

**MPA Engage** 

## ADDRESSING CLIMATE CHANGE IN MPAS: THE MPA ENGAGE SHOWCASE



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# MPA ENGAGE KEY FACTS & FIGURES







# **OUR PARTNERS**



#### **30 ASSOCIATED PARTNERS**

from both sides of the Mediterranean basin

#### MPA4Change

MPAs will bring in their experiences and know-how and will have the opportunity to implement totally or partially the project methodologies

Scientists will review the protocols and methodologies developed by the project, as well as contribute to their implementation

Science4Change

#### Med4Change

Policy actors will ensure the coherence and policy relevance of the project outputs, while also contribute to their mainstreaming into related policy processes

# **AIM & LINES OF ACTION**



**MPA-ENGAGE** aims to support MPA managers to adapt to and mitigate the ongoing climate change effects in the **Mediterranean Sea** 

MAIN LINES OF ACTION σ 0 U C nitorin N 0 • proa tici uo E patory iches 0 W 2 G I Developing adaptation action plans to Climate Change in seven MPAs bility en Ē G N ence S 1 en Φ S C C S

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## **VULNERABILITY ASSESSMENT**

#### **GOAL**

Guide MPAs to perform a **Socio-ecological Vulnerability Assessment** to evaluate the vulnerability of species, habitats and local stakeholders to the projected impacts of climate change.

#### **APPROACH**

**Vulnerability** is measured using an indicatorbased approach, which are combined in 3 dimensions: exposure, sensitivity and adaptive capacity.



The assessment focuses on **MPA as socio**ecological systems, where the interaction between the ecological and the social domains is represented by 4 interdependent systems.





#### **MAIN ACHIEVEMENTS**

Implementation of a beta-version of an **interactive tool** to calculate and illustrate the Vulnerability Indices of Marine Protected Areas (MPAs) in the Mediterranean Sea



## THE MPA ENGAGE HARMONIZED MONITORING APROACHES



Applying **harmonized monitoring tools** to detect the impacts of climate change in Mediterranean MPAs





Main achievements: development and implementation of 11 monitoring protocols

## **CITIZEN SCIENCE**

#### GOAL

Engage citizens in climate change monitoring



### **ACHIEVEMENTS to-date**

6 PARTNER MPAS 15 DIVING CENTERS ENGAGED 3 PROTOCOLS IMPLEMENTED (FVC/MASS MORTALITY/FAP) 2 ASSOCIATED PARTNER MPAs 5 DIVING CENTERS ENGAGED 3 PROTOCOLS MPLEMENTED (FVC/MASS MORTALITY/FAP)

1 EXTERNAL MPA 20 DIVING CENTERS ENGAGED 3 PROTOCOLS IMPLEMENTED (FVC/MASS MORTALITY/FAP)



Citizen icience

## THE COMPONENTS OF THE MPA ENGAGE PILOT ACTIONS



METHODOLOGICAL FRAMEWORK FOR SETTING UP A PARTICIPATORY DECISION-MAKING PROCESS

> There is no one-size-fitsall approach!

Local contexts vary depending on the nature and magnitude of existing and future threats, the condition of the ecological resources, past and ongoing management efforts, prevailing political and socioeconomic circumstances, etc. Which are the fundamental parts of the planning process?

do these parts fit together?

#### THE DPSIR FRAMEWORK AT THE HEART OF THE MPA ENGAGE PLANNING PROCESS

- Driving forces are the socio-economic and socio-cultural forces driving human activities, which increase or mitigate pressures on the environment.
- Pressures are the stresses that human \_\_\_\_activities place on the environment.
- **S**tate, or state of the environment, is the condition of the environment.
- Impacts are the effects of environmental degradation.
- **R**esponses refer to the responses by society to the environmental situation.



# THE FIVE-PHASE PLANNING PROCESS

Scoullos, M. (ed), 2015. An Integrative Methodological Framework (IMF) for coastal, river basin and aquifer management. UNEP/MAP-PAP/RAC, GWP-Med and UNESCO-IHP. MedPartnership.



The various phases of the planning process should not be seen necessarily as distinct steps but as parts of a continuum.





PARTICIPATORY APPROACH FOR EFFECTIVE CLIMATE CHANGE DECISION-MAKING

#### THE QUINTUPLE HELIX APPROACH





#### **THE MPA-ENGAGE PARTICIPATION MATRIX**



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Harnessing stakeholder consensus throughout the

#### five-phase planning process

Environmental planning processes typically lie at the sciencepolicy-society interface. They involve wide-ranging stakeholders with competing agendas and vested interests in the ultimate decision-making. In order to ensure transparent, appropriate and effective decision-making it is essential to **build consensus towards reaching agreement**.

## HOW TO HARNESS STAKEHOLDER CONSENSUS





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#### **HOW TO HARNESS STAKEHOLDER CONSENSUS**

#### Create a respectful and trusting atmosphere

#### **Explore differences**

Take a pragmatic approach to decisionmaking

**Confirm agreement & be open** 



EXAMPLES OF CLIMATE CHANGE ADAPTATION OPTIONS PER SOCIAL VULNERABILITY RELATED AREA

**Capacity Building & Awareness Raising** 

**Regulation & Risk Management** 

Response category	Response type	Response description
Diving sector		
Capacity Building & Awareness Raising	Increase adaptive capacity	Sensitize divers about the effects of climate change on marine ecosystems.
Regulation & Management	Reduce consequence	Close and/or change diving paths in damaged sites with coralligenous or limit the presence of divers in affected sites.
Research & Monitoring	Increase adaptive capacity	Engage divers in participatory monitoring to amplify and support the MPA capabilities to detect and quantify the ongoing ecologica changes (e.g. invasive species, mass mortalities, population declines).
Coastal tourism sector		
Capacity Building & Awareness Raising	Increase adaptive capacity	Develop awareness raising activities targeting MPA visitors on climate change effects and best practice responses at MPA level.
Regulation & Risk Management	Reduce consequence	Prevent fire risks by reinforcing surveillance, updating fire programmes and evacuation measures.
Research & Monitoring	Increase adaptive capacity	Monitor and assess the impact of tourist frequentation (the practice of visiting often) and disturbance (e.g. trampling) on sensitive species.
Technological	Increase adaptive capacity	Optimize water consumption and improve availability.
Professional & recreational fishir	lg	
Capacity Building & Awareness Raising	Increase adaptive capacity Reduce consequence	Develop educational activities to enhance ocean literacy of professional and recreational fishers towards ocean-informed actions and the adoption of good practices for sustainable fishing

Increase adaptive capacity

Reduce consequence

activities.

sustainable fisheries products.

Carry out public awareness raising activities on the importance of

sustainable fishing activities and the added value of opting for

Phase out or reduce the use of disposable plastics by fishers and

setup derelict fishing gear management schemes.

