatici



Giovani motivati e portatori di proposte innovative per la propria Regione



Adulti che intendono lasciare un territorio sicuro alle future generazioni

Ci sono due livelli di partecipazione.

L'Innovation Camp (IC) genera prototipi di soluzioni e azioni con un gruppo ristretto di portatori di interesse delle diverse generazioni che lavoreranno su tre sfide concrete.

Le soluzioni emerse nell'Innovation Camp saranno condivise e messe in pratica con un pubblico intergenerazionale più ampio attraverso la piattaforma PartecipAzioni della Regione Emilia-Romagna.

Participatory workshops to discuss and make proposals on how to realize:

- **Governance** - how can collaborate the different generations in the protection and adaptation of the coast (GIDAC Strategy) implementation?
- **Communication and Participation** – how can we co-design an intergenerational not conventional communication and participation strategy?
- **Monitoring and Knowledge continuous improvement** – how to promote continuous intergenerational learning on coastal protection and adaptation?

Relationship between IT National Plan on CC Adaptation & the GIDAC Strategy (main points)



- ✓ Structurally protect the coast from sea level rise, erosion and storm surge events
- ✓ Reduce exposure and vulnerability of coastal communities to storm surge events
- ✓ Ensure the conservation and protection of ecosystems, coastal habitats, increase biodiversity
- ✓ Raising awareness of coastal communities on coastal risks and alterations due to climate change



- Free-up spaces on littorals and elevating quota on the waterfronts
- Urban requalification, planning for reducing vulnerability, adaptive solutions
- Beach nourishment, dunes conservation and reconstruction
- Forecasting and monitoring system, Early warning system
- Communication and awareness empowerment on impacts and adaptation options
- Maintenance and empowerment of the knowledge system, in collaboration with local bodies



Closing Remarks

The National Plan for CC Adaptation represents a relevant long-awaited reference document in Italy for coordinating actions in climate change adaptation of the territory.

Anyway, a weakness point is the **lack of resources assigned** for supporting the Regions in preparing adaptation plans for their territory and coastal areas.

Coastal areas are among the **most threatened territories** by climate change: coastal communities, settlements, economic activities, ecosystems and environmental heritage are exposed to high risks (sea level rise, erosion, storm surges, marine ingression, floodings), while coastal areas are also the **first line of defence of the hinterland from the sea**.

The **missing of resources** specifically assigned for planning and realising specific adaptation actions and interventions represents a problematic **lack of perspective** for the future of our coasts and for the hinterland.

European programs (Interreg, Horizon, etc.) represent concrete support for the Regions in designing the adaptation of their territories, thanks to funds and creation of cooperation opportunities and synergies between Administrations dealing with the same challenges.

Something more should be done both at European and National level to give perspective to our coasts, individuating **adequate resources specific for putting in place adaptation**, interventions, re-design, regeneration, requalification of coastal areas **towards sustainability of the risks management, vulnerability reduction and enhancing resilience of coastal systems to CC effects**.

Thanks for your attention!

Emilia-Romagna Region

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<https://ambiente.regione.emilia-romagna.it/it/suolo-bacino/argomenti/difesa-della-costa/gidac/gidac-dicembre-2022>

www.italy-croatia.eu/adriaclim