

INTERREG MED PROGRAMME
FISHMPABLUE2 PROJECT

WP5 “Capitalisation”

Deliv. 5.2.2 “Support strategy to potential sites for applying the governance toolkit”

FINAL

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1. Introduction

The FishMPABlue2 project tested the governance toolkit for SSF on the field in 11 Pilot MPAs located in 6 Med countries (Spain, France, Italy, Slovenia, Croatia and Greece), with a bottom-up approach, in order to explore the different impacts of its actual application in different territorial features and local stakeholders (MPA managers, local small scale fishers and others). The overall goal was to improve the conservation effectiveness and to increase the Mediterranean MPAs capacity of sustainably governing small-scale fisheries, one of the main human-based pressures for a MPA.

The project applied an innovative approach to test the toolkit, based on the participatory engagement of the local community. The 11 Pilot MPAs were directly engaged to test (supported by several capacity-building actions) the toolkit, with several on-field activities.

8 additional MPAs (i.e. not being already FishMPABlue2 pilot MPAs) and the Montenegro Agency devoted to MPAs creation (MEDCEM) formally expressed their interest in applying the SSF Governance Toolkit. Notably, the MPAs are: Lastovo (Croatia), Priroda (Croatia), Thermaikos (Greece), Torre del Cerrano (Italy), Penisola del Sinis (Italy), Tremiti Islands (Italy), RAPA Vlore (Albania), and Debeli Rtič (Slovenia). Therefore, the FishMPABlue2 project partnership drafted a "Support Strategy" for it, focusing on a Summer School on monitoring techniques; know-how Twinning Exchange visits in some pilot MPAs; and a Webinar on the SSF Governance toolkit.

2. Summer School “Design and implement monitoring activities to assess Marine Protected Areas ecological and fisheries effectiveness: improving MPAs’ managers skills”

The Summer School was held in the National Marine Park Zakynthos, Zakynthos, Greece, from the 23rd to the 27th of September 2019.

The targeted participants were the pilot MPAs partners of project (11 MPAs) but the invitation to attend the training sessions was also extended to the new MPAs that expressed their interest in testing and implementing the governance toolkit.

Taking into consideration the methodologies adopted and implemented in the framework of the FishMPABlue2 project, the objective of the Summer School was twofold:

- to propose a methodology during the training sessions for increasing MPAs’ managers skills on how to design and implement monitoring activities to assess Marine Protected Areas ecological and fisheries effectiveness.
- to coordinate and organize a two-days field work to train MPA managers.

The training sessions started with an introduction on MPAs’ socio-ecological benefits, and experimental design in MPAs. They then presented the FishMPABlue2 approach for

ecological, economic and social monitoring of SSF in MPAs: methods and main results. They also introduced the main coastal families and species of the Mediterranean Sea.

It was one-of-a-kind learning experience in the Mediterranean region with an international team of 7 teachers and 9 trainees from the following MPAs: Lastovo (Croatia), Priroda (Croatia), Thermaikos (Greece), Torre del Cerrano (Italy), Penisola del Sinis (Italy), RAPA Vlore (Albania), Debeli Rtič (Slovenia), Strunjan (Slovenia) and Telascica (Croatia). All the teachers are researchers or professors specialising in marine biology and conservation, MPAs ecological effectiveness, SSF management in MPAs.

The training format was diverse: lectures in classroom, practice in the field, practical sessions of data collection and analysis. Specifically, participants were trained on the use of methodologies and techniques of environmental (Underwater Visual Census UVC, Baited Underwater Videos BUV, Monitoring of SSF landings), economic (assessment of catches and their economic value) and social (questionnaires) monitoring aspects of SSF in MPAs.

More details on Summer School in Annex 1 (Agenda), Annex 2 (Report on the training sessions, including number of participants, skills learnt, number of field trainings) and Annex 3 (Final Report).

3. Twinning Exchanges with pilot MPAs

The FishMPABlue2 partnership invited 10 additional MPAs to participate in Twinning Exchanges on best practices in SSF with the pilot MPAs of the Project, between September and October 2019. It was an Exchange opportunity for MPAs that expressed interest in adopting the FishMPABlue2 'Governance toolkit' in order to improve the management of Small Scale Fisheries in and around the MPA.

The Twinning Exchanges were organised based on the particular expectations that the interested MPAs expressed and the corresponding areas of expertise of the pilot MPAs. Each MPA engaged with a pilot MPA and learnt from its particular expertise and best practices in testing the toolkit. Each invited MPA therefore identified, depending on its issues, a pilot MPA that it wanted to visit in order to benefit from its experience in the project, with modalities and duration freely defined between the two MPAs.

Two twinning exchanges were organised. The first one was on the 24th September 2019, with the Egadi Islands hosting the Exchange with Torre del Cerrano. During the Exchange, the visiting MPA met two artisanal fishers who were involved in the Project, and they spoke about what they did during the monitoring. The visitors also met the MPA director, learning about the pilot actions carried out at the Egadi Islands (admin procedures and docs, survey forms given to the fishers, code of conduct). They discussed about the strengths and weaknesses that arised during the implementation, the positive results and what still needs to be improved. This exchange also included field visits in the area, to see some projects and initiatives carried out by the MPA.

The second Exchange took place between the 1st and the 3rd of October, when Côte Bleue welcomed Debeli Rtič. This Exchange presented and discussed the methodologies and techniques used for the SSF monitoring in the Côte Bleue Marine Park. It also included a field visit by boat of the marine reserve (no take area of 85 ha) and the coastline, and a meeting with local artisanal fishers at the fish market, close to the Cap Couronne reserve, a no-take area of 210 ha created at the initiative of the SS Fishers themselves.

More details on Twinning Exchanges in Annex 4 (Final Report Isole Egadi MPA) and Annex 5 (Exchange Programme Côte Bleue MPA).

4. Webinar “Adopting a governance toolkit for Small-Scale Fisheries in Mediterranean MPAs”

The Webinar took place on the 9th October 2019 and it was targeted at MPA practitioners, fisheries managers and NGOs alike. A total of 89 individuals registered previous to the date and 56 joined the webinar live from 18 countries.

This webinar provided an overview of management and governance of SSF in MPAs, in particular Mediterranean MPAs, based on the outcomes of FishMPABlue2. It started with an Introduction to FishMPABlue2 and its participative approach and gave a brief introduction to governance and management of SSF. It also provided an overview of the FishMPABlue2 governance toolkit with lessons learnt from case studies, and how it was and can be applied. Finally, it wrapped up with a description of the outcomes of the project, explaining how the innovative participative approach applied in FishMPABlue2 helped create positive collaborations among fishers, MPA managers and researchers in advancing MPA governance, with key examples from the pilot sites. At the end, there was an open discussion of new MPAs’ needs, tools that could be useful, levels of engagement.

The objective was to allow the participants to become familiar with the concepts of marine governance and management, as well as the tools and approaches for strengthening MPA’s management for SSF; and to become familiar with stakeholder engagement, working collaboratively to identify the needs of an MPA. The expected outcome was to give a clear overall picture of the governance toolkit and ability to identify with local stakeholders the needs of the MPA and which tools or combination of tools could be applied in the MPA to improve SSF governance.

The speakers of the Webinar are: Kate Hogg, Independent Consultant & Nathan Bennett of the University Of British Columbia. Kate has 10 years experience in international marine conservation, specialising in Marine Protected Area management and governance. Having worked on the FishMPABlue2 project for 14 months and on the updated governance toolkit, she is familiar with the project, experiences and lessons learned. Nathan is a world renowned

researcher on marine governance and aspects of stakeholder engagement based at the University of British Columbia.

More details on the Webinar in Annex 6 (Final Report) and Annex 7 (Webinar's Programme).

5. Conclusions

In the context of the Support Strategy provided to potential sites for applying the governance toolkit, 9 additional MPAs/Agencies have been trained for adopting the governance toolkit. They have been trained on the results of the test of the toolkit in the 11 Pilot MPAs (also with on-site visits); they have also been trained on how to adapt it to their specific situation.

In fact, the FishMPABlue2 project aimed to provide specific guidance, not only through the test of the toolkit and the policy recommendations, but also through capacity-building for end users (MPA managers and local fishers). This happens because the lessons learnt from the testing of the tools in 11 pilot MPAs, and the guidance – yielded from two years of pilot action – to better involve stakeholders in the process, can help MPAs shift towards co-management with small-scale fishers, that is to say a collaborative and participatory process of regulatory decision-making.

INTERREG MED PROGRAMME
FISHMPABLUE2 PROJECT

Summer school “Design and implement monitoring activities to assess Marine Protected Areas ecological and fisheries effectiveness: improving MPA’s manager skills”

**23-27 September 2019, National Marine Park Zakynthos,
Zakynthos, Greece**

Agenda

Context: the summer school is organized in the framework of the Med project FishMPABlue 2. This is the follow-up of FishMPABlue, which identified a set of governance features (so called "regional-based governance toolkit") that can allow marine protected areas (MPAs) to achieve conservation goals while at the same time delivering socio-economic benefits to small scale fisheries. The aim of FishMPABlue 2 is to test such toolkit (i.e. by implementing these features), on the field in 11 Pilot MPAs located in 6 Med countries (Spain, France, Italy, Slovenia, Croatia and Greece), to assess and quantify its effectiveness in achieving expected results in terms of MPA ecological effectiveness, benefits delivered to small scale fisheries and social acceptance of management measures by stakeholders. After a consultative process engaging the relevant stakeholders (e.g. MPA managers, fishermen etc) to define the features of the toolkit to be implemented in each MPA, scientific monitoring was carried out to assess ecological, economic and social dimensions.

Purpose: The goal of the summer school is to increase MPAs' staff's skills on how to design and implement monitoring activities to assess Marine Protected Areas ecological and fisheries effectiveness. Specifically participants will be trained on the use of methodologies and techniques of environmental (underwater visual census, baited underwater videos), economic (assessment of catches and their economic value) and social (questionnaires) monitoring aspects of small scale fisheries in MPAs.

Format: Lectures in classroom, practice in the field, practical sessions of data-handling and analyses

Lecturers: Antonio Di Franco (Stazione Zoologica Anton Dohrn, Italy), Antonio Calò (University of Palermo, Italy), Paolo Guidetti (University of Nice, France), Manfredi Di Lorenzo (CNR, Italy), Carlo Cattano e Gabriele Turco (Conisma, Italy), Charalampos Dimitriadis (National Marine Park Zakynthos, Greece)

Location: National Marine Park Zakynthos, Zakynthos, Greece

Course requirements for participants:

- English speaking/writing
- Scuba diving certification for diver
- Ability to carry out snorkeling activities if a non-diver
- Basic knowledge of Mediterranean coastal fishes is recommended

Equipment needed:

- Participants need to bring their own laptops, and diving equipment (diving suits, mask, fins, bcd jacket, regulators). Diving tanks, diving belt and weights will be provided on site. Diving equipment could be also rented on site (in this case please communicate your need as soon as possible).

Useful readings and material to consult before the summer school:

FishMPABlue 2 methodologies to assess MPA socio-ecological effectiveness for small scale fisheries: https://fishmpablue-2.interreg-med.eu/what-we-achieve/deliverable-database/detail/?tx_elibrary_pi1%5Blivable%5D=3514&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=2a496b21e24a52f5b0f54bc6e7a6cd1d

Assessment of environmental-socio-economic effects of toolkit implementation: https://fishmpablue-2.interreg-med.eu/what-we-achieve/deliverable-database/detail/?tx_elibrary_pi1%5Blivable%5D=5940&tx_elibrary_pi1%5Baction%5D=show&tx_elibrary_pi1%5Bcontroller%5D=Frontend%5CLivable&cHash=0ee380aedc3b68ccc8fa2d460ba60212

Database on fishes: <https://www.fishbase.se/search.php>

Paper describing visual census techniques:

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0153066>

Paper reviewing Underwater video techniques for observing coastal marine biodiversity:

<https://archimer.ifremer.fr/doc/00181/29274/27901.pdf>

Video BUV FishMPABlue2: <https://www.youtube.com/watch?v=7W2I-rr3-rs>

Paper about social assessment in FishMPABlue 2 MPAs:

<https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/conl.12640>

LECTURERS



Prof. PAOLO GUIDETTI

Full Professor of Ecology at the University of Nice-Sophia Antipolis (UNS, France) and Director of the ECOSEAS laboratory (CNRS-UNS). PhD in 'Fundamental Ecology' at the University of Lecce (Italy). Visiting scientist at Scripps Institution of Oceanography (UC San Diego, USA). Teaching courses on 'Ecology', 'Marine Biology and Ecology', 'Marine Ecology and Conservation'. Scientific responsible of more than 50 national and international projects on marine conservation. Author of 131 ISI papers published in international journals (including 'Nature')



Dr. ANTONIO DI FRANCO

Researcher at Stazione Zoologica Anton Dohrn (Italy). After the Ph.D. in 'Fundamental Ecology' at the University of Salento (Italy) in 2011 he has been Postdoc at University of Nice (France). He has worked on Marine Protected Areas (MPAs) in the Mediterranean Sea throughout his career, focusing on 1) assessing MPA ecological effectiveness, 2) estimating fish connectivity patterns to inform the design effective MPA networks, and 3) investigating MPAs as a socio-ecological system. Member of Science Council of Global Ocean Refuge System (Glores). Author of 45 ISI papers in international journals.



Dr. ANTONIO CALÒ

Researcher at the University of Palermo (Italy). PhD in 'Biodiversity and Environmental Management' at the University of Murcia (Spain). Formerly researcher at the University of Nice (France). More than 10 years' experience on Marine Protected Areas, investigating: MPA effects, the ecological and biological processes that drive their benefits, human impacts on protected resources and small-scale fishery management in MPAs.



Dr. CARLO CATTANO

Post-doc researcher at the University of Palermo (Italy). PhD in 'Earth and Marine Sciences'. His research interests deal with the behavior, biology and ecology of fish, the impact of climate change on marine species and ecosystems, and the evaluation of protection effects on spatio-temporal dynamics of fish communities using non-destructive sampling methods (e.g. Baited Underwater Videos).



Dr. GABRIELE TURCO

Post-Doc researcher at the University of Palermo (Italy). PhD in 'Earth and Marine Sciences' investigating the ecological effects of small-scale fisheries (SSF) on coastal marine environments, testing their 'impact' from the environmental, social and economic points of view. Extensive experience on MPAs and Ocean Acidification (OA) focusing on the effects of protection (MPAs context) and OA related on fish communities by the use of Baited Underwater Video systems (BUVs). Currently collaborating with research groups in Spain and UK for the optimization of BUVs in Mediterranean coastal environments.



Dr. MANFREDI DI LORENZO

Researcher at the Institute of Marine Biological Resources and Biotechnologies (IRBIM-CNR) in Mazara del Vallo (Italy). PhD in 'Fundamental Ecology' at the University of Lecce (Italy). Visiting scientist at Universidad de La Laguna (Spain), California State Universities (USA), CNRS of Perpignan (France). He cooperated to more than 30 projects on marine conservation and fishery. Author of 15 ISI papers published in international journals.



Dr. CHARALAMPOS DIMITRIADIS

Head of research department of the National Marine Park of Zakynthos with a long track record on both research and conservation/management. He has been involved in 15 National and International Scientific Projects, he has also served as an Assistant Professor at the Ionian University. He has more than 70 publications in peer reviewed

Tentative Agenda:

DAY 1 – 23 September

TIMING	ACTIVITY	TYPE	MATERIAL NEEDED
8:00	Participants registration	REGISTRATION	
8:30	Welcome to participants from NMPZ	OPENING	
8:40	Summer school agenda description	OPENING	
8:50	Participants self-introduction	OPENING	
LECTURES			
9.00 AM – 9.45	General introduction on 1) Marine Protected Areas (MPAs) and MPA socio-ecological benefits, and 2) experimental design in MPAs	LECTURE	
9.45 – 10.30	Underwater Visual Census (UVC): what this is and how it works	LECTURE	
BREAK			
11.00 – 11.45	Baited underwater video (BUV): what this is and how it works	LECTURE	
11.45 – 12.30	FishMPABlue 2 approach for ecological assessment: methods and main results	LECTURE	
LUNCH Break			
14.30 – 16.30	Species identification: main coastal families and species of the Mediterranean Sea	LECTURE	
16.30 – 17.00	Preparation to practical session: what we will do tomorrow in the field and logistic information	LECTURE	

DAY 2 – 24 September 2019

TIMING	ACTIVITY	TYPE and Lecturers	MATERIAL NEEDED
8.00 AM – 8.30	Rendezvous for the practical UVC session on the field at the port		
8.30 – 9.00	Briefing on the activity	PRACTICAL SESSION (FIELD ACTIVITY)	
9.00 – 16.00	Field activity: practical session on UVC. Participants will be divided in groups of 3-4 persons, each guided by an expert.	PRACTICAL SESSION (FIELD ACTIVITY)	Diving/snorkeling equipment

DAY 3 – 25 September 2019

TIMING	ACTIVITY	TYPE and Lecturers	MATERIAL NEEDED
8.00 AM – 8.30	Rendezvous for the practical BUV session on the field at the port		
8.30 – 9.00	Briefing on the activity	PRACTICAL SESSION (FIELD ACTIVITY)	
9.00 – 12.00	Field activity: practical session on BUV. Participants will be divided into 2 groups, each guided by an expert.	PRACTICAL SESSION (FIELD ACTIVITY)	
LUNCH			
14.30 – 18.00	Practical session on data extraction and analysis - Participants will be divided in groups of 3-4 persons and will work on the UVC and BUV data they collected in field	PRACTICAL SESSION (DATA MANAGEMENET AND ANALYSIS)	Participants should bring their own laptop for this activity

DAY 4 – 26 September 2019

9.00 AM – 10.00	Economic assessment in MPAs – methods and brief results of Fish2	LECTURE	
10.00 AM – 10.30	Guide to the practical session - Methodology of ssf monitoring in MPA: from photo-sampling to data analysis	LECTURE	
BREAK and preparation to field session			
10.45 AM – 13.00	Practical session for ssf data collection (photo-sampling)	PRACTICAL SESSION	Photo-camera or smartphone, rulers, notebooks, pens (beside smartphone, this material will be provided by organizers)
LUNCH			
15.00 – 18.00	Practical session on data extraction and analysis - Participants will be divided in groups of 3-4 persons and will work on the data they collected in the morning	PRACTICAL SESSION	Participants should bring their own laptop for this activity

DAY 5 – 27 September

TIMING	ACTIVITY	TYPE and Lecturers	MATERIAL NEEDED
9.00 AM – 10.30	Social assessment in MPAs – Approach, methods and brief results from Fish2	LECTURE	
BREAK			
11.00 – 13.00	Summer-school wrap-up, delivery of certificates of attendance and closure	CLOSURE	
LUNCH			
13.00 – 18.00	Free afternoon/Field excursion		



3rd Deliverable-Report

Design and implement monitoring activities to assess Marine Protected Areas ecological and fisheries effectiveness: improving MPA's manager skills

FishMPABlue 2 Interreg project “Transferring and Capitalising” Applying the “governance toolkit”

Zakynthos, Greece 2019



MANAGEMENT AGENCY OF THE NATIONAL MARINE PARK OF ZAKYNTHOS

Authored by: Charalampos Dimitriadis, Laurent Sourbes and Drosos Koutsoubas
On behalf of the National Marine Park of Zakynthos

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This document forms the 3rd deliverable of the National Marine Park of Zakynthos according to the signed (20/8/2019) contract with ref. number 56/19 (Project code: Interreg Med FishMPABlue 2, P02276; Project activity PA02276.W5).

EVALUATION AND OUTPUTS OF THE TRAINING SESSION

1. Number of participants

After the completion of the training sessions (23 to 27 of September 2019) a series of indices that indicate the success of the event have been calculated. The first one can be considered the number of participants that attended the workshop.

Index	Value	Implementation Status
Number of total participants	20	

Breakdown of the number of participants is as follows: 13 MPA managers, 7 trainers and technicians. In more details the list of participants is as follows:

MPA	Managers's name
Lastovo (Croatia)	Bruna Đuković
Priroda	Sunčica Strišković
Thermaikos (Greece)	Lydia Alvanou
Torre del Cerrano (Italy)	Claudia Borgatti
Penisola del Sinis (Italy)	Stefania Coppa
RAPA Vlore (Albania)	Artion Seferi
Debeli rtič (Slovenia)	Neža Gregorič
Strunjan (Slovenia)	Luka Kastelic
Telascica (Croatia)	Milena Ramov
NMPZ (Greece)	Elpiniki Kalli
NMPZ (Greece)	Anna Thalassini Valli
NMPZ (Greece)	Elena Drosogianni
NMPZ (Greece)	Vasiliki Gkouva

Trainer Affiliation	Trainer's name
UNICE	Antonio Di Franco
UNICE	Antonio Calo
CONISMA	Gabriele Turco
UNICE	Martina Crimi
UNICE	Paolo Guidetti
NMPZ	Charalampos Dimitriadis
CONISMA	Carlo Cattano
CNR	Manfredi di Lorenzo
NMPZ	Drosos Koutsoubas

2. Skills learnt

The second index corresponds to the number of skills learnt by the participants.

Index	Value	Implementation Status
Skills learnt		
Designing and implementing UVC monitoring surveys in MPAs	1	
Designing and implementing BUVs monitoring surveys in MPAs	1	
Designing and implementing monitoring surveys on the fisheries landings in MPAs	1	
Designing and implementing monitoring surveys on fisheries socioeconomic factors in MPAs	1	
Analysis of ecological data	1	
Image and footage analysis with Image J software	1	
Implementation of FISHMPABLUE2 governance toolkit	1	
TOTAL	7	

3. Field surveys

The third index comprise the number of field surveys in the MPA of the NMPZ for the training of the participants

Index	Value	Implementation Status
Field Surveys		
UVC and snorkeling in the field	1	
BUVs in the MPA of NMPZ	1	
Sampling of landings from the MPA of the NMPZ	1	
Cruise to the MPA	1	
TOTAL	4	

4. Dissemination

The fourth index comprise the number of press releases and interviews in the regional television channels regarding the workshop (dissemination of the workshop/public awareness)

Index	Value	Implementation Status
Dissemination		
Press release to local newspapers including interviews of the trainers	2	
Interviews at regional television channel	1	
Interviews at local radio station	1	
TOTAL	4	

5. Produced informational material

The fifth index comprise the number of the educational material that was produced for the training of the participants

Index	Value	Implementation Status
Information material		
Presentations and documents	6	
TOTAL	6	



Signature

DROSOS KOUTSOUMPAS

Name of the Signatory



Official stamp of the Signatory Structure



4th Deliverable

FINAL REPORT



Design and implement monitoring activities to assess Marine Protected Areas ecological and fisheries effectiveness: improving MPA's manager skills

FishMPABlue 2 Interreg project “Transferring and Capitalising” Applying the “governance toolkit”

Zakynthos, Greece 2019



MANAGEMENT AGENCY OF THE NATIONAL MARINE PARK OF ZAKYNTHOS

Authored by: Charalampos Dimitriadis, Laurent Sourbes and Drosos Koutsoubas
On behalf of the National Marine Park of Zakynthos

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This document forms the FINAL deliverable of the National Marine Park of Zakynthos according to the signed (20/8/2019) contract with ref. number 56/19 (Project code: Interreg Med FishMPABlue 2, P02276; Project activity PA02276.W5).

BACKGROUND

Taking into consideration the methodologies which were adopted and implemented in the framework of the FISHMPABLUE2 project, the objective of the consultancy was twofold:

a) to propose a package training session(s) with a precise methodology for increasing MPAs' staff's skills on how to design and implement monitoring activities to assess Marine Protected Areas ecological and fisheries effectiveness. A draft scheme could be as follows.

b) to coordinate and organize on site practical activities to train MPA managers

A two days field work will be organized for 20 participants at the MPA of Zakynthos for the training of the participants

The specificities will be arranged with the FISHMPABLUE2 team.

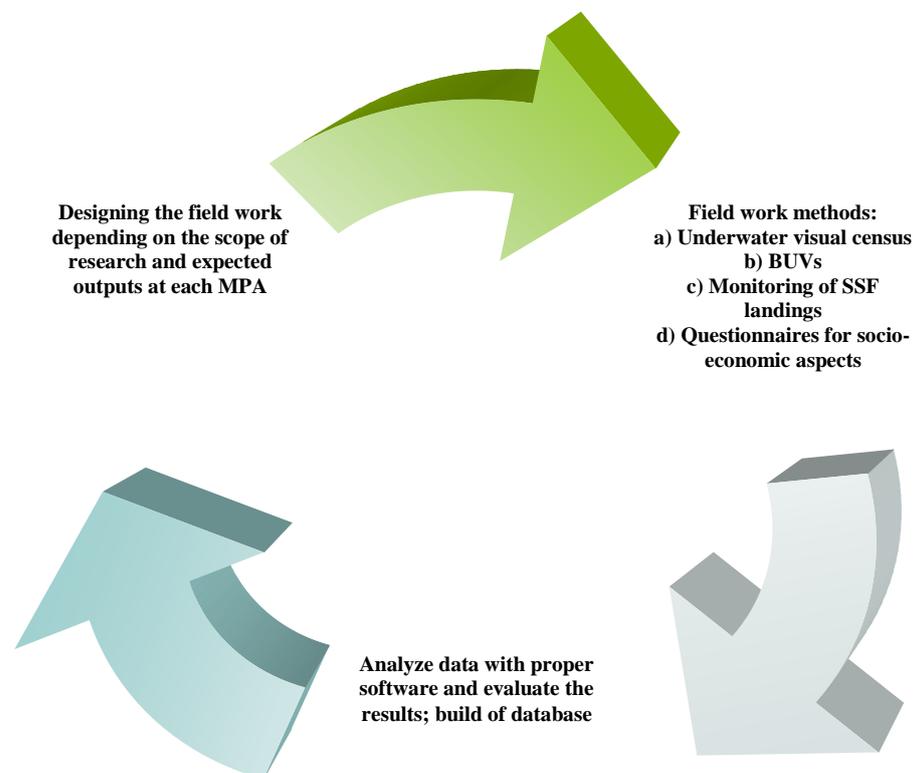


Figure 1. Schematic diagram of the work flow during the training session at Zakynthos MPA

METHODOLOGIES

The training sessions will be discriminated in two major axis, with the first being a series of interactive lectures on how to design monitoring activities depending on the context of each MPA type (e.g. fully protected, partially protected), the methodologies applied as well as the data analysis after data collection. The second axis consists of field exercises in which the trainees will practice on the proposed methodologies. All the above will be intergraded on the MPA management context and how to include them in the recurrent monitoring procedures of each MPA for decision making purposes. Finally, management strategies for SSF will be also presented and discussed as well as experience gained and capacity building. The details of the applied methodologies that will be implemented in the field and presented to the trainees through lectures are described below.

1. Underwater visual census (UVC)

The underwater visual census can be considered as a standard method to monitor fish fauna and marine mega-fauna of shallow marine areas worldwide. The shallow coastal waters mainly consist of four habitat types that are all included in the EU Habitats Directive 92/43/EEC; namely, *Posidonia oceanica* (EU habitat code – EUhc: 1120), rocky reefs (EUhc: 1170), soft substrates (included in EUhc 1110), and marine caves (EUhc: 8330). However most studies are focusing on rocky reefs and *P. oceanica* meadows which represent the most productive habitats in the shallow sublittoral Mediterranean waters (Guidetti, 2000; Giakoumi and Kokkoris, 2013) and are most commonly sampled for the assessment of coastal fish assemblages in Mediterranean MPAs (e.g. Harmelin-Vivien et al., 2008; Sala et al., 2012; Villamor and Becerro, 2012; Seytre and Francour, 2013). In this framework the size and abundance data of fish species are collected by means of underwater visual census (Harmelin et al., 1995) performed by SCUBA diving at a fixed depth zone (usually ranging from 0 to 20m). The number of the sampled stations across areas with different protection status is a function of the hypothesis which is under scrutiny as well as logistic and funding constrains.

In any case at each sampling station, data are recorded along replicate belt-transects (usually ranging from 3 to 5 replicates) of 25×5m (125m²) each, located several meters apart in a successive (straight line) fashion. Moving oneway along each transect at constant speed, the fish observer identifies, counts and estimates the size of all fish present within 2.5m distance

on either side of the line. All species encountered are recorded, except for small cryptic ones (e.g. Blenniidae and Gobiidae). Actual fish counts are recorded up to 20 individuals, while higher numbers are assigned to separate abundance classes (i.e. 21–30, 31–50, 51–100, 101–200, 201–500, >500 individuals), as proposed by Harmelin et al. (1995) and Harmelin-Vivien et al. (2008). Two divers are usually involved at each transect: one diver moves ahead and counts the fish while the second one follows with a rope that delineates the 25m length of the transect.

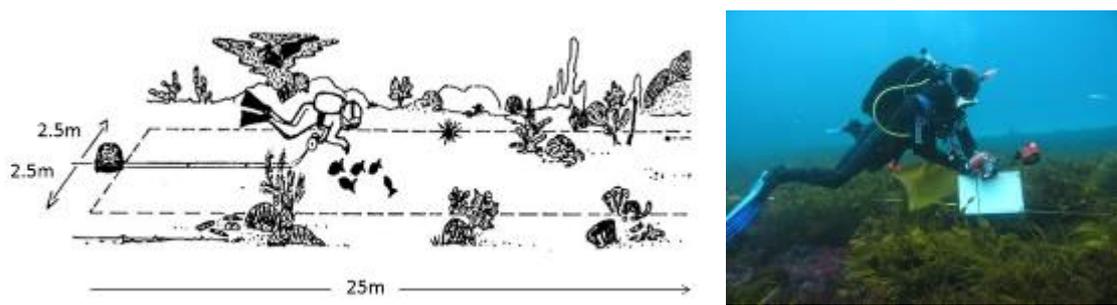


Figure 2. Schematic diagram of the implementation of the UVC method at shallow waters

The NMPZ will organize both the theoretical and field work sessions and will provide all the equipment to the participants (e.g. diving equipment, slates, ropes).

2. Underwater baited video (BUVs)

The use of video to study marine life has increased over the past twenty years, and a variety of video survey techniques are now commonly used for sampling marine populations (Mallett et al., 2014). Amongst others, the advantages of using video include the removal of the time and depth limitations associated with diver surveys, the potential for reductions in survey costs, the ability to check images as many times as necessary and the relative ease of training observers to process recordings. Importantly video sampling techniques are also non-extractive and therefore well suited for studies on marine protected areas (Stobart et al., 2007). While video techniques do not necessarily outperform traditional sampling techniques such as visual census, they are free from diver bias. In recent years the use of video systems has increased as technological improvements have made them cheaper and easier to use. Improvements include better video quality, increased filming times, a reduction in the size and cost of video recorders and changes to the recording media from tapes to direct storage on hard drives. In principle this method uses bait to attract individuals into the field of view of a camera so that species can be identified and individuals counted. The video metrics that are usually used to estimate relative abundance include a value for total number of individuals per recording (TotN), the traditional maximum number of fish observed in a single video frame (MaxN), and the recently suggested alternative, the average of the mean MaxN from 5-minute periods throughout the duration of the recording (MeanN) (Stobart et al., 2015).

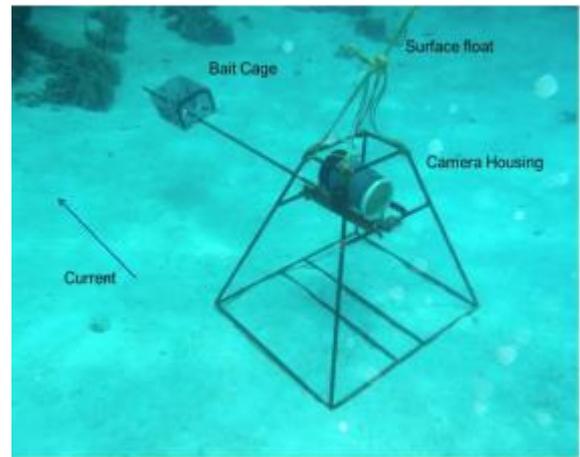
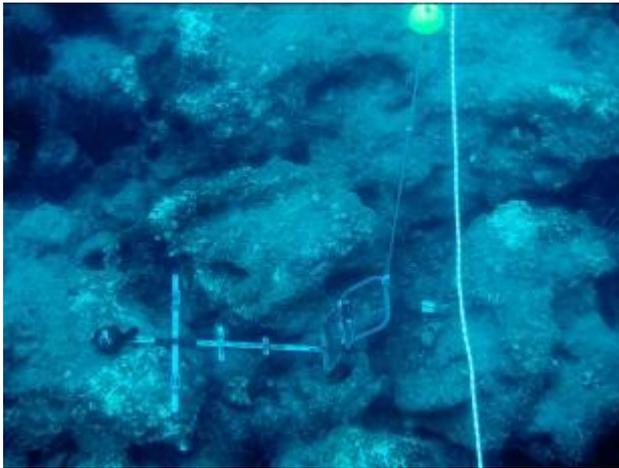


Figure 3. BUVs method at for monitoring fish species

The number of the sampled stations across areas with different protection status is a function of the hypothesis which is under scrutiny as well as logistic and funding constrains.

3. Small scale fisheries landings

In the framework of FISHMPABLUE2 project the small scale fisheries landings were measured by the use of a photographic method. The basic idea behind this approach is to decrease the time and effort needed to measure the length and weight of each individual caught by using a photo of several individual at the same frame. To this end multiple individuals are placed within a frame that includes a measure scale and a unique id code for each frame. Then a photo sample is taken which is stored for further process.



Figure 4. Photo-method for the recording of small scale fisheries landings at MPAs

The photo samples are then introduced to proper software in which the total length of each individual is measured after the identification of each specimen down to species level. The length measurement is finally used for the calculation of biomass by the use of length-weight relationship of each species.

4. Questionnaires for socio-economic aspects

The developed and implementation of quantitative questionnaire surveys targeting at small-scale fisheries in MPAs is gradually gaining increased attention from the managerial and scientific community. Traditionally these surveys (usually through structured interviews) are focusing on a broad set of questions related to the demographics (e.g., gender, age, education, location, origin, people in household) and characteristics (e.g., income from fisheries, diversification, dependence) of small-scale fishermen, as well as perceptions of social aspects, MPA management, compliance and enforcement. Therefore the design of such surveys is very case depended and largely relies upon the research objectives and goals. The implementation on the other hand requires delicate moves so as to ensure the participation of the fishers to the survey. After the design and implementation of the surveys, data handle and analysis follows. This part requires well trained staff in order to statistically process the data and extract trends and conclusions.



AGENDA

After a few meetings (via Skype) with IUCN Project Coordinator (focal point) and other project partners and WPs' leaders especially the University of Nice (in charge of the assessments – WP3) of the FISHMPABLUE2 project, we have formulated the following draft agenda.

Summer school “Design and implement monitoring activities to assess Marine Protected Areas ecological and fisheries effectiveness: improving MPA’s manager skills”

22-27 September 2019, National Marine Park Zakynthos, Zakynthos, Greece

Agenda - Draft

Purpose: The goal of the summer school is increase MPAs’ staff’s skills on how to design and implement monitoring activities to assess Marine Protected Areas ecological and fisheries effectiveness. Specifically participants will be trained on the use of methodology and techniques of environmental (underwater visual census, baited underwater videos), economic (assessment of catches and their economic value) and social (questionnaires) monitoring aspects of small scale fisheries in MPAs.

Format: Lectures in classroom, practice in the field, practical sessions of data-handling and analyses

Lecturers: researchers from ECOSEAS (University of Nice, France), Conisma (Italy) and National Marine Park Zakynthos (NMPZ)

Location: National Marine Park Zakynthos, Zakynthos, Greece

Tentative Agenda:

23 September : Arrival of the participants

DAY 1 – 23 September

TIMING	ACTIVITY	TYPE and Lecturers	MATERIAL NEEDED
8:00	Participants registration	REGISTRATION	
8:45	Welcome to participants from NMPZ	OPENING	
8:50	Summer school agenda description	OPENING	
LECTURES			
9.00 AM – 9.30	General introduction on MPAs, MPA benefits, monitoring and socio-ecological assessment of	LECTURE	



	MPAs (Fish2 approach)		
9.30 – 10.30	Ecological assessment in MPAs: 1. Introduction to experimental design for conservation studies and 2. Non-destructive methods for assessing fish assemblages in MPAs	LECTURE	
BREAK			
11.00 – 12.00	Focus on Underwater Visual Census (UVC) and Baited underwater videos (BUV)	LECTURE	
12.00 – 13.00	Fish2 approach for ecological assessment: methods and main results	LECTURE	
LUNCH Break			
15.00 – 17.00	Species identification: main coastal families and species of the Mediterranean Sea	LECTURE	
17.00 – 18.00	Preparation to practical session: 1. how to perform UVC (fish recognition underwater), 2. How to perform BUV	LECTURE	

DAY 2 – 24 September 2019

TIMING	ACTIVITY	TYPE and Lecturers	MATERIAL NEEDED
8.00 AM – 8.30	Rendezvous for the practical UVC session on the field at the port		
8.30 – 9.00	Briefing on the activity	PRACTICAL SESSION (FIELD ACTIVITY)	
9.00 – 16.00	Field activity: practical session on UVC. Participants will be divided in groups of 3-4 persons, each guided by an expert.	PRACTICAL SESSION (FIELD ACTIVITY)	Diving equipment, UVC equipment

DAY 3 – 25 September 2019

TIMING	ACTIVITY	TYPE and Lecturers	MATERIAL NEEDED
8.00 AM – 8.30	Rendezvous for the practical BUV session on the field at the port		
8.30 – 9.00	Briefing on the activity	PRACTICAL SESSION (FIELD ACTIVITY)	
9.00 – 12.00	Field activity: practical session on BUV. Participants will be divided into 2 groups, each guided by an expert.	PRACTICAL SESSION (FIELD ACTIVITY)	
LUNCH			
14.30 – 18.00	Practical session on data extraction and analysis - Participants will be divided in groups of 3-4 persons and will work on the UVC and BUV data they collected in field	PRACTICAL SESSION (DATA MANAGEMENT AND ANALYSIS)	Participants should bring their own laptop for this activity

DAY 4 – 26 September 2019

9.00 AM – 10.00	Economic assessment in MPAs – methods and brief results of Fish2	LECTURE	
10.00 AM – 10.30	Guide to the practical session - Methodology of ssf monitoring in MPA: from photo-sampling to data analysis	LECTURE	
BREAK and preparation to field session			
10.45 AM – 13.00	Practical session for ssf data collection (photo-sampling)	PRACTICAL SESSION	Photo-camera or smartphone, rulers, notebooks, pens
LUNCH			
15.00 – 18.00	Practical session on data extraction and analysis - Participants will be divided in groups of 3-4 persons and will work on the data they collected in the morning	PRACTICAL SESSION	Participants should bring their own laptop for this activity

DAY 5 – 27 September

TIMING	ACTIVITY	TYPE and Lecturers	MATERIAL NEEDED
9.00 AM – 10.30	Social assessment in MPAs – Approach, methods and brief results from Fish2	LECTURE	
BREAK			
11.00 – 13.00	Summer-school wrap-up and closure	CLOSURE	
LUNCH			
13.00 – 18.00	Free afternoon/Field excursion		

28 September: Departure of the participants

FURTHER TASKS AND ACTIVITIES

The management agency of the National Marine Park of Zakynthos is committed to work closely with the IUCN Project Coordinator (focal point), with the others project partners and WPs' leaders especially the University of Nice (in charge of the assessments – WP3) and MedPan that will work on the dissemination (WP4) of the FISHMPABLUE2 project.

The staff of the NMPZ has attended an initial meeting (via skype) with the project coordinator and discussed the details for the organization of the training sessions (who is doing what, where and when). The attendance confirmation of the participants is due at the 30th of August 2019. This is extremely critical since the final number of participants will determine the next steps regarding the organization of the workshop.

SCHEDULE OF DELIVERABLES

The timeline of the consultancy will strictly follow the milestones of the call while the training session is proposed to be held from **23rd of September up to 27th of September** 2019. The inception report will be submitted upon contract signing.

Deliverables	Tentative Timeline
2019	
First draft on the methodology	included in the answer of the call
Plan to organize the training session	1 of August
Training sessions	No later than the 30 of September
Final report	15 of October

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ARRANGEMENTS

1. *Transportation*

The transportation of the participants is proposed to be conducted by the local transportation company “Ionian Transport”, the largest transport company of Zakynthos. In more detail, the proposed routes and the shuttle buses needed are as follows:

- a) 22/9/2019: Two shuttle buses from the Airport to the Hotel Yria in Zakynthos Town.
- b) 24/9/2019: One Shuttle bus (departure from Yria Hotel at 8:00 to Keri Lake and return at 16:00).
- c) 25/9/2019: One Shuttle bus (departure from Yria at 8:00 to Keri Lake and return at 12:00pm).
- d) 27/9/2019: One shuttle bus (departure from Municipality of Zakynthos at 13:00 to Laganas and return at 17:00).
- e) 28/9: Three shuttle buses for the transportation of the participants from Hotel Yria in Zakynthos Town to the Airport (three persons departing at 8:00, three at 10:00 and three at 13:10).

2. *Facilities*

All the lectures as well as the data extraction and analysis from the practical sessions are proposed to be conducted at the seminar room of the NMPZ Management Agency’s office, located in El.Venizelou 1 in Zakynthos town. During the lectures, the equipment of the seminar room as well as audiovisual material will be deployed.

Furthemore, information material will be distributed to all the participants. The information material will include a visitor’s guide, integrated management handbook, a detailed map of the NMPZ, information material regarding the coastal-terrestrial habitats and flora, the marine fauna and flora, the avifauna, the marine turtle’s biology and the sea turtle proper observation code of conduct.



Figure 2. Premises of the National Marine Park of Zakynthos

3. *Meals*

Between lectures, coffee breaks will be held for the participants. Elena's Bakery (traditional Greek bakery) is proposed to undertake the coffee breaks where the participants will be provided with a variety of refreshments (coffee, hot chocolate, juice, tea), snacks (sandwiches) and local sweets (cakes, biscuits).

Lunch and dinner is proposed to be offered by the traditional Greek restaurant "Alektor". The restaurant is located in the central square of Zakynthos (Solomos square), within 200m of the hotel and the office of the Management Agency where the lectures will take place. The participants will have the opportunity to taste a variety of local and Greek traditional dishes, accompanied by live music from local musicians. In total 9 meals will be provided for 20 participants, accounting a total of 180 meals.

The restaurant will also offer vegetarian and vegan dishes for any participants with special dietary needs.

4. *Accommodation*

The accommodation of the participants can be provided by Yria Hotel in Zakynthos town. The hotel is located very near to the office of the NMPZ Management Agency. In particular, the following rooms are needed:

- a) Seven single rooms from 22/09/2019 (arrival) to 28/09/2019 (departure)
- b) Two double rooms from 22/09/2019 (arrival) to 26/09/2019 (departure)
- c) Four double rooms from 22/09/2019 (arrival) to 28/09/2019 (departure)

Moreover, breakfast will be included every day.



5. Activities

The field trip on 24/09 which includes a practical session on UVC, is proposed to take place at the marine area of Marathias (West Coast of Laganas Bay) in cooperation with Nero-Sport Diving Center. The boat which is required for the transport of the participants to the diving site as well as the full diving and snorkeling equipment will be provided by the Diving Center whereas the diving center will also provide a rescuer diver for the safety of the participants.

The field trip on 25/09 which includes a practical BUV session is proposed to take place at the marine area of Marathias (Southwest Coast of Laganas Bay) in cooperation with ‘‘Big Blue MotorBoat Rentals’’. In specific, the company will provide for the implementation of the activity three small motored boats for the transportation of the participants for the field activity in the marine area of the NMPZ.

On 27/9/2019 (last day of the Summer School) a field excursion at the marine area of the NMPZ will take place. This activity is proposed to be provided by ‘‘Laganas Boat Trips’’, a company that organizes sea excursions in the Bay of Laganas. The sea excursion will include a trip and stop for swimming at Keri Caves and Marathias, as well as a stop at Marathonisi island. Marathonisi is a nesting beach of the sea turtle *Caretta caretta*, so the participants will be able to be informed about the management measures for the protection of the sea turtle nesting beaches. Finally, before returning, they will have the opportunity for turtle-spotting and observation of the *Caretta caretta*, while they will be acquainted with the code of conduct for the proper observation of the sea turtles.

EVALUATION AND OUTPUTS OF THE TRAINING SESSION

1. Number of participants

After the completion of the training sessions (23 to 27 of September 2019) a series of indices that indicate the success of the event have been calculated. The first one can be considered the number of participants that attended the workshop.

Index	Value	Implementation Status
Number of total participants	20	

Breakdown of the number of participants is as follows: 13 MPA managers, 7 trainers and technicians. In more details the list of participants is as follows:

MPA	Managers's name
Lastovo (Croatia)	Bruna Đuković
Priroda	Sunčica Strišković
Thermaikos (Greece)	Lydia Alvanou
Torre del Cerrano (Italy)	Claudia Borgatti
Penisola del Sinis (Italy)	Stefania Coppa
RAPA Vlore (Albania)	Artion Seferi
Debeli rtic (Slovenia)	Neža Gregorič
Strunjan (Slovenia)	Luka Kastelic
Telascica (Croatia)	Milena Ramov
NMPZ (Greece)	Elpiniki Kalli
NMPZ (Greece)	Anna Thalassini Valli
NMPZ (Greece)	Elena Drosogianni
NMPZ (Greece)	Vasiliki Gkouva

Trainer Affiliation	Trainer's name
UNICE	Antonio Di Franco
UNICE	Antonio Calo
CONISMA	Gabriele Turco
UNICE	Martina Crimi
UNICE	Paolo Guidetti
NMPZ	Charalampos Dimitriadis
CONISMA	Carlo Cattano
CNR	Manfredi di Lorenzo
NMPZ	Drosos Koutsoubas

2. Skills learnt

The second index corresponds to the number of skills learnt by the participants.

Index	Value	Implementation Status
Skills learnt		
Designing and implementing UVC monitoring surveys in MPAs	1	
Designing and implementing BUVs monitoring surveys in MPAs	1	
Designing and implementing monitoring surveys on the fisheries landings in MPAs	1	
Designing and implementing monitoring surveys on fisheries socioeconomic factors in MPAs	1	
Analysis of ecological data	1	
Image and footage analysis with Image J software	1	
Implementation of FISHMPABLUE2 governance toolkit	1	
TOTAL	7	

3. Field surveys

The third index comprise the number of field surveys in the MPA of the NMPZ for the training of the participants

Index	Value	Implementation Status
Field Surveys		
UVC and snorkeling in the field	1	
BUVs in the MPA of NMPZ	1	
Sampling of landings from the MPA of the NMPZ	1	
Cruise to the MPA	1	
TOTAL	4	

4. Dissemination

The fourth index comprise the number of press releases and interviews in the regional television channels regarding the workshop (dissemination of the workshop/public awareness)

Index	Value	Implementation Status
Dissemination		
Press release to local newspapers including interviews of the trainers	2	
Interviews at regional television channel	1	
Interviews at local radio station	1	
TOTAL	4	

5. Produced informational material

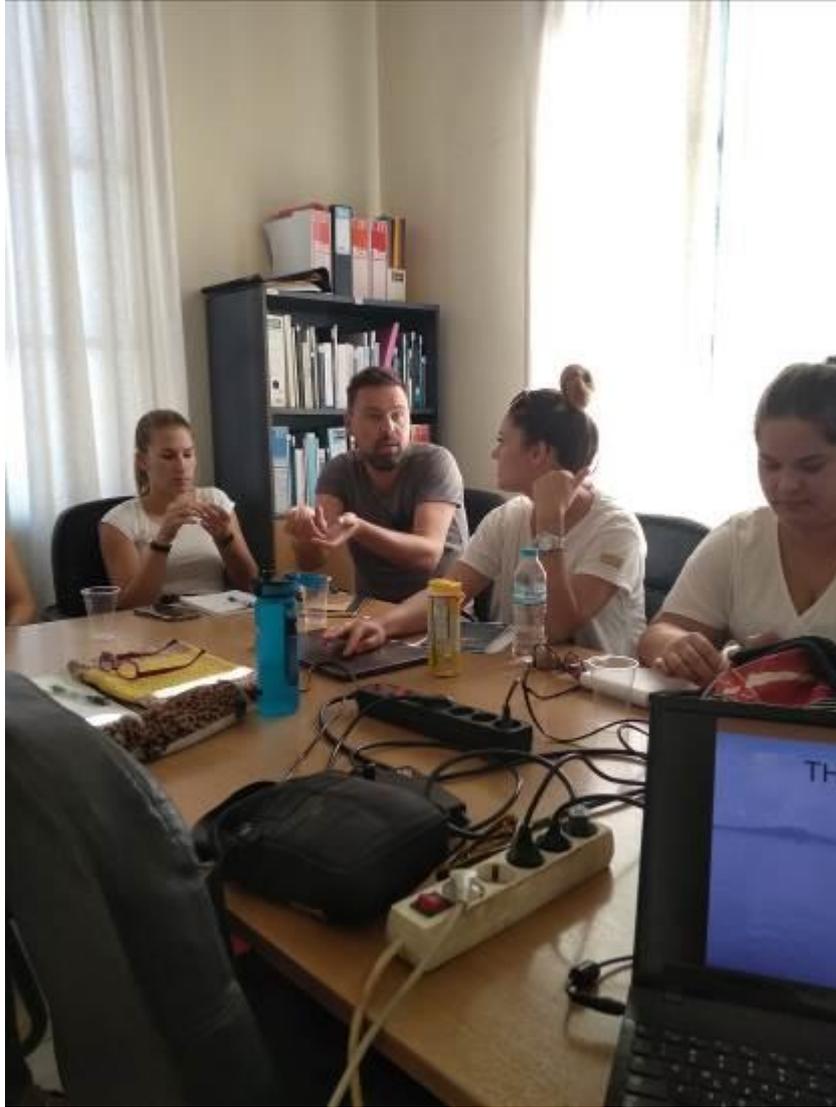
The fifth index comprise the number of the educational material that was produced for the training of the participants

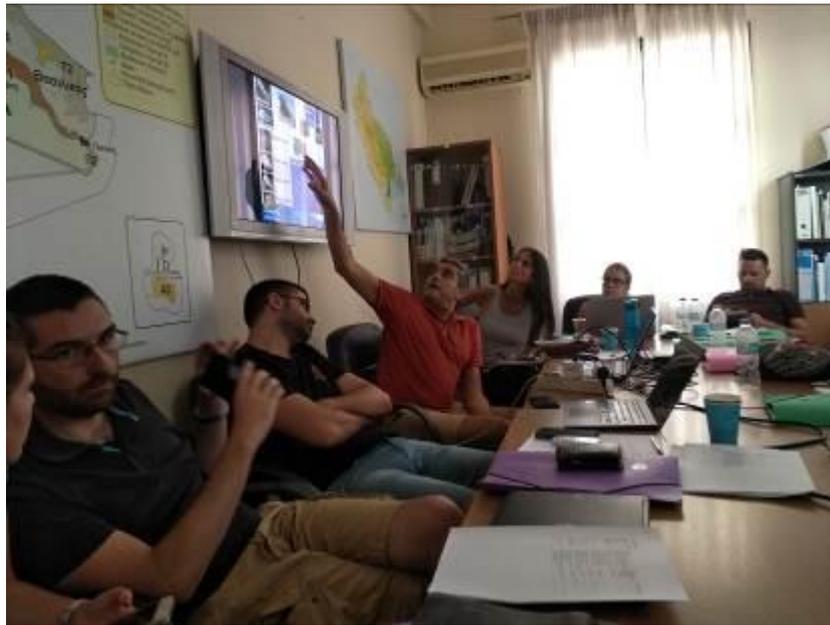
Index	Value	Implementation Status
Information material		
Presentations and documents	6	
TOTAL	6	

MATERIAL AND DOCUMENTS FROM THE WORKSHOP

Training of the participants in the premises of the National marine park of Zakynthos









Field trips and field work



















Launch, dinners and coffee breaks







Certificates to the trainees





Dissemination of the workshop to the media

The link of the program of the regional television channel that refers to the workshop is the following:

<https://ioniantv.gr/zkynthos-therino-sxoleio-apo-to-mpz/>

Press releases to the newspapers

ΕΘΝΙΚΟ ΘΑΛΑΣΣΙΟ ΠΑΡΚΟ ΖΑΚΥΝΘΟΥ

Θερινό σχολείο για τη διαχείριση της αλιείας στις θαλάσσιες προστατευόμενες περιοχές

4 ΗΜΕΡΑ
Τετάρτη 26/09/2019
Αρ.φωλ: 5598



Σε μια αξιόπνη δράση συμμετέχει Εθνικό Θαλάσσιο Πάρκο Ζακύνθου (Ε.Θ.Π.Ζ.), το ονομαζόμενο Θερινό Σχολείο, το οποίο αφορά σε ένα επιστημονικό πρόγραμμα διαχείρισης της αλιείας σε προστατευόμενες περιοχές, με ευρωπαϊκή συνεργασία.

Πρόκειται για ένα ευρωπαϊκό πρόγραμμα που συμμετέχουν 11 προστατευόμενες θαλάσσιες περιοχές από όλη τη μεσόγειο και διάφορα ερευνητικά κέντρα και πανεπιστήμια της Ιταλίας, της Γαλλίας και το Πανεπιστήμιο Αιγαίου. «Με το θερινό σχολείο, που πραγματοποιείται υπό την εποπτεία του φορέα διαχείρισης του Εθνικού Θαλάσσιου Πάρκου σε συνεργασία με το πανεπιστήμιο Sophia Antipolis της Γαλλίας, το πανεπιστήμιο Αιγαίου και με το επιστημονικό προσωπικό του θαλασσιού πάρκου, συντελείται σημαντικό έργο για την προστασία του περιβάλλοντος», μας δήλωσε ο κ. Κουτσούμπας, Πρόεδρος του Ε.Θ.Π.Ζ. Είναι μια πολύ σημαντική δραστηριότητα γιατί έχουν όλοι συμμετέχοντες εκπαιδευόμαστε από το επιστημονικό προσωπικό στον τρόπο με τον οποίο θα συλλέγουν τα θαλάσσια πάρκα στις περιοχές τους επιστημονικά δεδομένα για

την κατάσταση που βρίσκονται τα ιχθυοαποθέματα. Ο κ. Κουτσούμπας δήλωσε: «Τα δεδομένα αυτά είναι χρήσιμα για να ληφθούν τα αναγκαία διαχειριστικά μέτρα, σε περίπτωση που χρειαστεί να γίνει κάποια προστασία των ιχθυοαποθεμάτων. Και αυτό επειδή τα θαλάσσια πάρκα είναι περιοχές που δεν γίνονται δραστηριότητες αλιείας, άρα αποτελούν καταφύγιο για τα ψάρια». Σε επικοινωνία με τον κ. Δημητριάδη, θαλάσσιο βιολόγο, μας ανέφερε: «Γίνεται προσπάθεια, στο πλαίσιο του προγράμματος, να δοθούν τρόποι και παράλληλα να αναπτύξουμε εργαλεία για το πώς μπορούμε να αυξήσουμε την αποτελεσματικότητα της διαχείρισης της αλιείας σε θαλάσσιες προστατευόμενες περιοχές».

Ο κ. Δημητριάδης μας ενημέρωσε ότι ήδη έχουν αναπτυχθεί εργαλεία για την παρακολούθηση των θαλάσσιων προστατευόμενων περιοχών σχετικά με την αλιεία. Συγκεκριμένα δήλωσε: «Στο πλαίσιο του προγράμματος έχουν αναπτυχθεί κάποια εργαλεία σε επίπεδο μεθοδολογίας, όσον αφορά στην επιστημονική παρακολούθηση των θαλάσσιων προστατευόμενων περιοχών σχετικά με την αλιεία και μέσω του θερινού σχολείου συγκεκριμένα αφορά στις δράσεις δημοσιότητας και

μεταφορές τεχνολογίας». Αξίζει να σημειωθεί ότι στο νησί μας έχουν έρθει από διάφορες προστατευόμενες περιοχές της Σλοβενίας, της Κροατίας, της Ιταλίας, της Αλβανίας, της Γαλλίας κάποιοι διαχειριστές, όπως είναι εδώ το Εθνικό Θαλάσσιο Πάρκο, με αποτέλεσμα να γίνεται «μία εκπαίδευση σε μεθόδους εργασιών πεδίου για το πώς μπορούμε να παρακολουθούμε τα ιχθυοαποθέματα με σύγχρονες τεχνολογίες, έτσι ώστε να αποκτήσουμε τη γνώση για να μπορούμε να διαχειριστούμε το κομμάτι της αλιείας σε μεθόδολογία», δήλωσε χαρακτηριστικά ο κ. Δημητριάδης.

Το Εθνικό Θαλάσσιο Πάρκο Ζακύνθου συμμετέχει εδώ και 3 χρόνια στο συγκεκριμένο πρόγραμμα. Φέτος οι δράσεις του Θερινού Σχολείου πραγματοποιούνται στο νησί μας, αφού επιλέχθηκε σαν μια θαλάσσια προστατευόμενη περιοχή, με πολύ καθοριστικό ρόλο στην ανάπτυξη των μεθοδολογιών, καθώς στον μάλιστα το Θαλάσσιο Πάρκο διαθέτει και σχετική τεχνολογία. Επιπλέον, η Ζακύνθος είναι μια θαλάσσια περιοχή με πολλές προκλήσεις, κατά συνέπεια είναι πολύ σημαντικό να υπάρχουν μεθοδολογικά εργαλεία σε περιοχές όπου η διαχείριση είναι πολύ δύσκολη.



Αποθήκη καταπορεύσεως αλιευμάτων από κάμαρες

2 | Τετάρτη 26/09/2019
ΕΡΜΗΣ Αρ.φωλ: 5597

Σε εξέλιξη το Θερινό Σχολείο για το πρόγραμμα FishMPABUe 2.

35 αλιείες ενημερώθηκαν για μεθόδους διατήρησης των ιχθυοαποθεμάτων

Της Μοιρίλενας Πανοδέστου

Διακρίνονται επιστήμονες στο αντικείμενο της θαλάσσιας βιολογίας και της περιβαλλοντικής έρευνας, αλλά και υπεύθυνοι θαλάσσιων πάρκων προστατευόμενων περιοχών από την Μεσόγειο. Βρίσκονται αυτές τις ημέρες στο νησί μας, συμμετέχοντας σε μια από τις δράσεις στις οποίες συμμετέχει το Εθνικό Θαλάσσιο Πάρκο Ζακύνθου. Πρόκειται για το Θερινό Σχολείο που οργανώθηκε στο πλαίσιο του προγράμματος FishMPABUe 2, με τίτλο: «Αλιευτική Διακυβέρνηση στις Θαλάσσιες Προστατευόμενες Περιοχές (Θ.Π.Ζ.): Δυνατότητες για Μικρο Οικονομία 2».

Το πρόγραμμα χρηματοδοτείται από το Interreg και έχει σαν στόχο την βιώσιμη διαχείριση της μικρής κλίμακας παράκτιας αλιείας στην προστατευόμενη Περιοχή του Ε.Θ.Π.Ζ. με την εφαρμογή κοινοτήτων εργαλείων και όπως έγινε γνωστό από τους υπεύθυνους του προγράμματος, συμμετέχουν σε αυτό 35 αλιείες από το νησί μας.

Μιλώντας στον «Ε» ο Πρόεδρος του Πάρκου Καθηγητής Δρ. Κουτσούμπας ανέφερε πως στο συγκεκριμένο πρόγραμμα συμμετέχουν εκτός από την Ελλάδα και άλλες ευρωπαϊκές χώρες όπως η Ιταλία, η Κροατία, η Αλβανία, η Σλοβενία, η Γαλλία, η Ισπανία και αφορά την προστασία των ιχθυοοικολογικών σε προστατευόμενες θαλάσσιες περιοχές. Η Ζακύνθος και το ΕΘΠΖ ήταν ένα από τα πεδία εφαρμογής του προγράμματος, όπου σε συνεργασία με τους τόπους ψαράδες έγιναν μετρήσεις, εφαρμόστηκαν συγκεκριμένοι μέθοδοι αλιείας,

πραγματοποιήθηκαν ενημερωτικά σεμινάρια και πολλές άλλες δράσεις για την ενημέρωση και των επαγγελματιών αλλά και του επιστημονικού προσωπικού του Πάρκου.

«Στόχος είναι να ενημερωθούν οι ψαράδες για την σημασία που έχει η προστασία των ιχθυοαποθεμάτων. Η Ζακύνθος θεωρήθηκε ως πρότυπο εφαρμογής αυτού του προγράμματος και αυτός ήταν και ο λόγος που αποφασίστηκε να πραγματοποιηθεί εδώ το Θερινό Σχολείο».

Μεταξύ των συμμετεχόντων στο πρόγραμμα είναι και ο παλιός Καθηγητής Ραβύλο Γκιγιέτι, Καθηγητής στο Πανεπιστήμιο της Νίκαιας και θα διατελέσει μια εβδομάδα, περιλαμβάνοντας σεμινάρια, αλλά και δράσεις στη θαλάσσια περιοχή του Πάρκου.

Ανέφερε ο Πρόεδρος του ΕΘΠΖ σημειώνοντας πως το θερινό σχολείο πραγματοποιείται σε συνεργασία με το Πανεπιστήμιο της Νίκαιας με συγκεκριμένο την θαλάσσια οικολογία, ο οποίος ανέφερε πως οι προστατευόμενες περιοχές, δεν πρέπει να θεωρούνται ως περιοχές όπου ισχύουν περιορισμοί, αλλά αντίθετα ως περιοχές που προσφέρουν σημαντικές δυνατότητες και προοπτικές, στη βάση της νάτια της προστασίας και της βιώσιμης ανάπτυξης. Σημείωσε πως η Μεσόγειος είναι μια μοναδική περιοχή έρευνας και ανάπτυξης, όπου υπάρχει ένα πλούσιο θαλάσσιο περιβάλλον, όπου διαβιώνουν πολλά προστατευόμενα είδη αλλά παράλληλα υπάρχει και μια έντονη ανθρώπινη δραστηριότητα, τουριστική, αστοχική, αλιευτική κ.α.

Κληθείς δε να σχολιάσει την πρόκληση για τις έρευνες υδρογονανθράκων που ξεκινούν στις θαλάσσιες του Ιονίου σημείωσε: «Αν θέλουμε να ακολουθήσουμε το βήμα της βιώσιμης ανάπτυξης θα πρέπει να λάβουμε υπόψη μας τον απόλυτο έλεγχο στους διαθέσιμους πόρους και όχι να τους εκμεταλλευτούμε ακόμη περισσότερο συντηρώντας ένα οικονομικό σύστημα που στηρίζεται στην υπερκατανάλωση πόρων και έχει αποδειχθεί αποτυχημένο. Αποτυχημένο και μακροπρόθεσμα αλλά και μεσοπρόθεσμα: Οι μεγάλες εταιρείες εκμεταλλεύονται τους πόρους ενός τόπου και ακολουθεί αναζήτηση καινούργιους. Η βιώσιμη ανάπτυξη επιβάλλει να απολαμβάνουν τους πόρους μιας περιοχής οι κάτοικοι και μοιράζονται, θα τους απολαμβάνουν και οι εποχικές επισκέψεις».

ΕΠΙΧΕΙΡΗΣΙΑ
ΕΡΜΗΣ

ΙΔΙΟΚΤΗΤΗΣ: ΕΡΜΗΣ Α.Ε.
ΓΡΑΦΕΙΑ: ΚΩΣΤΑΣ ΒΑΡΦΕΛΗΣ 2
ΤΗΛ: (26940) 4444, 2406 6444, 6444
Email: info@ermis.gr, contact@ermis.gr

ΕΚΔΟΤΗΣ: Ιωάννα Πέττα - Σινεμά ΔΕΥΤΕΡΟΤΗΤΗ - Αργείο Σινεμά

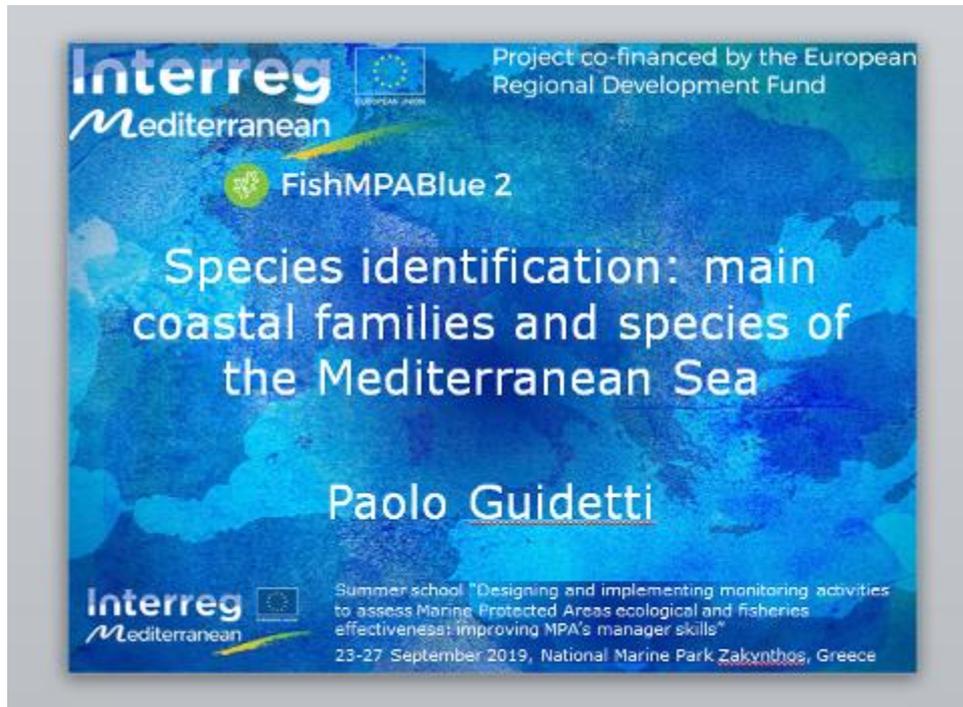
ΥΠΕΥΘΥΝΟΣ ΤΥΠΟΓΡΑΦΟΥ: Δημήτρης Πέττα

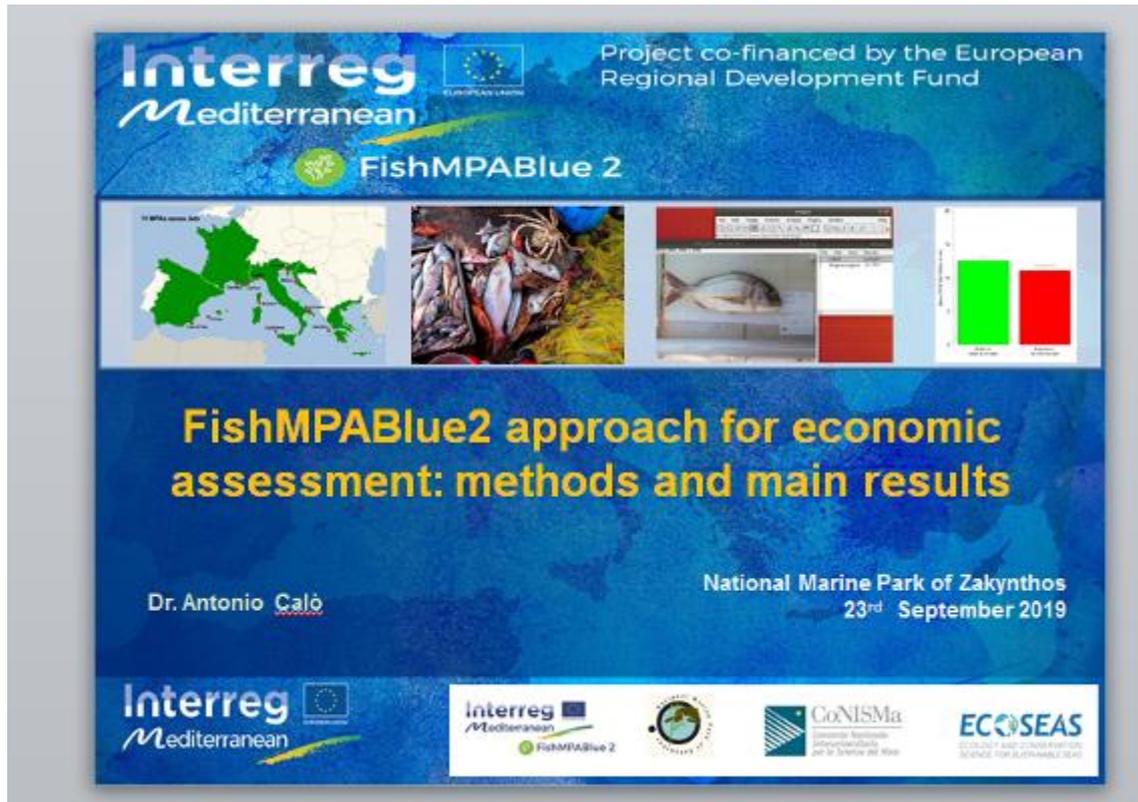
ΤΙΜΗ ΦΥΛΛΟΥ: €
ΕΤΗΣΙΑ ΣΥΜΦΩΝΗ: 120 € (Πλέον 50 ευρώ για ταχυδρομικό έξοδο για συνδρομείς εκτός Ζακύνθου)

ΣΥΝΔΡΟΜΗ
ΤΡΑΠΕΖΙΟΝ - ΕΠΙΧΕΙΡΗΣΕΩΝ 200 €

Η αναδιοργάνωση επιτρέπεται μόνο κατόπιν γραπτής αδείας της εταιρείας ΕΡΜΗΣ Α.Ε. Τα τυπογραφικά έξοδα αναφέρονται στις απειρίες μόνο των συστατικών τριών.

Presented educational material





Interreg Mediterranean Project co-financed by the European Regional Development Fund

FishMPABlue 2

Map of the Mediterranean region, image of fish, image of a fish in a tank, and a bar chart with green and red bars.

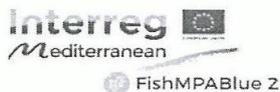
FishMPABlue2 approach for economic assessment: methods and main results

Dr. Antonio Calò

National Marine Park of Zakynthos
23rd September 2019

Interreg Mediterranean **interreg Mediterranean** **CoNISMa** **ECOSEAS**

PRESENCE SHEETS



Summer school
 "Design and implement monitoring activities to assess Marine Protected Areas ecological and fisheries effectiveness: improving MPA's manager skills"



23-27 September 2019, Zakynthos
 National Marine Park of Zakynthos



23th September 2019

A/A	Name/Surname	Organization	Signature
1	Artion Seferi	RAPA Vlore	[Signature]
2	CLAUDIA BORGATTI	ARPA TORRE DEL CERRETO	Claudia Borgatti
3	SUNČICA STRIŠKOVIĆ	PUBLIC INSTITUTION IPIRADA	[Signature]
4	BRUNA AUKOVIĆ	PUBLIC INSTITUTION IPIRADA ISLANDS	[Signature]
5	MILENA RANON	PUBLIC INSTITUTION NP BELASICA	Milena Ranon
6	NEŽA GREGORIČ	MPA DEBELI RTIČ (SLO)	[Signature]
7	LUKA KASTELIC	MPA STRUNJAN (SLO)	[Signature]
8	STEFANIA COPPA	CNR / BINIS MPA	Stefania Coppa
9	ANTONIO CALO'	UNICE / UNIPA	Antonio Calo'
10	ANTONIO DI FRANCO	SEN / UNICE	[Signature]
11	GABRIELE TURCO	CONISMA	Gabriele Turco
12	MARTINA CRIMI	UNICE	Martina Crimi
13	PAOLO GUIDETTI	UNIV. NICE	Paolo Guidetti
14	Charalampos Dimitriadis	NMPZ	[Signature]
15	CARLO CATTANO	CONISMA	Carlo Cattano
16	MANFREDI D'LORENZO	IPBIR CNR	Manfredi D'lorenzo
17	DROSOS KOUTSOUBAS	NMPZ - Univ Aegean	[Signature]
18	Elpiniki Kalli	NMPZ	[Signature]
19	Anna-Thalassini Kalli	NMPZ	[Signature]
20	Elena Drosogianni	NMPZ	[Signature]
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Summer school
 "Design and implement monitoring activities to assess Marine Protected Areas ecological and fisheries effectiveness: improving MPA's manager skills"



23-27 September 2019, Zakynthos
 National Marine Park of Zakynthos

24th
 September 2019

A/A	Name/Surname	Organization	Signature
1	CARLO CATTANO	CONISMA	<i>Carlo Cattano</i>
2	GABRIELE TUNCO	CONISMA	<i>Gabriele Tunco</i>
3	CLAUDIA BORGATTI	APP TORRE DEL CERRENO	<i>Claudia Borgatti</i>
4	Artion Seferi	RAPA VLORE	<i>Artion Seferi</i>
5	SUNCICA STRIŠKOVIĆ	P.1. PIRIDA CROATIA	<i>Suncica Striško</i>
6	BRUNA ĐUKUČIĆ	PINP LASTOVO ISLANDS	<i>Bruna Đukučić</i>
7	MILENA RANCV	NATURE PARK PEŁASZCICA	<i>Milena Rancv</i>
8	KUKA KASTELIC	NATURE PARK STRUNJAN	<i>Kuka Kastelic</i>
9	NEŽA GREGORIĆ	MPA DEBELI RTIĆ	<i>Neža Gregorić</i>
10	STEFANIA COPPA	CNR / GISIS MPA	<i>Stefania Coppa</i>
11	LYDIA ALVANOU	ΘΕΡΜΑΪΚΟΣ ΚΥΛΗΦΑΝΑ	<i>Lydia Alvanou</i>
12	PAOLO GUIDETTI	UNIV. NICE	<i>Paolo Guidetti</i>
13	ANTONIO DI FRANCO	SEN / UNICE	<i>Antonio Di Franco</i>
14	MANFREDI DI CORONA	IRBIM - CNR	<i>Manfredi Di Corona</i>
15	MARTINA CRINI	UNICE	<i>Martina Crini</i>
16	ANTONIO CALO'	UNIPA/UNICE	<i>Antonio Calo'</i>
17	(Nivalopoulos) Dimitrakidi	NMP2	<i>Dimitrakidi</i>
18	Elpinki Kalli	NMP2	<i>Elpinki Kalli</i>
19	Anna-Thalassini Valli	NMP2	<i>Anna-Thalassini Valli</i>
20	Μαργαρίτα Κωνσταντίνου	NMP2	<i>Margherita Konstantinou</i>
21			
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Summer school
 “Design and implement monitoring activities to assess Marine Protected Areas ecological and fisheries effectiveness: improving MPA’s manager skills”



23-27 September 2019, Zakynthos
 National Marine Park of Zakynthos

25th
 September 2019

A/A	Name/Surname	Organization	Signature
1	CARLO CATTANO	CONISMA	<i>Carlo Cattano</i>
2	GABRIELE TUNCO	CONISMA	<i>Gabriele Tunco</i>
3	CLAUDIA BORGATTI	AMP TORRE DEL CERRANO	<i>Claudia Borgatti</i>
4	Artion Seferi	RAPA VLORE	<i>Artion Seferi</i>
5	SUNICA STRISPOVIĆ	PUBLIC INSTITUTION PRIRODA	<i>Sunika Strisповić</i>
6	BRUNA ĐUKOVIĆ	PI NP LASTOVO ISLANDS	<i>Bruna Đuković</i>
7	HILENA BAKOV	NATURE PARK TELASICA	<i>Hilena Bakov</i>
8	LOKA KASIELK	NATURE PARK STRUMJAN (SLO)	<i>Loka Kasielk</i>
9	NEŽA GREGORIČ	LANDSCAPE PARK DEBELI RTIČ	<i>Neža Gregorič</i>
10	STEFANIA CERRA	CNR / SINIS MPA	<i>Stefania Cerra</i>
11	LYDIA ALVANOU	THEMAIKOS GULF PAMA	<i>Lydia Alvanou</i>
12	PAOLO GUIDETTI	UNIV. NICE	<i>Paolo Guidetti</i>
13	MANTRE DI DI LOBBA	IRBIM- CNR	<i>Mantre Di Di Lobba</i>
14	ANTONIO & FRANCO	S2N	<i>Antonio & Franco</i>
15	MARTINA CRINI	UNICE	<i>Martina Crini</i>
16	ANTONIO CALO	UNI PA/ UNICE	<i>Antonio Calo</i>
17	Charalampia Dritsaki	NMP2	<i>Charalampia Dritsaki</i>
18	Elpinki Kalli	NMP2	<i>Elpinki Kalli</i>
19	Anna-Thalassini Velli	NMP2	<i>Anna-Thalassini Velli</i>
20	Elea Drosogianni	NMP2	<i>Elea Drosogianni</i>
21			
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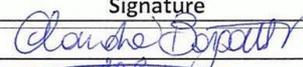
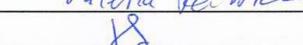
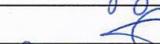
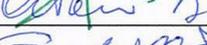
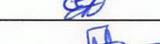
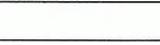


Summer school
 "Design and implement monitoring activities to assess Marine Protected Areas ecological and fisheries effectiveness: improving MPA's manager skills"



23-27 September 2019, Zakynthos
 National Marine Park of Zakynthos

26th September 2019

A/A	Name/Surname	Organization	Signature
1	CLAUDIA BORGATTI	ANP TORRE DEL CERRAVO	
2	Artion Seferi	RAPA VLORË	
3	SUNCICA STRIŠKOVIĆ	PUPIRODA CROATIA	
4	BRUNA ĐUKOVIĆ	PIMP LASTOVO ISLANDS	
5	MILENA PAMOU	NATURE PARK BELAŠČICA	
6	LUKA KASTELIĆ	NATURE PARK ŠTRUNJAN	
7	NEŽA GREGORIČ	NATURE PARK DEBELI RTIČ	
8	STEFANIA COPPA	CNR / SINIS MPA	
9	LYDIA ALVANOU	THEMAYIKOS GULF PAMA	
10	ANTONIO DE FRANCO	SEM / UNICEF	
11	GABRIELE TURCO	CONISMA	
12	ANTONIO CALO'	UNICE/UNI PA	
13	CARLO CASTANO	CONISMA	
14	MANFREDO DI LORENZO	IRBIM - CNR	
15	Chavalasmas Dimitriadis	NMP2	
16	Elpinki Kalli	NMP2	
17	Anna-Thelessini Kalli	NMP2	
18	Eleua Drosogianni	NMP2	
19	Vasiliki Kouva	NMP2	
20	Ναυσίδουλος Κωνσταντίνος	NMP2	
21			
22			



Summer school
 "Design and implement monitoring
 activities to assess Marine Protected Areas
 ecological and fisheries effectiveness:
 improving MPA's manager skills"



23-27 September 2019, Zakynthos
 National Marine Park of Zakynthos

27th September 2019

A/A	Name/Surname	Organization	Signature
1	BRUNA DUKOVIĆ	P.N.P. LASTOVO ISLANDS	<i>[Signature]</i>
2	MILENA BAKOU	NATURE PARK DECAEOLICA	<i>[Signature]</i>
3	CLAUDIA BORGATTI	AMP TORRE DEL GERARDO	<i>[Signature]</i>
4	LUKA KASTELIĆ	NATURE PARK ŠIBUNJAN	<i>[Signature]</i>
5	NEVA GREGORIĆ	NATURE PARK DEBELI RTIĆ	<i>[Signature]</i>
6	LYDIA ALVANOU	THERMAYOS GULF PAMA	<i>[Signature]</i>
7	STEFANIA COPPA	CNR SINIS MPA	<i>[Signature]</i>
8	Action Seferi	RAPA VLORE	<i>[Signature]</i>
9	SUNJICA STRIŠKOVIĆ	P.I. PRIRODA	<i>[Signature]</i>
10	ANTONIO DI FRANCO	SZW	<i>[Signature]</i>
11	CARLO CATTANO	CONISMA	<i>[Signature]</i>
12	SABINELE TURCO	CONISMA	<i>[Signature]</i>
13	MANTFREDI DI LORENZO	IREMI - CNR	<i>[Signature]</i>
14	ANTONIO CALO'	UNICE-UNIPA	<i>[Signature]</i>
15	Christodoulos Dimitriadis	NMP2	<i>[Signature]</i>
16	Elpiniki Kalli	NMP2	<i>[Signature]</i>
17	Anna-Thalassini Velli	NMP2	<i>[Signature]</i>
18	Elea Drosogianni	NMP2	<i>[Signature]</i>
19	Vasiliki Gkavva	NMP2	<i>[Signature]</i>
20	Postopoulos Kostas	NMP2	<i>[Signature]</i>
21			
22			

FINANCIAL REPORTING

22 september		
Type	Unit	Estimated cost
Accommodation	9 single rooms x 30 € + 4 double rooms x 40€ + 0.50€ X17 (overnight tax)	438,5
Dinner	20personsX20€	0
Lunch Break	20personsX15€	0
Total per day		438,5

23 september		
Type	Unit	Estimated cost
Coffee Break	20personsX10€	0
Lunch Break	20personsX15€	0
Dinner	20personsX20€	0
Premises/equipment	Full equiped hall	1000
Accommodation	9 single rooms x 30 € + 4 double rooms x 40€ + 0.50€ X17 (overnight tax)	438,5
Small office equipment		100
Lecturers	2X200€	400
Secretary	1X100	100
Cummunication		50
		2088,5



24 september		
Type	Unit	Estimated cost
Snack at the field	20personsX10€	0
Diving equipment	15 tanksX20€ + diving equipment for 20 persons X 40 euros + 10 slatesX50 + 3 transect lines *50 euros each + ropes (50 euros)	1800
Rescue diver	1 diver X 150€	150
Boat rental	2 boatsX150€	300
Transportation	20 persons X 30€	600
Accomodation	9 single rooms x 30 € + 4 double rooms x 40€ + 0.50€ X17 (overnight tax)	438,5
Small office equipment		100
Lecturers	2X 200€	400
Secretary	1X100	100
Cummunication		50
		3938,5

25 september		
Type	Unit	Estimated cost
Transportation	20 persons X30€	600
Boat rental	2 boats X200€	400
Lunch Break	20personsX25€	0
Premises/equipment	Full equiped hall	1000
Diner	20personsX30€	0
Accomodation	9 single rooms x 30 € + 4 double rooms x 40€ + 0.50€ X17 (overnight tax)	438,5
Small office equipment		100
Lecturers	2X 200€	400
Secretary	1X100	100
Cummunication		50
		3088,5

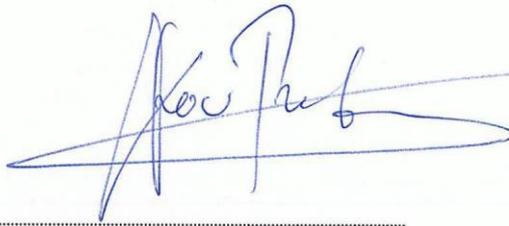
26 september		
Type	Unit	Estimated cost
Coffee Break	20personsX10€	0
Premises/equipment	Full equiped hall	1000
Coffee Break	20personsX10€	0
Fishing boat rental and catches	1 boat X 1200	1200
Equipment for SSF landing monitoring	various equipment	400
Lunch Break	20personsX15€	0
Diner	20personsX20€	0
Accomodation	7 single rooms x 30 € + 4 double rooms x 40€ + 0.50€ X17 (overnight tax)	378,5
Small office equipment		100
Lecturers	2 X 200€	400
Secretary	1X100	100
Cummunication		50
		3628,5

27 september		
Type	Unit	Estimated cost
Premises/equipment	Full equiped hall	1000
Coffee Break	20personsX10€	0
Field excursion	20personsX40€	800
Transportation	20 persons X 40€	800
Accomodation	7 single rooms x 30 € + 4 double rooms x 40€ + 0.50€ X17 (overnight tax)	378,5
Diner	20personsX20€	0
Lunch Break	20personsX20€	0
Small office equipment		100
Lecturers	2X 200€	400
Secretary	1X100	100
Cummunication		50
		3628,5



Reporting cost	8189
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Per cost category	
Accommodation	2511
Premises/equipment	4000
Small office equipment	500
Lecturers	2000
Secretary	500
Cummunication	250
Reporting cost	8189
Diving equipment	1800
Rescue diver	150
Boat rental	700
Transportation	2000
Fishing boat rental and catches	1200
Equipment for SSF landing monitoring	400
Field excursion	800
Total	25000

A handwritten signature in blue ink, appearing to read "Drosos Koutsoumpas", written over a horizontal dotted line.

Signature

DROSOS KOUTSOUMPAS

Name of the Signatory



Official stamp of the Signatory Structure

Project FISHMPABLUE 2 (*Fishing governance in MPAs: potentialities for Blue Economy 2*)
PROGRAM INTERREG MED 2014/2020
CUP E52H16000210007

Twining exchange, Favignana September, 24 2019 FINAL REPORT

The exchange visit took place in Favignana (at the MPA Egadi Islands).

The guest MPA was “Torre del Cerrano”, represented by Dr. Rossana D'Andrea.

The one-day visit was structured to illustrate the Egadi pilot action within the MED FishMPABlue 2 project, to learn about the “Egadi Islands” MPA, its peculiarities, activities and projects particularly aimed at sustainability and fishermen (as detailed in table below).

9:00 a.m.	Visit to the port of Favignana	Illustration of types of fishing and meeting with the fishermen who participated in the project
10 a.m.	MPA office	meeting with the MPA Director. Illustration of the pilot action carried out at the Egadi Islands (phases, procedures, survey forms, code of conduct ...) Illustration of projects and activities of the MPA, in particular about fishing
12:00	Field visit of MPA by car	Knowledge of the territory, of the second fishing port (Punta Lunga) and of the activities of the MPA
13:30	Lunch	
15:30	MPA office	Final meeting with MPA managing staff

17:00	Field visit	Rescue Marine Turtle Centre of MPA
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At the port of Favignana, we met two artisanal fishermen.

In addition to illustrating their involvement in the project and what they did during the monitoring, we talked with them about the problems of artisanal fishing, in particular the accidental interactions with dolphins and their opinion on how fishing can be improved with an efficient management of fishing gear during the year and their characteristics.

We also talked about the arising opportunity from tourism to diversify the fishing activity that has a positive effect on the environment (reduction of pressure on fish stocks) and for the fisherman in terms of increased earnings.



At the MPA office, there was an initial institutional greeting and discussion with the MPA Director about the two areas involved in the exchange visit, to learn about similarities and differences.



Subsequently, we held a meeting to deepen the administrative procedures, the operating methods, the execution steps of the pilot action, through the vision of technical documents, the survey forms given to the fishermen and the administrative documents. We have read and discussed the contents of the code of conduct and its application. We discussed the strengths and weaknesses that emerged during implementation, the potential and the positive results, on what needs to be improved.



The program included a field visit to learn about the area and see some projects and initiatives conducted by the MPA for the sustainability of use. This activity was done by car, the MPA staff accompanied the MPA guest representative on a tour describing and telling about the environment, species and initiatives.

Last stop of the visit was the Sea Turtle Rescue Center, that is located within "Ex Stabilimento Florio delle Tonnare di Favignana e Formica", today an important museum of fishing and processing of bluefin tuna.

The technical staff of the center explained the aims, the activities, the projects concerning the protection of sea turtles and the relationship with the area fishermen.



Twinning exchange visit on best practice for small scale fisheries. Methodology and techniques used for monitoring SSF in the Côte Bleue Marine Park

Date and place:

01-03 october 2019

Location : Observatoire du Parc Marin - Plage du Rouet 31, avenue Jean Bart

13620 CARRY-LE-ROUET – France

Tel: +33 (0) 4 42 45 45 07 (+Mobile Eric Charbonnel : +33 (0) 6.95.70.67.05)

Main twinning exchange visit objectives:

Present and discuss the kind of methodologies used for the monitoring of small scale fisheries in the Côte Bleue Marine Park (PMCB), from an accurate study (pHD of K. Leleu, 2012, see publications Leleu *et al.*, 2012, 2014) to light monitoring in routine conducted since 2012. Return of experience concerning FishMPABlue program 2017-2018.

Language:

The meeting can be carried out in English (with French accent!), or in French

Speaker: Eric Charbonnel (scientific officer PMCB), Olivier Bretton (Ecoguard of PMCB)

Please note that accommodations and meals are not provided by the Marine Park

Useful links:

<http://www.parcmarincotebleue.fr/Page%20contact/Contact.html> (file to the access by car)



Location of Côte Bleue Marine Park territory (9.873 ha), including 2 no-take reserves (CARRY and COURONNE) and artificial reefs of protection and production (5.000 m³).

PRELIMINARY PROGRAM OF THE VISIT

(3 FULL DAYS)

Day 1:

10h-12h: Introductive presentation of the Marine Park activities with exchanges

12h15-13h45: Lunch in Carry (beach café)

14h-17h: Field visit (by boat) of the Carry marine reserve (no take area of 85 ha) and the coastline of the park, showing management measures (no-go zone for boat, mooring)

17h-18h: monitoring studies for better management

Day 2:

9h-10h: Visit on land of carry reserve, show case of panel informations, rules, posidonia panel, UW pathway panel, pathway of lizard

10h30-12h: Visit of fish market and exchanges with artisanal fishers in the harbour of Carro, close to the Cap Couronne reserve (no take area of 210 ha) created at the initiative of SSFishers themselves

12h30-14h: Lunch in Carro (Côte&mer restaurant)

14h30-15h15: Visit of "the small museum of carro, private visit with the creator of museum, an old fisherman

15h15-15h45 : visit of Couronne reserve by land

16h-18h: presentation of methods for monitoring SSF in the Marine Park; feedback/return of our experience (from strong monitoring (pHD Leleu, 2012, FishMPABlue2 program) to "light" monitoring in routine).

Day 3:

9h15-12h : visit by boat of the coastline of the Park, and protected land managed by conservatory of littoral with sea school classes (55 children)

14h30h-15h15: presentation of Sloneania MPA

15h15-16h: feedback, debriefing, assessment of the 3 days visit

Date and place: 18/09/2019 – Carry-le-Rouet

Stamp :

PARC MARIN DE LA COTE BLEUE
SYNDICAT MIXTE
Observatoire - Plage du Rouet
31, avenue Jean Bart - B.P. 42
13620 CARRY-LE-ROUET
Tél. 04 42 45 45 07 - Fax 04 42 44 98 06
syndicatmixte@parcmarincotebleue.fr
www.parcmarincotebleue.fr

**Report of webinar:
Adopting a Governance Toolkit for small-scale fisheries
in Mediterranean MPAs**

Report by:

Kate Hogg

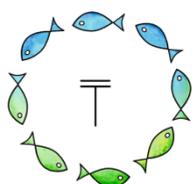
and

THALASSA Marine research & Environmental awareness

17 rue Gutenberg 06000 Nice, FRANCE

www.thalassa-env.com

thalassa.env@gmail.com



THALASSA
Marine research & Environmental awareness

On request from

IUCN Mediterranean Centre of Cooperation

<https://www.iucn.org/regions/mediterranean>



1. Webinar feedback

1.1. Number of participants

The webinar “Adopting a governance toolkit for small-scale fisheries in Mediterranean MPAs” was hosted by THALASSA Marine Research and two guest speakers: Kate Hogg and Nathan Bennett on Oct 9th at 17h. A total of 89 individuals registered previous to the date and 56 joined the webinar live from 18 countries (Table 1).

Table 1. List of countries of webinar participants

Europe	North America	Africa
France	Canada	Algeria
Germany	Mexico	Morocco
Greece	United States	Tunisia
Italy	Central America	Asia
Portugal	Costa Rica	Turkey
Slovenia	South America	
Spain	Peru	
United Kingdom		

1.2. Results from the poll

As part of the webinar, participants were asked to complete a poll related with the toolkit: “Which tool(s) would be most useful for meeting your MPAs needs?”

33 out of the 56 participants responded to the poll giving a 59% response rate.

The tools that received the highest votes focused on engaging fishers: in collaborative platforms (70%, n=23) and in monitoring activities (55%, n=18). All tools related with increasing enforcement received a fair share of votes. Interestingly attendees selected adding value and promoting consumption of new species (45%, n=15). When the pilot MPAs

selected which tools to implement, few selected tools within this category to increase SSF profitability (Fig. 1).

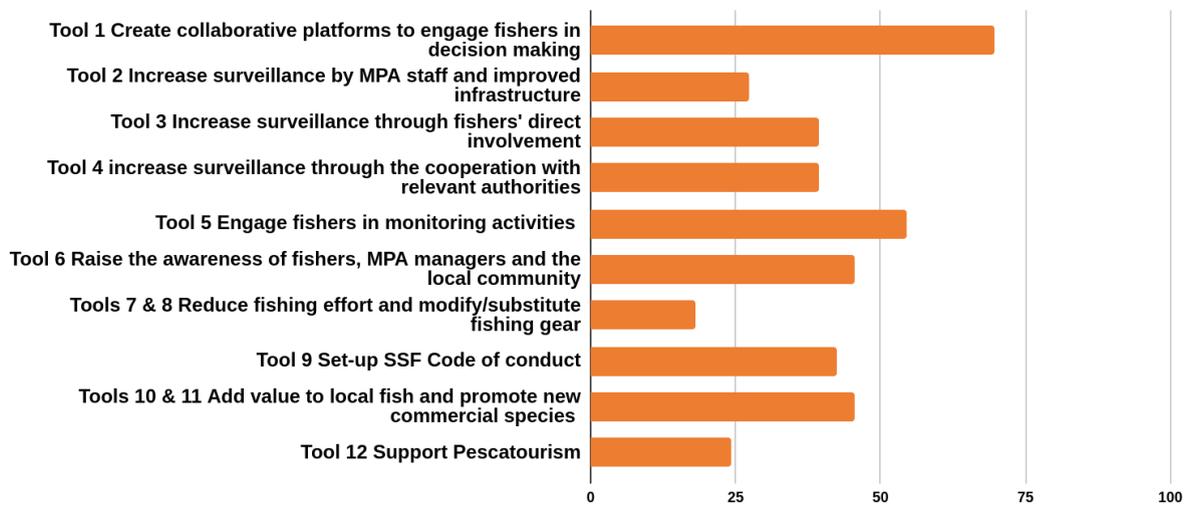


Figure 1. Results from the poll. Data is shown in percentage.

1.3. Satisfaction survey

Following the webinar attendees were emailed a survey designed by Kate Hogg using Survey Monkey to obtain feedback on the webinar. The following provides the responses obtained to each of the 9 questions posed. Overall the results received were very positive highlighting the webinar was successful. 25 of the 56 attendees responded giving a 45% response rate.

Q1. Overall how would you rate the webinar?

Out of 25 responses 36% (n=9) rated the webinar as excellent, 44% (n=11) as very good, 16% (n=4) as good and 4% (n=1) as fair (Fig. 2).

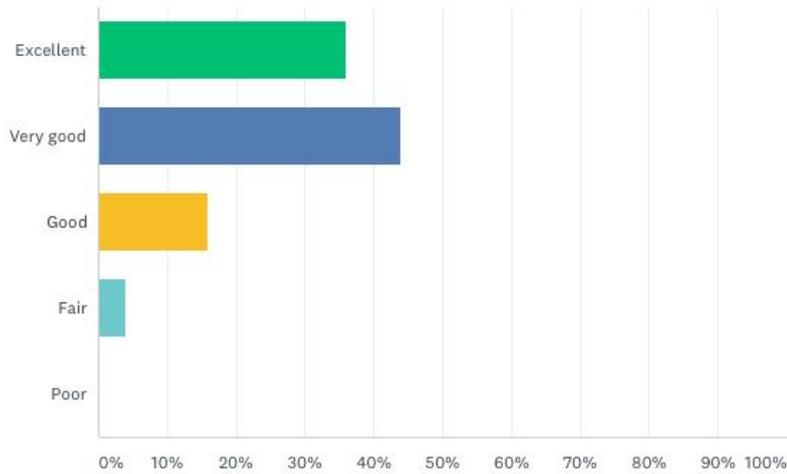


Figure 2. Results from question Q1. Data is shown in percentage

Q2. The level of detail was appropriate?

Out of 25 responses 44% (n=11) strongly agreed and 52% (n=13) agreed. One person (4%) disagreed.

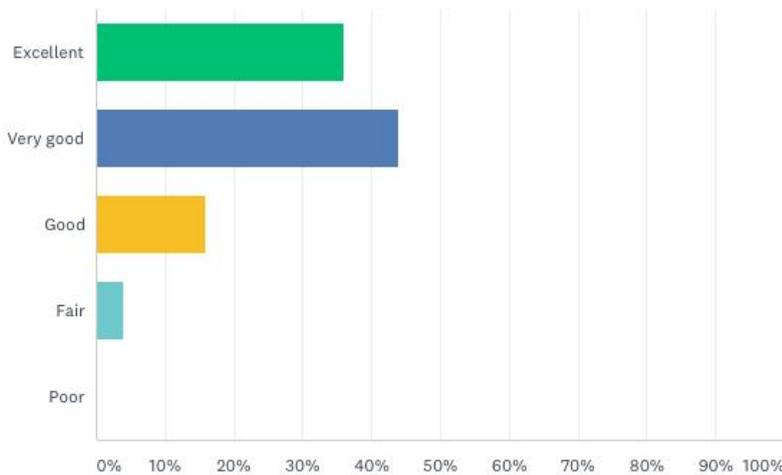


Figure 3. Results from question Q2. Data is shown in percentage

Q.3 The speakers were knowledgeable and professional

Out of 25 responses 22 (88%) strongly agreed and 3 (12%) agreed.

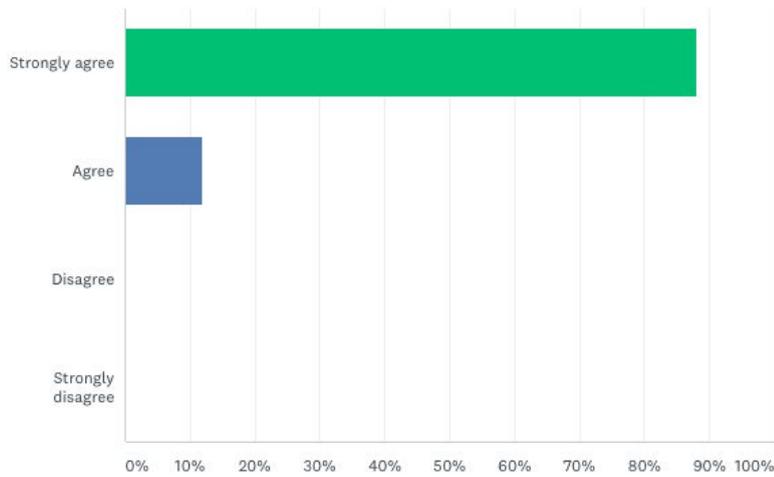


Figure 4. Results from question Q3. Data is shown in percentage

Q4. Was the webinar too long, too short or about right?

Out of the 25 responses 12% (n=3) said too short and 84% (n=21) stated the webinar length was about right, and 4% (n=1) too long.

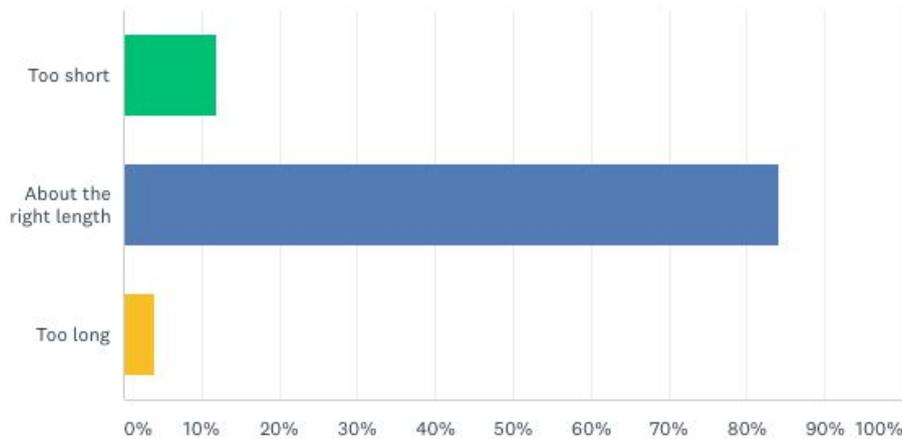


Figure 5. Results from question Q4. Data is shown in percentage

Q5. How useful did you find this webinar?

Out of the 25 responses 20% (n=5) said extremely useful, 56% (n=14) said very useful, 20% (n=5) said somewhat useful. One person (4%) found the webinar not so useful for them.

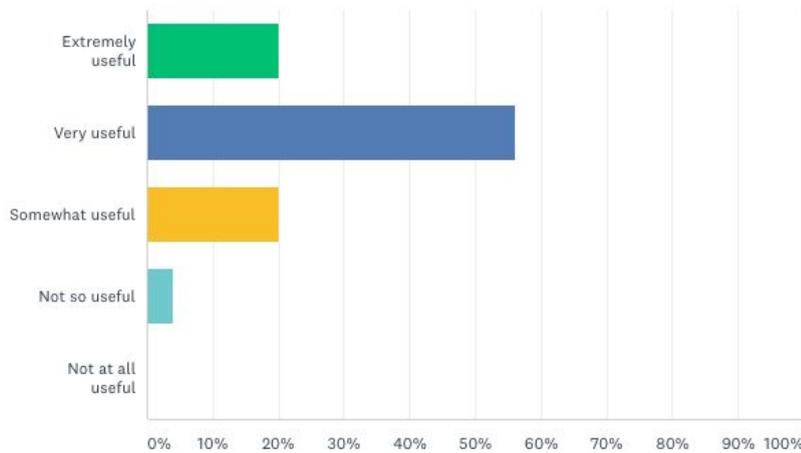


Figure 6. Results from question Q5. Data is shown in percentage

Q6. The information was directly applicable to my work

Out of 25 responses 11 (44%) strongly agreed, 12 (48%) agreed, and 2 (8%) disagreed.

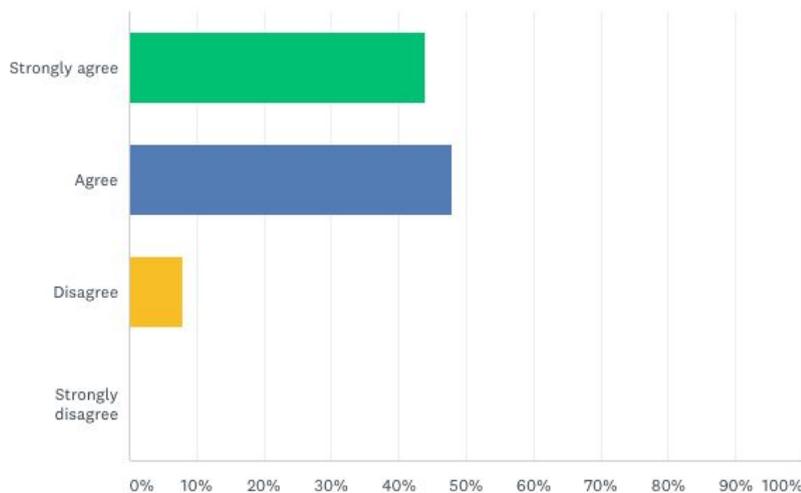


Figure 7. Results from question Q6. Data is shown in percentage

Q7. Was there any information that would have been helpful to know before the webinar?

The eight responses to this question included:

- The agenda
- The toolkit
- More information on the projects the presenters have been working on with links to the projects
- Prior access to the publications mentioned to be more familiar with governance issues

- Prior access to the slides
- Names of speakers
- An example of one tool applied to an SSF step by step

Some points such as the agenda and toolkit were mute if the webinar was accessed from the FishMPABlue website, however other sites that shared the webinar did not provide the full details for the speakers, webinar or how to access the toolkit in advance.

Q8. How likely are you to consider the governance toolkit in your work?

Of the 24 responses 37.5% (n=9) responded very likely, 58.33 (n=14) responded likely and one (4.17%) unlikely.

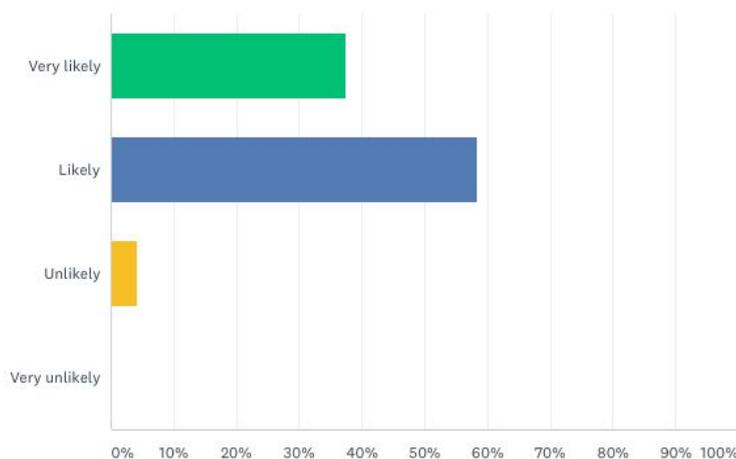


Figure 8. Results from question Q8. Data is shown in percentage

Q9. How did you hear about this webinar?

Of the 24 responses 37.50% (n=9) reported hearing from MedPAN, 8.33% (n=2) from the FishMPABlue website, 16.67% (n=4) from open channels, 33.33% (n=8) from friends/colleagues and 16.67% (n=4) from other sources. Other sources included: 2 from Twitter (Nathan Bennett’s), IUCN Facebook page and MSC.

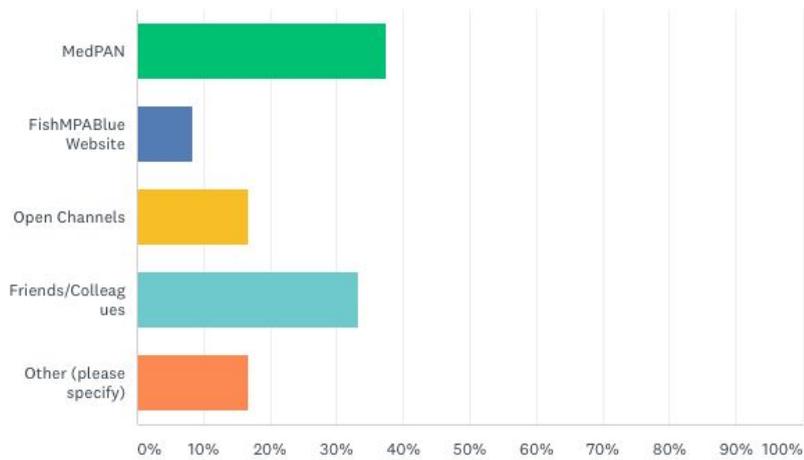


Figure 9. Results from question Q6. Data is shown in percentage

Additional feedback provided was that the content was very good but the material was also quite dense and it would have been more light if there had been questions permitted throughout the webinar.

1.4. Conclusion

In hindsight it would have perhaps been better to remove the word Mediterranean from the title to make the webinar more globally attractive, and it would have been better to have the webinar better advertised and shared through project partner networks and other channels. That said, we believe the webinar to have been a great success.

THE FISHMPABLUE APPROACH

Adopting a Governance Toolkit for Small-Scale Fisheries in Mediterranean MPAs

Kate Hogg & Nathan Bennett
Webinar 9th Oct 2019



Welcome

Speakers:



Kate Hogg is a consultant joining us from Italy. Kate is a specialist in marine protected area governance and small-scale fisheries management. Contact: kehogg@gmail.com



Nathan Bennett is joining us from Vancouver Canada where he works as a social scientist at the University of British Columbia. He is a leading specialist in ocean governance and small scale fisheries management Contact: Nathan.bennett@ubc.ca

Both Kate & Nathan have been directly part of the FishMPABlue project team.

Interaction:

We would like this to be as interactive as possible and will end the session with a Q&A session. Please type your questions in the Q&A box. Any other issues please make use of the chat box or raise your hand.

Aim

Aim:

We would like you to be familiar with:

- the concepts of marine governance and management
- how governance thinking can be applied to understand and improve MPAs
- the FishMPABlue approach and governance toolkit that you can adopt in your MPAs to strengthen your management of small scale fisheries
- with some lessons learned from case studies



Overview of Webinar

- Introduction to the FishMPABlue Project
- What is environmental governance?
- How can governance thinking be applied to improve MPAs?
- What is the FishMPABlue2 Governance Toolkit?
- What lessons have we learned and how can you use it?
- Questions? Comments? Debate?



What is FishMPABlue2?

FishMPABlue2 Project

FishMPABlue2:

Is the follow on to FishMPABlue. It has been running for the last 36 months and is reaching its conclusion at the end of October.

Partners:

8 partners - Federparchi, MedPAN, CoNISMa, WWF Adria, ECOMERS University of Nice, WWF-Med, APAM & IUCN

7 Associates – GFCM/FAO, Croatian and Spanish Ministry of Environment, Slovenia Institute for Conservation, MedWet, French MPAs Agency, RACSPA



FishMPABlue2 Project

The Objectives:

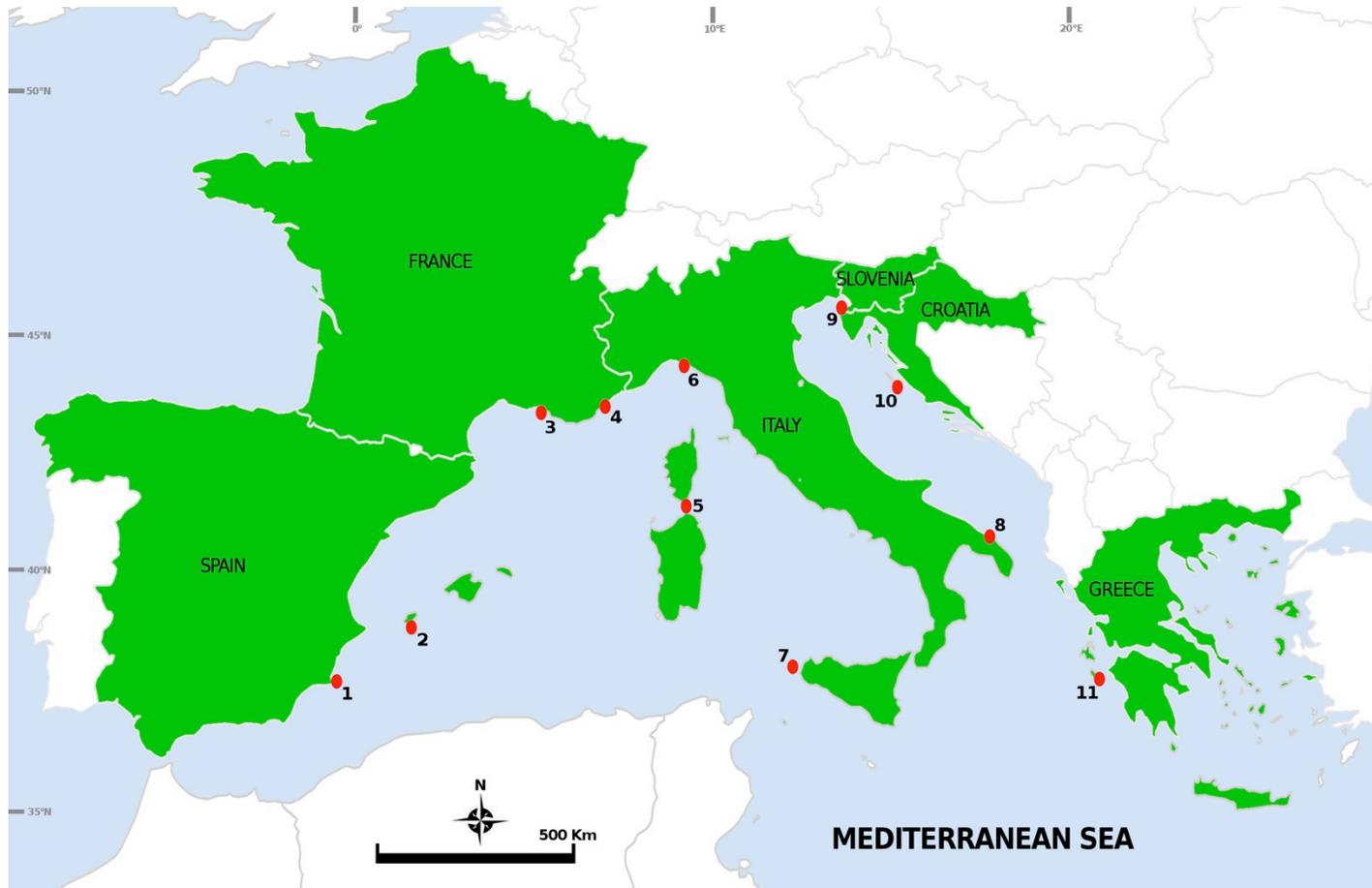
The overarching goal was to understand the relationship between SSF and MPAs in the Mediterranean Sea

To apply and test a governance toolkit in Mediterranean MPAs to demonstrate the effectiveness of these governance tools to help strengthen the management capacities and networks of MPAs

Testing in different MPAs they aimed to generate lessons learnt and refine these tools:

- allowing the toolkit to be shared with other MPAs in the Mediterranean and beyond
- and for the recommendations yielded to be adopted into national and international fisheries and MPA policy

Project pilot sites



1. Cabo de Palos - Islas Hormigas Marine Reserve (Spain)
2. Es Freus Marine Reserve of Ibiza and Formentera (Spain)
3. Côte Bleue Marine Park (France)
4. Cantonnement de Pêche of Cap Roux (France)
5. Bonifacio Strait Natural Reserve (France)
6. Portofino MPA (Italy)
7. Egadi Islands MPA (Italy)
8. Torre Guaceto MPA (Italy)
9. Strunjan Lanscape Park (Slovenia)
10. Telašćica Nature Park (Croatia)
11. National Marine Park of Zakynthos (Greece)

What is environmental governance?

Environmental Governance

The aim of environmental governance is to shape individual behaviors or societal actions to produce beneficial outcomes for the environment and for society.

Environmental governance is the institutions, structures and processes that determine who makes decisions, how and for whom decisions are made, how and what actions are taken and by whom to manage the environment.



@M.Mbari / MedPAN

Environmental Governance

Elements of Governance
Institutions Laws, Policies, Rules, Norms
Structures Governance structures: Top down, Co-management, Bottom Up Network Structures: networks, organizations & actors
Processes Planning, rule- making, negotiating, collaborating, conflict resolution



Who, how, for whom, what, by whom...
Who Who makes decisions?
How How and for whom are decisions made?
What How and what actions are taken to manage the environment?
By whom Who is responsible and to be held accountable for taking actions?

(Bennett & Satterfield, 2018)

Governance vs Management

Governanceis about... the structures, institutions and processes that determine **who** makes decisions, **how and for whom** decisions are made, **how and what** actions are to be taken and **by whom** to manage the environment.

Management ...is about...**what** is done in pursuit of environmental sustainability or conservation objectives, it can be understood as the resources, plans, and actions that result from the functioning of governance.

(Lockwood 2010: Bennett & Satterfield, 2018)

Environmental Governance Objectives

Objectives of Governance

Effective

To be ecologically effective. This requires direction, coordination, sufficient capacity, well informed, and accountable

Equitable

To be socially equitable. This requires recognition of all stakeholders, being participatory, fair, and just

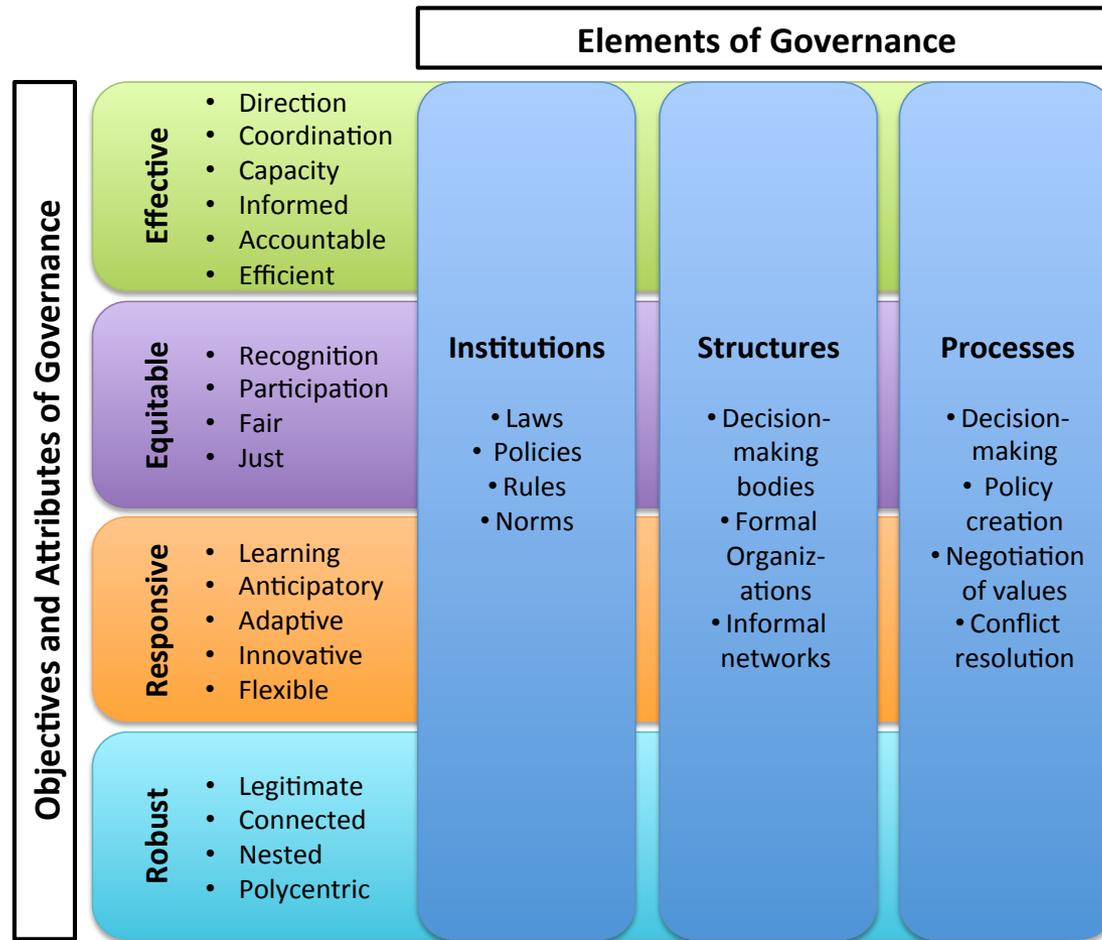
Responsive

To be responsive to changing circumstances. This requires being adaptive, innovative, flexible, anticipatory, and learn through doing

Robust

To be robust or persist over time e.g. to be legitimate, connected, nested within and between institutions on different levels

Bringing it All Together to Understand Environmental Governance



Bennett & Satterfield (2018). Environmental governance: A practical framework to guide design, evaluation, and analysis. Conservation Letters. Open Access.

Applying Governance Thinking to Understand and Improve Marine Protected Areas

Descriptive Governance Assessments

Descriptive analysis of MPA governance institutions, structures, and processes

Institutions

- Regional directives or international agreements
- National policies (for MPAs, fisheries, marine planning, etc.)
- Local norms and rules

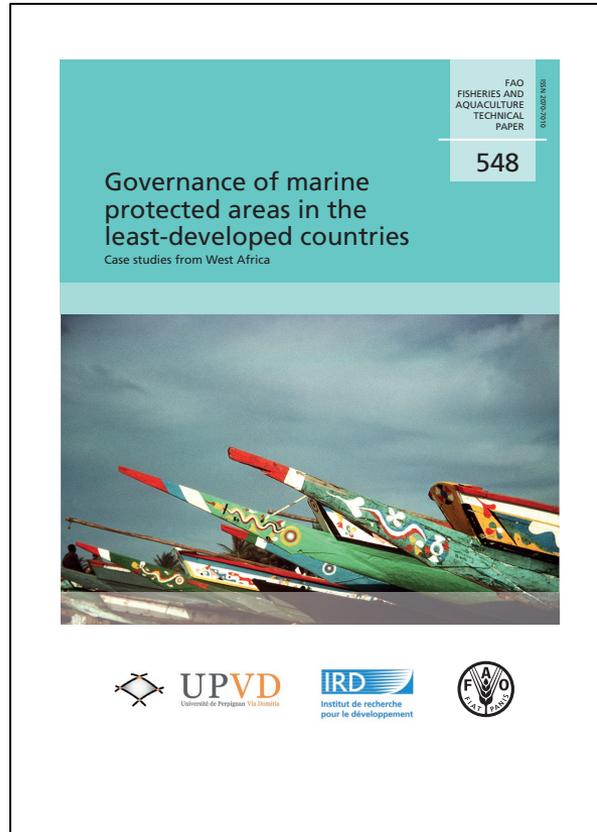
Structures

- Governance type - government-led, community-led, or collaborative management
- Composition of decision-making bodies
- Networks of actors and organizations involved in decision-making

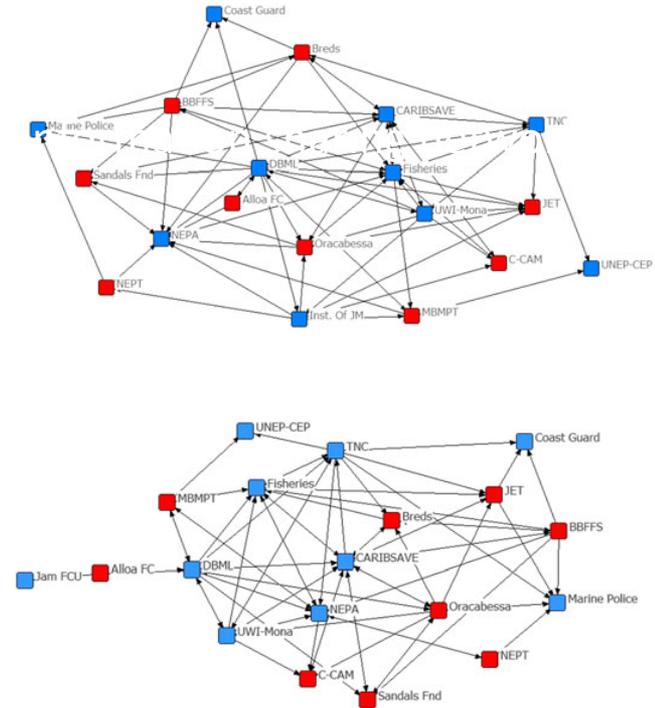
Processes

- Planning, implementation and management phases
- Decision- and rule-making processes
- Negotiation and conflict resolution processes
- Coordination and collaboration processes

Examples: Understanding Governance of MPAs



(Weigel et al, 2011)



Received: 22 August 2016 | Revised: 22 February 2017 | Accepted: 3 March 2017
DOI: 10.1002/aqc.2775

WILEY

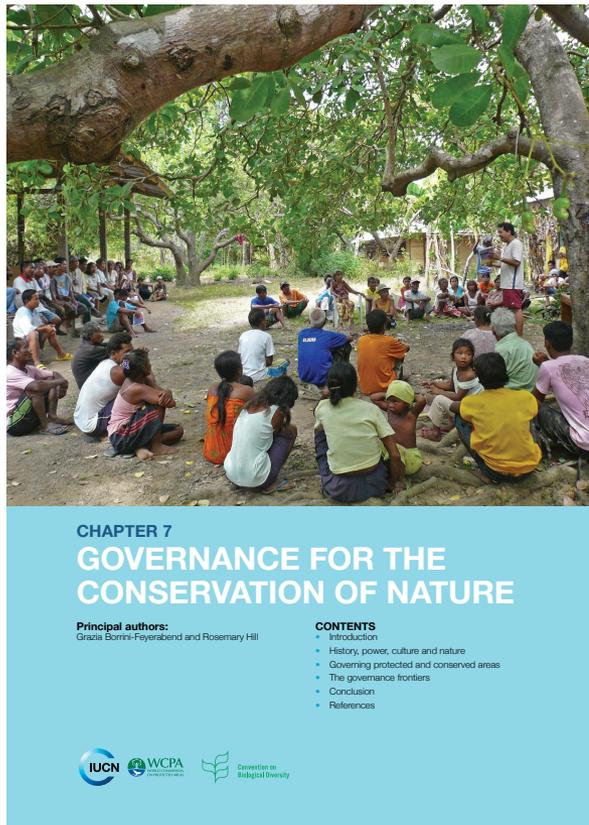
RESEARCH ARTICLE

Examining horizontal and vertical social ties to achieve social-ecological fit in an emerging marine reserve network

Steven M. Alexander^{1,2} | Derek Armitage³ | Peter J. Carrington⁴ | Örjan Bodin²

Evaluative Governance Assessments

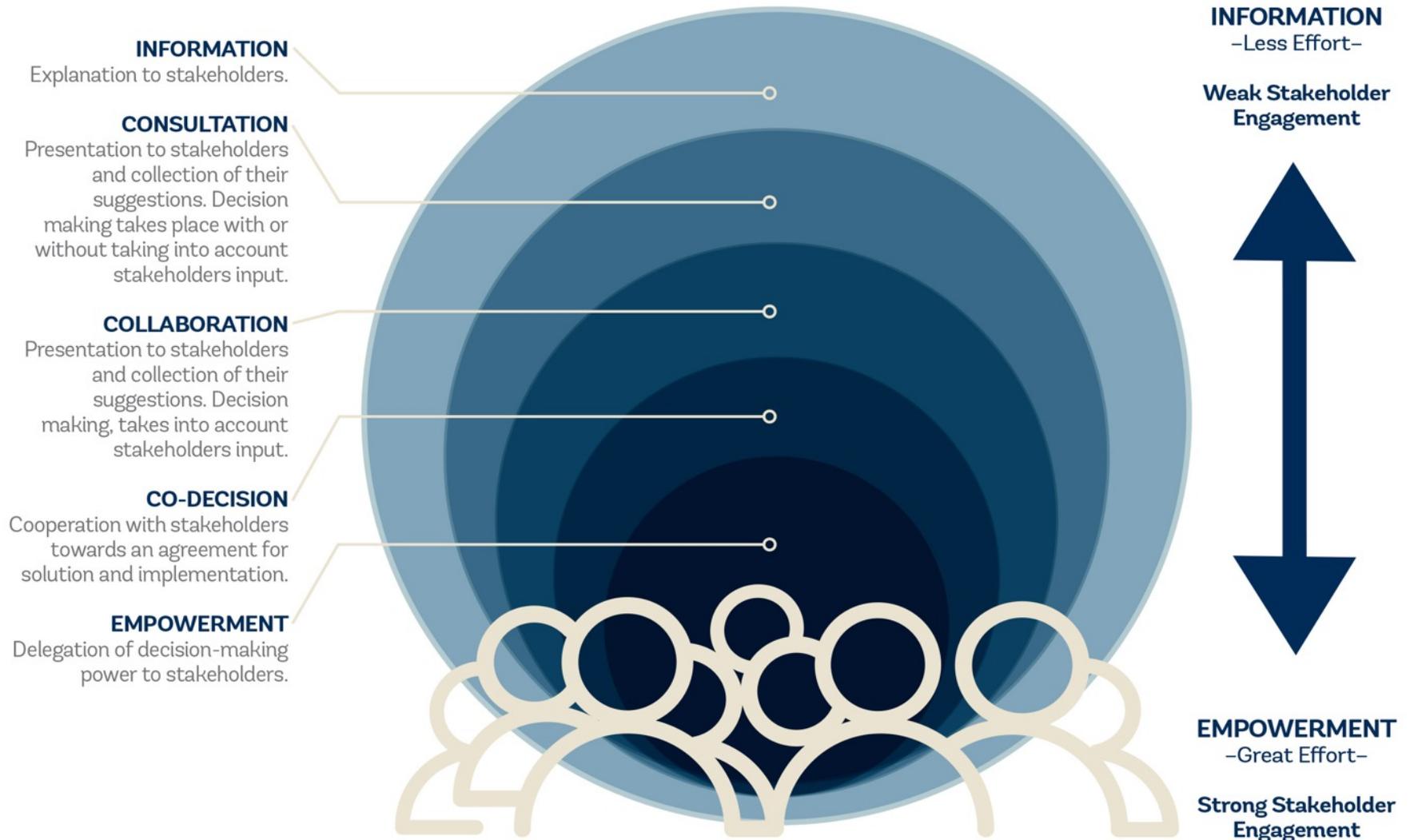
Evaluation against normative criteria for governance processes



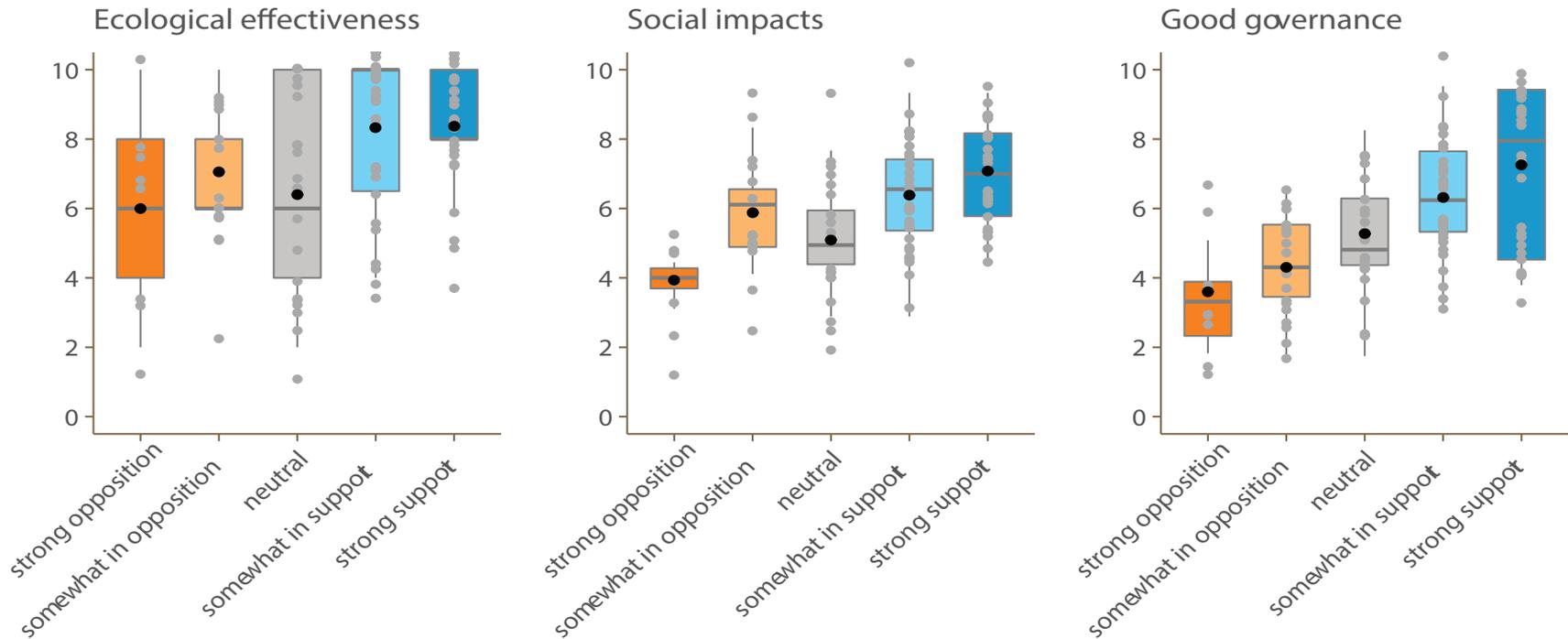
- Public participation
- Consensus orientation
- Strategic vision
- Responsiveness
- Effectiveness
- Efficiency
- Accountability
- Transparency
- Equity
- Rule of Law

(IUCN, 2015)

Example: Degree of Participation



Example: Does Good Governance Matter for Conservation?



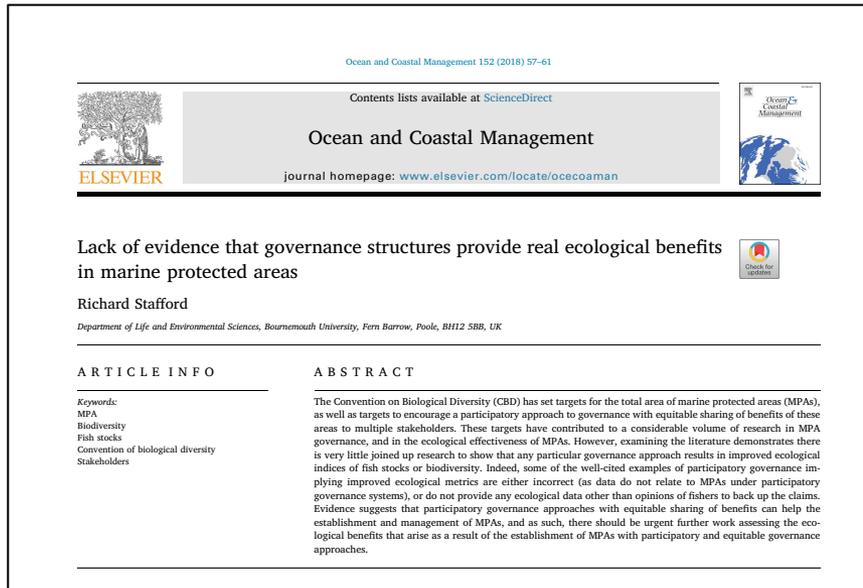
YES!

IT IS STRONGLY ASSOCIATED WITH LOCAL SUPPORT FOR CONSERVATION.

(Bennett et al, 2019)

Analysis of Outcomes of Governance

Analysis of substantive ecological or social outcomes of different governance configurations

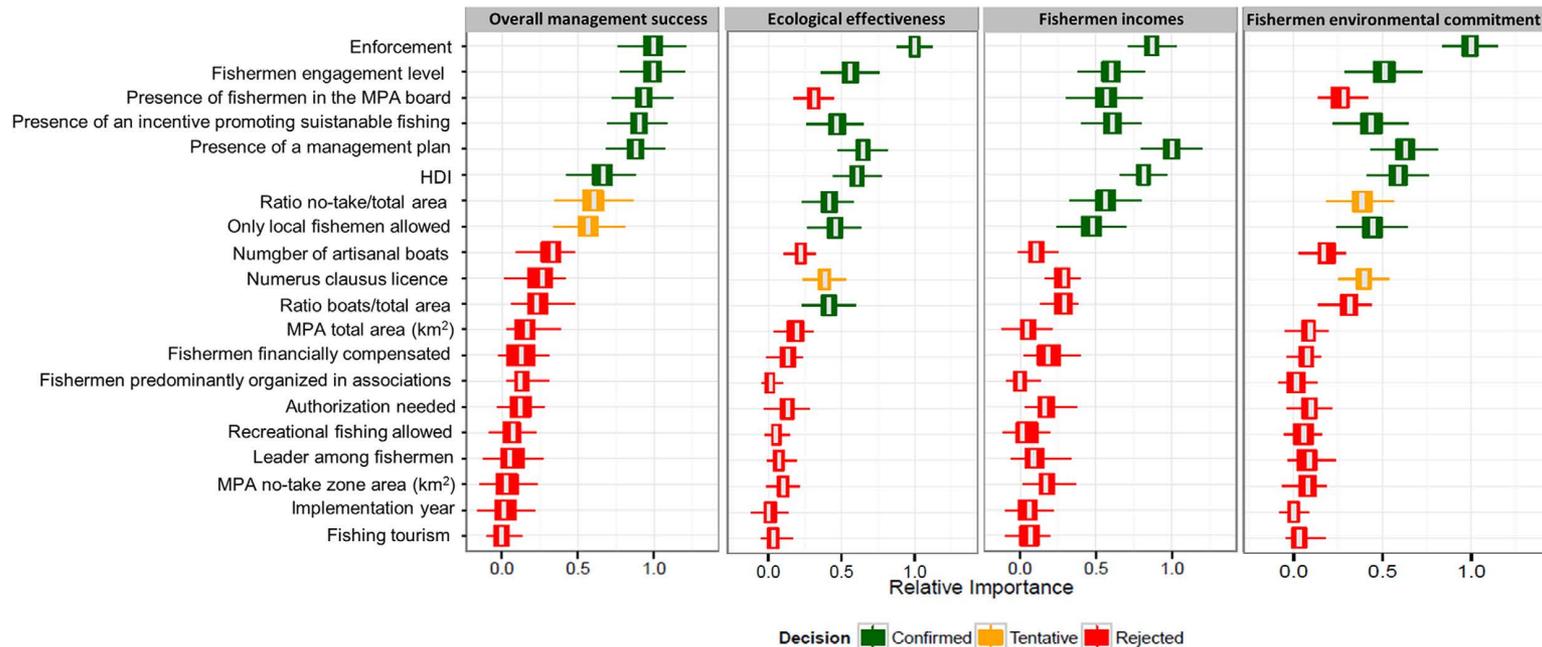


(Stafford, 2018)



(Jones, 2014)

Example: Understanding Key Features of MPA Success



SCIENTIFIC REPORTS

OPEN

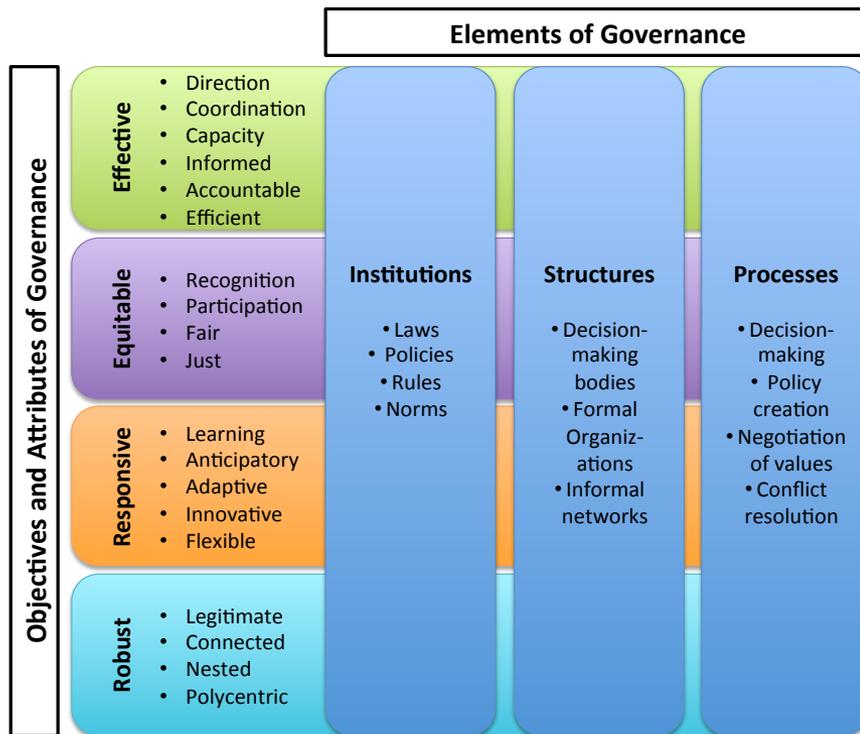
Five key attributes can increase marine protected areas performance for small-scale fisheries management

Received: 04 July 2016
Accepted: 04 November 2016
Published: 01 December 2016

Antonio Di Franco^{1,2}, Pierre Thiriet^{1*}, Giuseppe Di Carlo³, Charalampos Dimitriadis^{4,5}, Patrice Francour¹, Nicolas L. Gutiérrez⁶, Alain Jedy de Grissac⁷, Drosos Koutsoubas⁸, Marco Milazzo^{2,9}, María del Mar Otero⁷, Catherine Pianté⁹, Jeremiah Plass-Johnson¹, Susana Sainz-Trapaga¹⁰, Luca Santarossa¹¹, Sergi Tudela^{10,1} & Paolo Guidetti^{1,2}

(Di Franco et al, 2016)

Take away messages



A better understanding of governance can improve MPAs.

Governance and management are different!

Governance thinking can be applied to MPAs in three ways:

- descriptive assessments of current governance practice,
- evaluations of the achievement of different objectives and attributes of governance,
- analysis of the relationship between governance and environmental and/or social outcomes.

What is the FishMPABlue2
governance toolkit?

The toolkit



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Download your copy of the
toolkit [Here](#)

The FishMPABlue Approach

During the first phase of FishMPABlue a list of measures and interventions were identified that could improve SSF management in MPAs

In FishMPABlue2 the first step was for each participating MPA to establish a **Local Governance Group** creating a stable cooperation platform including MPA management and local professional fishers (or their representatives)

These Local Governance Groups were responsible for working together to identify the particular needs of their MPA and SSF sector and select which tools from the toolkit to implement and test in order to address the local issues

The FishMPABlue2 team worked in parallel to the Local Governance Cluster to test these measures in the 11 MPAs – assessing their effectiveness ecologically, economically and socially

The key thing to note is that in some cases this was the first time fishers were formally engaged in taking management decisions to improve their situations’ - representing a positive step towards **co-management**

After testing the toolkit has been refined and updated

The toolkit

- a** INVOLVEMENT IN DECISION MAKING;
- b** ENFORCEMENT STRENGTHENING;
- c** KNOWLEDGE AND OWNERSHIP;
- d** IMPROVE SSF ENVIRONMENTAL SUSTAINABILITY;
- e** IMPROVEMENT OF SSF PROFITABILITY.

The toolkit

ACTIVITIES SELECTED BY THEME by the 11 Local Governance Cluster in the framework of the FishMPABlue2 project

MPA	a INVOLVE- MENT IN DECISION MAKING	b ENFORCE- MENT STREN- GTHENING	c KNOWLEDGE & OWNERSHIP	d IMPROVE SSF ENVIRONMEN- TAL SUSTAI- NABILITY	e IMPROVEMENT OF SSF PROFI- TABILITY
EGADI ISLANDS MPA	█	█	█	█	
TORRE GUACETO MPA	█	█	█	█	
PORTOFINO MPA	█	█	█	█	
ZAKYNTHOS NATIONAL MARINE PARK	█	█		█	█
ES FREUS MARINE RESERVE	█	█			
CABO DE PALOS MARINE RESERVE	█	█	█		
CAP ROUX FISHERIES RESERVE	█	█	█		
CÔTE BLEUE MARINE PARK	█	█	█		█
BONIFACIO STRAIT NATURAL RESERVE	█		█	█	
STRUNJAN LANDSCAPE PARK	█	█	█	█	
TELAŠĆICA NATURAL PARK	█	█		█	█

The toolkit

THEME	TOOL	MPAs THAT IMPLEMENTED THE TOOL
a INVOLVEMENT IN DECISION MAKING	TOOL 1: Create collaborative platforms to engage fishers in decision making	11 Bonifacio Strait Natural Reserve, Cabo de Palos Marine Reserve, Cap Roux Fisheries Reserve, Côte Bleue Marine Park, Egadi Islands MPA, Portofino MPA, Es Freus Marine Reserve, Strunjan Landscape Park, Telašćica Nature Reserve, Torre Guaceto MPA and Zakynthos National Marine Park
b ENFORCEMENT STRENGTHENING	TOOL 2: Increase surveillance by MPA staff and improved infrastructure	5 Côte Bleue Marine Park, Es Freus Marine Reserve, Strunjan Landscape Park, Telašćica Nature Reserve, Zakynthos National Marine Park
	TOOL 3: Increase surveillance through fishers' direct involvement	6 Cabo de Palos Marine Reserve, Egadi Islands MPA, Portofino MPA, Strunjan Landscape Park, Telašćica Nature Reserve, Zakynthos National Marine Park
	TOOL 4: Increase surveillance through the cooperation with relevant authorities	4 Cap Roux Fisheries Reserve, Côte Bleue Marine Park, Telašćica Nature Reserve, Torre Guaceto MPA
c KNOWLEDGE & OWNERSHIP	TOOL 5: Engage fishers in monitoring activities	5 Bonifacio Strait Natural Reserve, Egadi Islands MPA, Portofino MPA, Strunjan Landscape Park, Torre Guaceto MPA
	TOOL 6: Raise the awareness of fishers, MPA managers and the local community	5 Egadi Islands MPA, Zakynthos National Marine Park, Cabo de Palos Marine Reserve, Strunjan Landscape Park, Cap Roux Fisheries Reserve
d IMPROVE SSF ENVIRONMENTAL SUSTAINABILITY	TOOL 7: Reduce fishing effort	3 Portofino MPA, Torre Guaceto MPA, Zakynthos National Marine Park
	TOOL 8: Modify/substitute fishing gear	3 Bonifacio Strait Natural Reserve, Strunjan Landscape Park, Telašćica Nature Reserve
	TOOL 9: Set-up SSF Code of conduct	1 Egadi Islands MPA
e IMPROVEMENT OF SSF PROFITABILITY	TOOL 10: Add value to local fisheries products	1 Côte Bleue Marine Park
	TOOL 11: Promote new commercial species	1 Zakynthos National Marine Park
	TOOL 12: Support Pescatourism	1 Telašćica Nature Reserve

The toolkit

a

Involvement in decision making

The level of uncertainty in managing natural resources is a real and permanent issue that all MPA managers face. It is necessary to examine conservation problems hand-in-hand with the societal contexts in which they are found. To do this successfully requires giving consideration to the local interests of resource users and wider community and also their perceptions and knowledge of natural resources and how they should be managed. Engaging stakeholders, primarily fishers, in the management of marine resources and MPAs is extremely beneficial as it facilitates representation of diverse views and values; provides local knowledge and solutions tailored to specific contexts; prepares the ground for more effective implementation of policies for long-term management; and helps legitimise MPA governance in the eyes of all involved.

Participative processes: provide different stakeholders and interest groups the opportunity to participate in and influence decision making; encourage ownership of the MPA; and assure cooperation in the implementation of decisions and management.

Good communication channels and open on-going dialogue are necessary to overcome distrust between stakeholders. Creating platforms and channels for communication offers an opportunity for a much needed two-way dialogue: helping fishers feed their experiential knowledge into management decision making; and allowing managers to explain decisions taken and how fishers' information has been used to make the decisions. In addition these stable platforms can be taken one step further and developed into formalised co-management committees where fishers can be empowered and along with other actors share decision-making power.

Exchange visit is to allow MPA managers and other stakeholders to benefit from lessons learnt from successful experiences at the Telašćica Nature Park, Croatia. © M. Mabari / MedPAN



CREATE A PERMANENT AND FORMAL COOPERATION PLATFORM TO ENGAGE FISHERS IN DECISION MAKING

TESTED IN:

Bonifacio Strait Natural Reserve, Cabo de Palos Marine Reserve, Cap Roux Fisheries Reserve, Côte Bleue Marine Park, Egadi Islands MPA, Es Freus Marine Reserve, Strunjan Landscape Park, Telašćica Nature Park, Torre Guaceto MPA and Zakynthos National Marine Park

COST:

Low

TIME NEEDED:

Medium

STAKEHOLDER INVOLVEMENT:

Medium

PERCEIVED EFFECTIVENESS:

High impact

TEST AND OUTCOMES:

There are several ways to set up a collaborative platform depending on the overall objective, with varying levels of participation and legitimacy. For example: working groups that unite to discuss specific needs of an MPA, or legally recognised co-management bodies where all participants play an equal role in the decision-making process.

The demand and desire for increased involvement in decision making processes is evident as all 11 pilot sites within the FishMPABlue2 project selected to implement governance tools and measures within the "Increase fishers' engagement" theme. This theme included tools/measures discussed in other sections of this report, such as fishers engaged in surveillance and in monitoring activities. The main method chosen to increase the involvement of fishers in the decision-making process was the creation of collaborative platforms.

In the FishMPABlue2 project, all MPAs were already engaging fishers to some degree, yet through the initiative they took an additional step to better engage fishers in decision making through the formal establishment of a LGC. The LGC was a formalised joint committee composed mainly of MPA managing bodies and local fishers' representatives who were responsible for the main decisions concerning the implementation of the FishMPABlue2 project pilot action. In some cases, this was the first time fishers had been involved beyond just being informed while attending meetings and were actively engaged in decision making.

Eight of the 11 MPAs opted to take the LGC a step further and implement governance tools focused on increasing fishers' engagement through the strengthening of existing and development of new cooperation platforms that would permit improved two-way dialogue, following different strategies:

Regular meetings: in 7 MPAs¹, these platforms were used to ensure regular meetings with all relevant stakeholders, allowing fishers to have greater involvement in the management of the MPAs and to discuss and decide upon several new strategies to improve governance, including territorial rights, and introduction of an agreed upon and formalised SSF "Code of conduct". In some of the cases where committees existed but were no longer meeting or only infrequently, specific support was offered to strengthen their role through the organisation of more regular meetings with clearly defined objectives.

Strengthening fishers' organisations: in Telašćica Natural Park, efforts were made to strengthen an existing fisheries organisation (a Fisheries Local Action Group - FLAG) through actions that increased the capacity of fishers and representatives, supporting these organisations in the application for relevant funds (e.g. European Maritime and Fisheries Fund - EMFF), and offering support to fishers to participate in or contribute to other SSF-related organisations such as the Low Impact Fishers of Europe - LIFE network.

These regular meetings have helped build relationships and trust and also developed a shared vision for the MPAs in question, and the fishers reported that they perceived a much better relationship with the management bodies and the decision taken.

CASE STUDY

CREATING FORMALISED LOCAL GOVERNANCE CLUSTERS

The analysis of the specific interests and needs of each stakeholder group allowed managers to plan strategies that can be adopted to work with stakeholders in other MPAs throughout the Mediterranean. The MPA managers were advised to take some time analysing the stakeholders to ensure that those people invited to participate really were the most appropriate representatives possible, and that these people were willing and committed to acting as a communication channel between their sector and the committee. Each MPA created a committee that included representatives from the MPA management bodies and local fisheries sector. In some cases, where appropriate, other actors were incorporated in the committee, including researchers, local NGOs, and representatives of other business sectors such as scuba diving or tourism. Once all the actors were identified, they agreed to sign a formal commitment to say that

they agreed to participate in and to meet the expectations of the committee. The next step after signing the formal commitment was for the Local Governance Cluster (LGC) to meet regularly and begin a participatory process to assess the needs of the MPA and the local community. By involving all the actors it was assured that the actual needs of the community were well understood. The LGC then followed a process to assess which of the tools in the governance toolkit would best help address the issues identified and meet the interests and needs of the local community. Once identified, the LGC committed to finding

suitable ways to implement and test the tools. The analysis of the specific interests and needs of each stakeholder group allowed the MPA to plan better strategies that could improve the effectiveness of the MPA whilst at the same time ensuring greater support for the MPA and compliance with the newly agreed upon initiatives.



The Local Governance Cluster created in Telašćica Nature Park, Croatia. © J. Grbin



Fisher in Torre Guaceto Marine Protected Area, Italy. © M. Mabari / MedPAN



TIPS FOR ENGAGING FISHERS IN DECISION MAKING

Invest time to identify & characterise stakeholders and ensure they are good representatives. Attention must be given to the selection of representatives from all sectors, to ensure that they are representative of the whole sector, that they understand the responsibility of representing the views of the whole sector (not just their own interests), and that they report back any key messages, decisions and information to those they are representing.

Capacity building. Each stakeholder group involved must be provided with some capacity building to increase their training and experience with participatory processes that will ensure more equitable participation and empowerment of the different stakeholders.

Build a foundation. A foundation built from transparent and accountable trustful relationships can create an excellent starting point for a long term working relationship between MPA management bodies and stakeholders.

Be reliable, consistent and neutral. Neutral facilitators should be used; if the MPA facilitates meetings they need to receive some facilitation training.

Encourage equal participation. Ensure that both men and women (who fish &/or are involved in satellite activities of the sector/functioning of the family fishing business) are represented and that groups that are often marginalised are given equal opportunities to participate.

Identify a common ground. Develop with the stakeholders a common and shared vision for the ideal state of the MPA, which manages stakeholders' expectations for what can realistically be achieved, but sets contextually suitable goals.

What lessons have we learned?

Case Study 1: Voluntary Code of Conduct

Egadi Islands MPA located in Sicily, Italy.
Established 1991. 540km²

Fishers are from 3 small islands and a town on Sicily creating challenges for enforcement, Significant fishing pressure and lack of cohesion and engagement

Through FishMPABlue2, the local governance group of Egadi MPA attempted to improve the cohesion of the fishing sector designing a voluntary “Code of Conduct” that included guidance for monitoring the MPA



@A. Remy / WWF Med

Case Study 1: Voluntary Code of Conduct

On July 5th 2018 the fishers gathered to sign the code of conduct, and have been active in supporting the MPAs monitoring

Now continued effort is required from the MPA to make sure fishers are well engaged and keep the code of conduct going for the long term



@A. Remy/ WWF Med

Case Study 2: Loving the unlovable

Zakynthos National Marine Park, Greece.
Established 1999

The Marine Park has in recent years received more and more unwanted visitors in the form of invasive species, in particular, two species of rabbitfish (*Siganus luridus* and *Siganus rivulatus*)

These invasive species are outcompeting local and endemic species, overgrazing algae and altering the natural balance of the ecosystem generating concern in all stakeholders

Through FishMPABlue2 the local governance group agreed on a strategy to promote the consumption of these invasive species



@C.Amico / WWF Med

Case Study 2: Loving the unlovable

Fishers were directly engaged and encouraged to target these species. To ensure no time and money lost for the fishers, the MPA also ran a publicity campaign, producing flyers, organising cooking events with local chefs, recipe cards

The overall verdict from the events was that these new species are desirable

Finding cunning ways to encourage consumers to start buying these species can help promote their sale

Finally they are also exploring alternative ideas for using these rabbitfish as aquaculture feed

NATIONAL MARINE PARK OF ZAKYNTHOS
University of Aegean

Κατανάλωσε τη νόστιμη αγριόσαλα και προσταύεσε τη θαλάσσια βιοποικιλότητα!
Consume the tastefull spinefoot fish and protect marine biodiversity!

FISHMPABLUE 2
Αλιεία και Θαλάσσιες Προστατευόμενες Περιοχές, μια συνεργασία για τη βιώσιμη αλιεία στη Μεσόγειο
Fishermen and Marine Protected Areas, a partnership for sustainability in the Mediterranean
www.nmp-zak.org

Interreg Mediterranean
FishMPABlue 2

Μια παραδοσιακή Κινέζικη συνταγή
Καθαρίστε και ξεπλένετε τα ψάρια (4 ψάρια 300-350gr το καθένα) και μετά στεγνώστε κάθε πλευρά σε απορροφητικό χαρτί. Τηγανίζουμε τα ψάρια σε προθερμασμένο αντικαλιητικό τηγάνι σε μια κουταλιά της σούπας λάδι για 4 με 5 λεπτά από κάθε πλευρά μέχρι να χρυσαφίσουν. Στο ίδιο τηγάνι σπάρουμε το τζίντζερ (2 κομμάτια) και μια κουταλιά του τσιγαυού πολτοποιημένο σκόρδο μέχρι να μαλακώσουν. Έπειτα προσθέτουμε 3 πράσα κομμένα σε χοντρά κομμάτια και σπάρουμε για άλλα 2-3 λεπτά και μετά προσθέτουμε 80ml ζωμό κοτόπουλο. Τοποθετήστε το μαγειρεμένο ψάρι πάνω από τα πράσα και σιγοβράστε για ακόμη 1-2 λεπτά σε μέτρια φωτιά, αφήστε τα ψάρια να απορροφήσουν τη γεύση από το μίγμα των πράσων.

A traditional Chinese recipe
Clean and rinse the fish (4 fish of 300-350gr each), pat dry with kitchen paper. Preheat a frying pan with 1 tablespoon of oil, pan-fry the fish on both side for about 4-5 minutes under medium heat or till slightly golden brown. Using the same pan add in ginger (2 pieces) and 1 teaspoon of minced garlic, sauté till fragrant before adding the sliced leeks. Add the leeks (3 stalks) and continue to stir-fry for another 2 - 3 minutes until soften and add in 80ml of hot chicken broth. Place the cooked fish on top of the leeks and simmer for another 1 minute on medium low heat, carefully give it a quick stir in between to let the fish absorb the flavour from the leeks mixture. Dish up and serve with hot steamed rice.

Marbled spinefoot
Ασπρη αγριόσαλα
Γερμανός
Dusky spinefoot

Feasibility & Effectiveness of tools

	THEME	TOOL	COST	TIME NEEDED	LOCAL STAKEHOLDERS INVOLVEMENT	PERCEIVED EFFECTIVENESS	MPAS THAT IMPLEMENTED THE TOOL
a	INVOLVEMENT IN DECISION MAKING	Create collaborative platforms to engage fishers in decision making	 LOW COST	 MEDIUM TIME	 MEDIUM STAKEHOLDERS INVOLVEMENT	 HIGH IMPACT	11 RNBB, Cabo, Cap Roux, PMCB, Egadi, Portofino, Es Freus, Strunjan, Telašćica, Torre Guaceto and Zakynthos
b	ENFORCEMENT STRENGTHENING	Increase surveillance by MPA staff and improved infrastructure	 MEDIUM COST	 LONG TIME	 MEDIUM STAKEHOLDERS INVOLVEMENT	 HIGH IMPACT	5 PMCB, Es Freus, Strunjan, Telašćica and Zakynthos
		Increase surveillance through fishers' direct involvement	 MEDIUM COST	 LONG TIME	 HIGH STAKEHOLDERS INVOLVEMENT	 HIGH IMPACT	6 Cabo, Egadi, Portofino, Strunjan, Telašćica, Zakynthos
		Increase surveillance through the cooperation with relevant authorities	 MEDIUM COST	 LONG TIME	 MEDIUM STAKEHOLDERS INVOLVEMENT	 HIGH IMPACT	4 Cap Roux, PMCB, Telašćica, Torre Guaceto
c	KNOWLEDGE & OWNERSHIP	Engage fishers in monitoring activities	 MEDIUM COST	 MEDIUM TIME	 HIGH STAKEHOLDERS INVOLVEMENT	 MEDIUM IMPACT	5 RNBB, Egadi, Portofino, Strunjan, Torre Guaceto
		Raise the awareness of fishers, MPA managers and the local community	 MEDIUM COST	 MEDIUM TIME	 MEDIUM STAKEHOLDERS INVOLVEMENT	 MEDIUM IMPACT	5 Egadi, Zakynthos, Cabo, Strunjan, Cap Roux
d	IMPROVE SSF ENVIRONMENTAL SUSTAINABILITY	Reduce fishing effort	 MEDIUM COST	 LONG TIME	 HIGH STAKEHOLDERS INVOLVEMENT	 MEDIUM IMPACT	3 Portofino, Torre Guaceto, Zakynthos
		Modify/substitute fishing gear	 MEDIUM COST	 LONG TIME	 HIGH STAKEHOLDERS INVOLVEMENT	 MEDIUM IMPACT	3 RNBB, Strunjan, Telašćica
		Set-up SSF Code of conduct	 MEDIUM COST	 LONG TIME	 HIGH STAKEHOLDERS INVOLVEMENT	 MEDIUM IMPACT	1 Egadi
e	IMPROVE SSF PROFITABILITY	Add value to local fisheries products	 LOW COST	 MEDIUM TIME	 HIGH STAKEHOLDERS INVOLVEMENT	 MEDIUM IMPACT	1 PMCB
		Promote new commercial species	 LOW COST	 SHORT TIME	 LOW STAKEHOLDERS INVOLVEMENT	 MEDIUM IMPACT	1 Zakynthos
		Support Pescaturism	 MEDIUM COST	 LONG TIME	 HIGH STAKEHOLDERS INVOLVEMENT	 MEDIUM IMPACT	1 Telašćica

Cost, Time & Stakeholder involvement needed to implement each tool and perceived effectiveness

Feasibility & Effectiveness of tools

Perception of the tools:

- having selected the tools themselves stakeholders had improved willingness to implement the toolkit
- felt to have potential to positively effect fish stocks, habitat health, fish catch, and fishers' income
- 67%of fishers reported that the new set of management measures had enhanced their relationship with the management board in the MPA

A positive perception can promote pro-environmental behaviour and improve support for the MPA



Quiz Time:

Which tool(s) would be the most useful for meeting your MPAs needs?

Concluding thoughts

The toolkit can be a useful instrument for any MPA manager wanting to improve his/ her MPA's effectiveness through better cooperation with local stakeholders

A key message is to understand the importance of honest and open dialogue with small-scale fishers and other stakeholders

FishMPABlue2 results show cooperation with local small-scale fishers can bring unexpected benefits for the MPA managing body

It is hoped that this vision is shared with all of you listening



Thank you. Questions?



WE & THE FISHMPABLUE TEAM
Thank you for joining today



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