



**MANTIS: Marine protected Areas Network Towards Sustainable fisheries in the Central Mediterranean**

## **Report of the Introductory meeting with stakeholders of the Adriatic**

**Ancona  
18 November 2016**

Workpackage 1, Deliverable 1.4

Introductory meetings report

G. Prato, G. Scarcella, S. Leoni, E. Arneri, F. Fiorentino



The second Mantis Introductory meeting was held in Ancona, Italy on the 18th of September 2016. In addition to the meeting organizer (WWF), the project coordinator (CNR Mazara) and local project partners (CNR Ancona), other six stakeholders were welcomed to the meeting. These included a representative from FAO-AdriaMed, a representative of the fisheries department of Marche region, a local fisher (trawler) and a representative of a local producers organization (OP San Basso), both part of a recently born network of fishing enterprises from the regions Marche, Abruzzo and Molise (Ma.Mol.Ab), the manager of the Torre del Cerrano MPA and a representative of a consulting society (Progetto Blu)

### List of participants

Name	Organization	Contact
Giuseppe Nardone	O.P. San Basso, Ma.Mol.Ab	3393709835
Emilio Caselli	Fisher, Ma.Mol.Ab	3334246436
Fabio Fiorentino	CNR-IAMC	fabio.fiorentino@iamc.cnr.it
Enrico Arneri	FAO-AdriaMed	enrico.arneri@fao.org
Giuseppe Scarcella	CNR-ISMAR	3387043071
Gianmaria Barducci	Progetto Blu Soc. Coop. Fano	3383124081
Fabio Vallarola	AMP Torre del Cerrano	3481401966
Uriano Meconi	Regione Marche	3316875651
Simone Leoni	CNR-ISMAR	s.leoni1985@gmail.com
Giulia Prato	WWF	g.prato@wwf.it

The objectives of the meeting were to:

- introduce the project to all relevant stakeholders whose activity depend upon the fisheries resources of the Northern Adriatic (GSA 17)
- gather fishers traditional ecological knowledge to validate and integrate scientific information on the distribution of essential fish habitat for 4 target species (Hake, Mullet, Sole and Norway lobster - *Merluccius merluccius*, *Mullus barbatus*, *Solea solea* and *Nephrops norvegicus* respectively) in GSA 17
- gather local stakeholders suggestions on best management actions to improve stocks and fisheries conditions in GSA 17
- collect the compiled questionnaires of stakeholders perceptions and suggestions on fisheries management
- introduce the smartphone application developed within the parallel Minow project to monitor discards.

## 1. BACKGROUND AND PROJECT OBJECTIVES

After a brief presentation of participants and the introduction of the agenda from the meeting organizer, project coordinator Fabio Fiorentino introduced the project aims: evaluating how a network of MPAs (intended as spatially managed marine areas) can contribute to ameliorate overfishing conditions and reduce fishing impacts on the ecosystem in the Adriatic and Sicilian Channel. Fiorentino reminded how trawling catches are mostly composed of under-sized fish, especially hake. Juveniles have the largest production potential of the stock, thus by removing thousands of them, overfishing conditions of the stocks are strongly increased. Management measures are thus needed to improve the size-structure of the catch by reducing the presence of under-sized individuals. For most target species, with the exception of the Norway lobster, the distribution of juveniles and their areas of stable concentration (nursery areas) do not overlap those of adults. Overexploitation of fish stocks can thus be reduced by protecting nursery areas from fishing, instead of reducing fishing effort on the whole fishing area. This was demonstrated in a scientific work performed in the Sicilian Channel, where results showed that protecting relatively small nursery areas for 1 year, without changing fishing effort, led to a reduction in fishing mortality equal to the reduction that would have been obtained by reducing the fishing fleet by 10% (Russo et al. 2014). Based on these premises, Mantis wants to identify how many critical areas should be protected and where they should be located in order to enhance the conditions of the Adriatic stocks without acting on fishing capacity. Such objective is in line with the direction given by the new Common Fishery Policy (CFP) and in particular with some of its main objectives:

- reaching Maximum Sustainable Yield (MSY) by 2020 for all commercial fish stocks while reducing ecosystem impacts of fishing.
- Spatially managing artisanal and industrial fisheries, in order to reduce conflicts and guarantee the survival of the first.
- Minimize fishing discards (Art.14 and 15).

Spatially managing fisheries by protecting nursery areas, as pursued by Mantis, accomplishes at the same time two needs: 1 - it allows to achieve MSY without reducing fishing effort, by improving the size structure of the catches and 2 - it reduces the presence of discards in the catches. Fiorentino also linked Mantis to the EU-financed Minow project specifically aimed at reducing fishing discards.

At the end of Fiorentino's introduction the discussion with stakeholders was opened.

Mamolab representatives explained their concerns concerning two spatial management solutions tested in the Adriatic in the past years:

The 1-year closure of the Jabuka Pit area from trawling was considered a good solution, but it did not lead to the expected results due to the free access maintained for longliners. This, according to the fisher, strongly undermined the recovery of stocks.

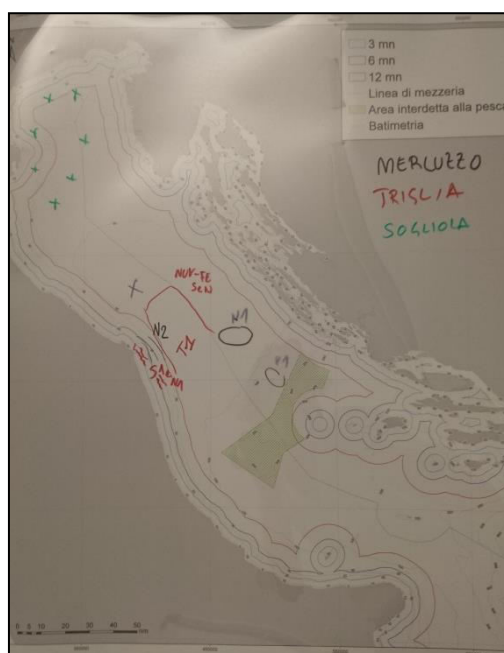
The trawling ban in the coastal zone up to 6 miles (established in 2012) led to very good results in terms of juveniles protection. However, measures should be taken to reduce the artisanal fishing exploitation of adults during the spawning season. The artisanal fishing with fixed nets indeed exploits spawning areas.

Researchers agreed that artisanal fishing and industrial fishing should both be regulated. However, Fiorentino stressed the main problem of trawling: although regular nets are used, stocks are strongly subject to overfishing due to high percentage of juveniles caught. This issue should be improved if the fishing capacity of the Mediterranean wants to be maintained. The examples of the Gulf of Castellamare, Patti and Catania were brought: here it was shown how the closure of these areas to fishing led to 30x increase of mulle, allowing a new artisanal fishing fleet to develop and hence demonstrating the high production potential of coastal areas if juveniles survive.

Researchers also highlighted that one year is not a long enough period to see large results from the Jabuka Pit closure, however it was agreed that the area should also be closed to longliners, which impact mostly adult fish (spawners).

Participants also stressed how acting on the selectivity of fishing instruments is often not enough, since fish able to slip through the net have probably low survival rates. Fiorentino highlighted that new devices to improve nets selectivity are currently being tested in the Mazara fleet (Minow project) and results in terms of discard reduction are promising.

## 2. PARTICIPATORY MAPPING AND MANAGEMENT SUGGESTIONS



CNR researchers presented the maps of juveniles and adults of the 4 target species, developed with the data collected during experimental campaigns. Participants were asked to validate and integrate the data with their knowledge.

Participants mostly agreed with the presented species distribution maps for sole, hake and Norway lobster, while the map of mullet was not considered complete by the local fisher. He stressed how juveniles of mullet occur with high abundance, although less concentrated, not only in coastal areas, but also in offshore areas, beyond 30-35 miles from coast.

Some additional details on the distribution of the 4 species were provided and are available in Fig. 1 and Tab.1

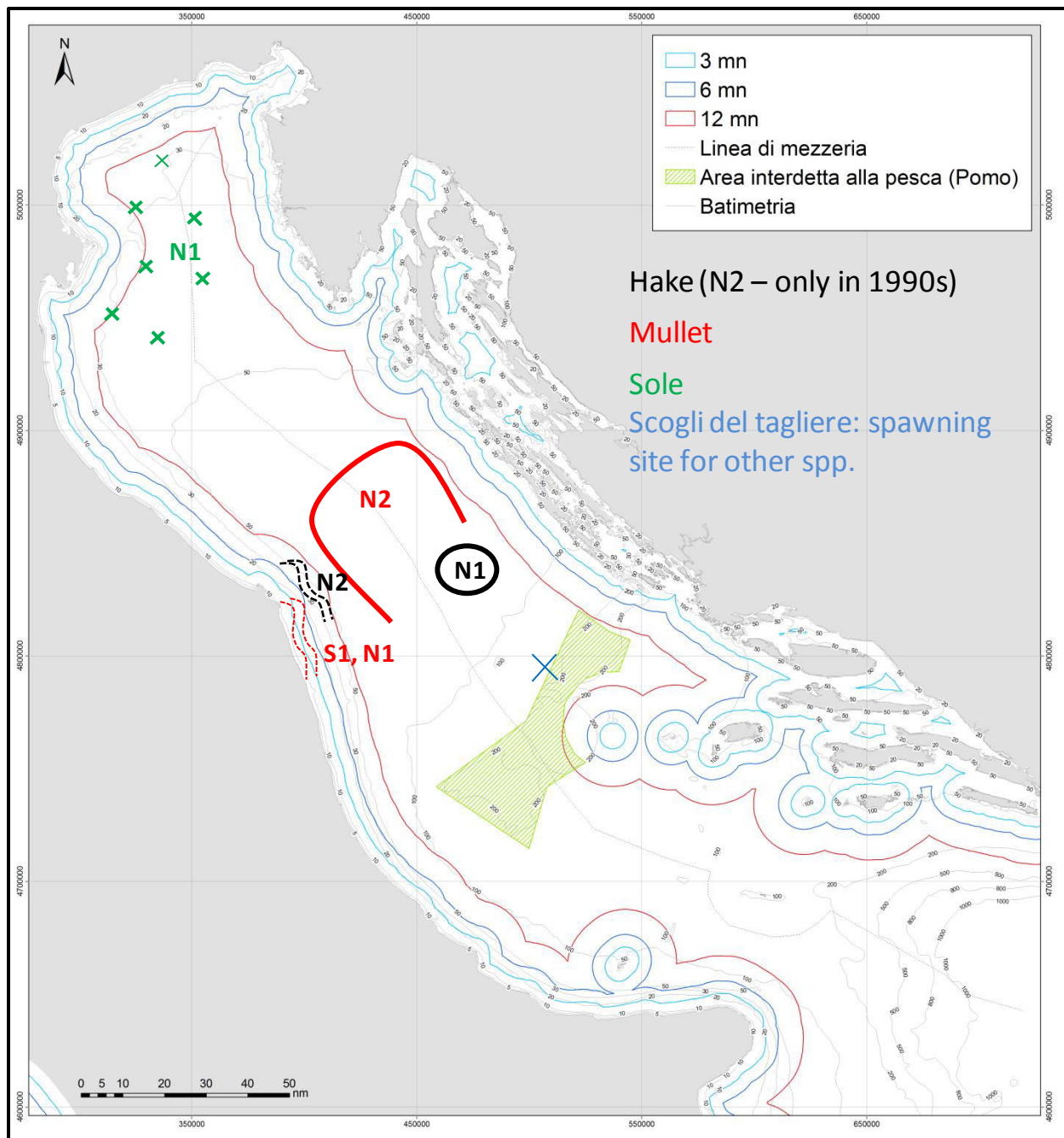


Fig.1 Participatory map of the distribution of nursery and spawning areas for sole, mullet and hake. The site Scogli del Tagliere offers refuge for the spawners of several other species (see text)

SPECIES	VITAL PHASE	POINT ON MAP	DEPTH	U. M.	DEPTH (m)	DESCRIPTION	MONTHS
Hake	Nursery	N1	60	braccia	110	Scogli del Tagliere, tra Ancona e Sibenik (Croazia). Quantità inferiori alla Fossa di Pomo	1-12
Hake	Nursery	N2	20	passi	40	Solo in passato (1990-91), di fronte al monte Conero	4
Hake	Spawning	Not on map	30-40	passi		Zona Sud Ancona, fondo sabbioso	11
Mullet	Spawning	S1	<30-50		60-90	5-6 miglia dalla costa	7
Mullet	Nursery	N1	10-20	passi	20-40	Oltre le 3 miglia	8-9
Mullet	Nursery	N2	50	braccia	90	Oltre 30-35 miglia dalla costa, al largo (meno concentrati)	3-4
Sole	Nursery	N1				Nord Adriatico, d'accordo con mappe CNR	
Norway lobster	Nursery					Scalata della fossa di Pomo. D'accordo con mappe CNR	

Tab. 1 Details on the nursery and spawning grounds drawn on Fig. 1.

In addition to the nursery and reproduction areas of the 4 target species, participants pointed out a refuge area called Scogli della Puntonata, at a depth of 60 passi ( ca 110 m) (Fig.1) for *Squalus acanthias* (spinarolo), *Zeus faber* (San Pietro), *Mullus surmuletus* (triglia di scoglio) and *Mustelus mustelus* (palombo).

Discussions on the management and exploitation state of the target species followed, leading to some joint suggestions.

**Sole:** participants underlined the positive results achieved after the trawling ban until 6 miles from the coast. The ban allowed to increase recruitment efficiency and more sole individuals could reach areas farther from the coast, up to 60 m depth: in the last years catches of this species increased and were mainly comprised of large adults. The ban also led to an increase in a common gasteropod (raguse) targeted by the beam trawlers (rapidisti): these used to fish illegally within the 3 miles where this species is mostly found. After the ban, the species increased to the point of saturating market. Since fishing this species is not anymore rentable, pressure on the coastal zone is further reduced.

However, the drop of market prices after the biological ban was considered by all participants a main issue that needs to be tackled through appropriate management measures. Market saturation for sole after the increase in catches caused a dramatic reduction in prices, hindering the economic survival of the sole fishery. **Participants and researchers agreed that spatio-temporal closures should be immediately followed by management actions to control extraction, such as reductions in the fishing days allowed per week, in order to avoid market saturation.**

**Hake:** it was highlighted that in the past (1990s) the coastal area facing mount Conero was rich in juveniles, nowadays absent from the area. Hake was also depleted from the sandy area North of Ancona (from Jabuka Pit until 88 miles north) by twin nets (reti gemelle). No specific license is needed for this fishing instrument, hence fishers can easily convert to it.

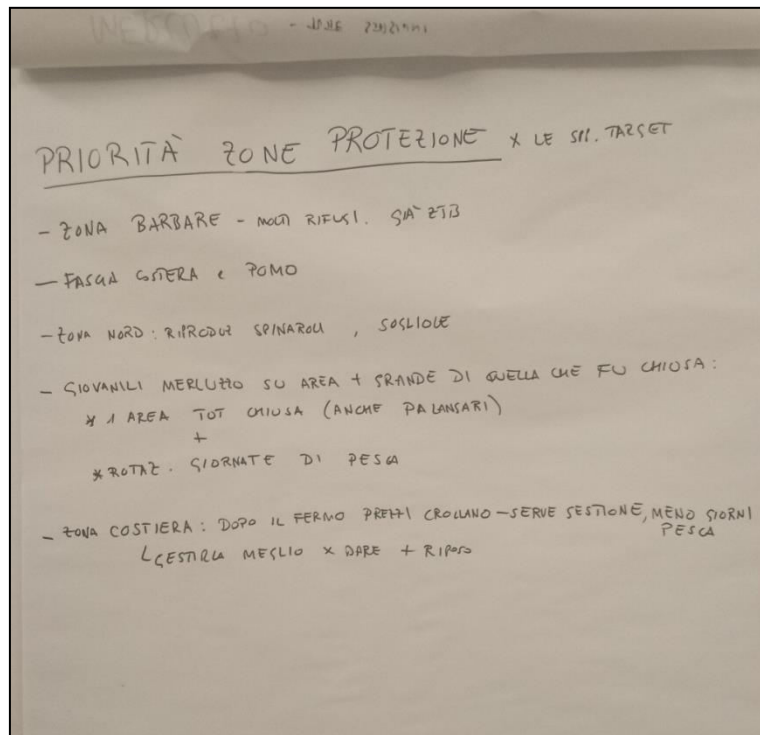
Researchers stressed that such **flexibility in the use of fishing instruments hampers the possibility to make accurate forecasts on the state of stocks. More precise management measures are needed to control this issue.**

A discussion on the fishing nets used in the area followed: the local fisher highlighted that both the 40 cm square mesh and the 50 cm diamond mesh lead to large discards of hake. Today many fishers, especially ex- pelagic trawlers (volanti) adopted the American net, either single or twin (rete Americana singola o gemella), made of better material compared to Italian nets, but with similar selectivity. Twin American nets are preferred, being easier to use than single nets. However this type of net has a strong impact on juveniles.

Following the discussion, the representative of O.P. San Basso Termoli, also member of the Ma.Mol.Ab network, advocated for a strong need to develop local management plans through local committees, where researches, fishers and administrations can work together and take immediate action if needed. A management proposal for the area covered by the 3 regions of the Ma.Mol.Ab network (Abruzzo, Marche and Molise) was agreed upon by 80% of the fleets of such regions and submitted to the Italian Ministry. The proposal included several measures to achieve a more sustainable exploitation of resources, such as the closure of the coastal zone to trawling up to 6 miles, a surface increase of the Tremiti Islands MPA, a maximum number of fishing days per year, a system of quotas and a ban for small pelagics fishing from Termoli to San Benedetto del Tronto, until 10 miles from coast. GFCM was also informed of the small pelagic proposal. However nor the Ministry nor the GFCM responded. The O.P. representative acknowledged that such requests should be verified by researches and expressed his hope for a closer collaboration between fishers and researchers to achieve a better management of the area

Finally , the local fisher expressed how the biological ban (now in August and September) should be anticipated to June and July to be effective. During these months juveniles of cephalopods are strongly depleted. Although, as reminded by researchers, the ban was specifically developed for the mullet, which profits from it, the fisher stressed that bans should be thought for species with more economic impact, such as cephalopods.

## WRAP UP OF SUGGESTED MANAGEMENT MEASURES



Overall, management measures for target species suggested by participants were:

- Full protection of Jabuka Pit (including longliners) + a larger area managed through rotation of fishing boats
- Protection of the coastal zone up to 6 miles, followed by management of the fishing activity after the ban, such as reduction of fishing days in order to avoid market saturation and keep prices stable.
- Anticipation of the biological ban to June and July to protect species with high economic value.
- Protection of the refuge area called “Zona Barbare”
- Protection of the area North of Ancona important for the reproduction of sole and the spiny dogfish (spinarolo)

### 3. PRESENTATION OF THE MINOW APP TO MONITOR DISCARDS

The meeting organizer presented the app developed in the framework of the Minow project, to monitor discards on a voluntary basis. The availability of fishers to adopt it was explored. The local fisher was skeptical due to the large amount of requested actions when at sea, including the compilation of logbooks both onboard and at landin. In particular he raised the concerns of the sector about the Italian implementation (Legge 154/2016) of the CE Controls Regulation. The



regulation implies to estimate onboard the weight of the catch of a species when this is >55 kg, and tolerates errors up to 10%. Errors larger than 10% lead to fines. Italian fishers strongly complain that fines established in law 154/2016 are too high. Considering the high risk of incurring in errors > 10% when estimating catch weight onboard, fishers are discouraged to do so and to compile onboard logbooks. However, he showed higher willingness to use a device such as the proposed app, which can be used on a voluntary basis and whose only scope is that of providing discards data to the EU. Finally, he asked the help of researchers to tackle this and many other issues to improve fisheries management.

The CNR researcher reminded that CNR was charged by the Ministry to develop a management plan proposal for the Adriatic, however he raised his concerns about the low availability of fishers to host observers onboard. This hampers the possibility to have representative samples of the fleet's catches, reducing the accuracy of stock assessments.

The O.P representative expressed the availability of many vessels part of the Ma.Mol.Ab network to welcome observers on board.

A solution proposed and agreed upon participants was that of offering incentives to vessels hosting observers.

As a concluding remark the O.P representative expressed his hope for the establishment of a technical-scientific table of researchers and fishers in order to bring joint proposals to the Ministry's attention.

At the end of the meeting, the questionnaires on stakeholders' perceptions were collected, participants were acknowledged for their collaboration. The meeting organizer explained that their input will be integrated with existing scientific data on the distribution of nursery and spawning grounds in the Adriatic, and their management suggestions will also be included in project analysis. Overall, the meeting allowed to set the basis for further cooperation with local stakeholders during the project's lifetime.

## Meeting Agenda



**WWF** *for a living planet*<sup>®</sup>

WWF Italia  
Sede Nazionale  
Via Po, 25/c  
00198 Roma

Tel: 06844971  
Fax: 068554410  
e-mail: [wwf@wwf.it](mailto:wwf@wwf.it)  
sito: [www.wwf.it](http://www.wwf.it)

<b>Facilitatore:</b> Giulia Prato	<b>Inizio Meeting:</b> h 14.30
<b>Data meeting</b> 18 settembre 2016	<b>Fine Meeting:</b> h 19
<b>Luogo meeting :</b> Hotel NH, Via Rupi di Via XXIX Settembre, Ancona	

### I. Obiettivo del meeting:

1.	I partecipanti comprendono chiaramente la meta finale del progetto, i suoi tempi e come MANTIS affronta il problema; il ruolo che il progetto assegna ai partecipanti e i benefici che i partecipanti ottengono dal progetto. Come MANTIS si inserisce nel progetto MINOUW
2.	Valutare ed aggiornare le problematiche della pesca in Adriatico e raccogliere i suggerimenti dei partecipanti sulle strategie di gestione adeguate.
3.	Mappatura partecipativa delle zone di pesca e degli habitat essenziali delle specie target
4.	Compilazione del questionario MANTIS
5.	Promozione/collaborazione dei pescatori ad utilizzare la APP predisposta da MINOW

### II. Partecipazioni richieste

Giuseppe Scarcella (CNR)	Simone Leoni (CNR)	Giulia Prato (WWF IT)
Fabio Fiorentino (CNR)	Enrico Arneri (FAO)	Antonio Pollutri (WWF IT)

### III. Argomenti:

Argomenti	
1.1	MANTIS: Cosa è, a cosa mira, quanto dura, come funziona, ruolo dei pescatori
1.2	Riforma della Politica Comune della Pesca – chiusure spaziali in Adriatico
1.3	Ruolo delle aree protette. Strategie per migliorare la gestione della pesca
1.4	Definizione habitat essenziali delle specie target . Mappatura zone di pesca e habitat essenziali.

### IV. Attribuzione dei compiti:

Descrizione	Persona Responsabile	Tempi
Lo scopo finale del WWF è fermare e far regredire il degrado dell'ambiente naturale del nostro pianeta e contribuire a costruire un futuro in cui l'umanità possa vivere in armonia con la natura.	Registrato come: WWF Italia Via Po, 25/c 00198 Roma	Ente morale riconosciuto con D.P.R. n.493 del 4.4.74.  Schedario Anagrafe Naz.le Ricerche N. H 1890ADZ
	Cod.Fisc. 80078430586 P.IVA IT 02121111005	O.N.G. idoneità riconosciuta con D.M. 2005/337/000950/5 del 9.2.2005 – ONLUS di diritto



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1.	Presentazione dei partecipanti e obiettivo meeting	Giuseppe Scarcella/Giulia Prato	5 min
2	Il progetto MANTIS e il lavoro svolto nel canale di Sicilia	Fabio Fiorentino	15 min
3	Le aree protette in Adriatico	Giuseppe Scarcella/Simone Leoni	30 min
5	Mappatura zone di pesca e habitat essenziali	Giuseppe Scarcella/ Simone Leoni, Giulia Prato	1h
6	Coffee break		10 min
8	Mappatura zone di pesca e habitat essenziali	Giuseppe Scarcella/ Simone Leoni, Giulia Prato	1h30
9	Promozione dell'uso della APP predisposta dal progetto MINOUW	Giulia Prato	10 min
10	Questionari e chiusura	Giulia Prato	20 min
	Durata		4h