

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

# Report of the Introductory meeting with stakeholders of the Strait of Sicily

CNR, Mazara del Vallo, Sicily 6 September 2016

Workpackage 1, Deliverable 1.4

Introductory meetings report

G. Prato, M. Costantini, F. Fiorentino



The first Mantis Introductory meeting was held in Mazara del Vallo, Sicily, on the 6th of September 2016. Twenty-four stakeholders were welcomed to the meeting, including representatives of national and regional institutions, local producers organizations, local fishermen cooperatives and fishermen. Two representatives of Maltese authorities also attended through skype.

NAME	AFFILIATION	CONTACT
Ilaria Rinaudo	AMP Isole Egadi	i. rinaudo@ampisolegadi.it
Antonino Bono	CREA Soc. Coop.	sigane17@hotmail.com
Pino Gullo	Legacoop Agroalimentare	pino.gullo@gmail.com
Fabio Giardina	AMP Isole Pelagie	fabiogiardina2@gmail.com
Leonardo Catagnano	Dip. Pesca Regione Sicilia	leonardo.catagnano@gmail.com
Alessandro Iannitti	Dip. Pesca MIPAAF	a.iannitti@politicheagricole.it
Giovanni Basciano	Agci Agrital	giovanni.basciano@gmail.com
Giuseppe Pernice	Osservatorio Pesca Mediterranea	giuseppe.pernice@cnr.it
Ignazio Piazza	Soc. Coop. Pescatori Sciacca	ipiazza@libero.it
Bartolomeo Lino Tumbiolo	Conf. Imprese Pesca Mazara (ad. Federpesca)	tumbiolino@libero.it
Salvatore Braschi	Federcoopesca e Cogepa Trapani	braschitoto@gmail.com, info@cogepatp.it
Giovanni Didia	FLAI - CGIL Trapani	giovannididia@libero.it
Domenico Asaro	Conf. Impresa Pesca (Coldiretti)	asarodomenico64@gmail.com
Emilio Sardo	Fiume Mazaro Soc. Coop	sardoemilio@libero.it
Roberto Falcetta	Fiume Mazaro Soc. Coop	
Salvatore Ajello	Cogepa Mazara	ajellosaltore@inwind.it
Marco Toccaceli	CREA Soc. Coop	creacoop@gmail.com
Ilaria Vielmini	Oceana	ivielmini@oceana.org
Roberto Ingargiola	Fisherman, OP siculpesca	siculpesca@gmail.com
Vito	Captain and shipowner	360652385
Adamo Antonino	Fisherman	
Marie Louise Pace (skype)	Maltese Ministry for Sustainable development, Environment and Climate change.	marie-louise.pace@gov.mt
Christopher	Environment and Resources Authority (ERA),	
Cousin (skype)	Malta	
Marco Costantini	WWF Medpo	m.costantini@wwfmedpo.org
Giulia Prato	WWF Italia	g.prato@wwfmedpo.org
Fabio Fiorentino	IAMC-CNR	fabio.fiorentino@iamc.cnr.it

## **List of Participants**

The objectives of the meeting were to:

- introduce the project to all relevant stakeholders, whose activity depend upon the fisheries resources of the Strait of Sicily (SS)
- gather fishers traditional ecological knowledge on the distribution of essential fish habitat for 4 target species (Red shrimp, White Shrimp, Hake and Mullet *Aristaeus antennatus,*

*Parapenaeus longirostris, Merluccius merluccius and Mullus barbatus* respectively ) along the North African sidet of the SS.

The meeting lasted 3h30 and was structured in two parts:

- 1. Informing participants about the scientific and management background behind fisheries in the SS and introducing scope and objectives of the Mantis project.
- 2. Participatory mapping of essential fish habitats along the data-poor southern side of the SS.

## 1. BACKGROUND AND PROJECT OBJECTIVES



Meeting objectives were presented by the project coordinator, Fabio Fiorentino, who contextualised the Mantis project under the current management framework of fisheries in the of Sicily Strait (SS) Participants were reminded about the recent approval of the GFCM (General Fisheries Commission for the Mediterranean) recommendation for the development of a management plan for white shrimp and hake in the SS. The recommendation provides to control fishing effort through the issuing of fishing permits and the establishment of spatial closures: three fishery restricted areas (FRA) have been implemented to protect critical habitats along the northern side of the SS, and an equal number of FRAs shall be identified along the North African side. Spatial closures have a crucial role in reducing overexploitation of fish stocks, since through the protection of nursery grounds, target fish stocks are allowed to rebuild. At the same time, closing nursery areas allows fishermen to considerably reduce under-sized individuals in the catch (discards), hence ensuring an easier implementation of article 15 of the Common Fisheries Policy reform

(CFP). Fiorentino also explained that fishing under-sized individuals limits the amount of effort that can be deployed before reaching maximum sustainable yield (MSY).

While a wealth of scientific data has allowed to identify essential fish habitats in the norther SS and to propose the location of FRAs on a sound scientific basis, the lack of data for the North African side hampers the identification of areas to be proposed for protection. Indeed, the only available information for North African areas derives from models (lacking validation on the field) and experimental fishing campaigns performed in the 90s (GRUND). Such information is thus limited and uncertain, and, as stressed by Fiorentino, needs to be complemented and validated by fishermen's knowledge. Only so it will be possible to identify nursery grounds whose closure is essential, in order to properly protect the fish stocks shared among Italy, Malta and North Africa.

At this point Fiorentino explained how this information will be used within the Mantis project, with the objective of evaluating if a network of spatial closures in the SS can contribute to improve fishing conditions, in terms of stock exploitation, fisheries socioeconomic performance and reduction of discards. Participants were also presented the questionnaire developed in coordination with the twin project Safenet, aiming at collecting stakeholders' opinion on the state of fisheries and suggestions on management actions.

Marco Costantini (WWF) drew the attention of participants to the current calendar of the CFP reform implementation. In particular, he underlined the urgent need to identify a solution to discards in view of the implementation of Article 15 (landing obligation). He also stressed that national governments are in need to receive useful information and data from scientists and stakeholders, in order to propose coherent management actions.

Fiorentino delivered a presentation summarising the state of the art of scientific knowledge on the distribution of nursery areas in the SS. Presented results were mostly based upon data collected during experimental trawling campaigns (Grund and Medits) and monitoring of commercial catches. The subdivision of the SS in GSAs was explained, pointing out the main ones concerned by the activity of the Mazara fleet (GSA 12-16 and 21). The following studies were presented (see presentation attached):

- Garofalo et al. 2011: the analysis of the spatio-temporal distribution of target fish in the SS revealed the presence of important areas of yearly recruitment for 8 target species.in GSA 16. The paper also describes the circular currents occurring in the area and concentrating eggs and larvae, thus providing the oceanographic causes behind the high density of juveniles in the area.
- Mediseh project: developed maps of nursery and spawning areas in the SS

- Russo et al. 2014: demonstrates that the closure of 3 nursery areas (respectively for white shrimp, hake and mullet) allows a reduction in fishing mortality (F) equal to the reduction that would be obtained by reducing the fishing fleet by 10%. The paper demonstrates that reducing the fleet is not the best approach to reduce F.
- Druon et al. 2015: presents a model predicting the presence of suitable habitat for juvenile hake on the northern side (confirmed by existing data) and the southern side (no data available to validate the model) of the SS.
- FAO Medsudmed project: presents a model based upon time series data from Grund campaigns approaching Tunisian and Libyan coasts, predicting the presence of nursery grounds for hake along the North African coast.
- Joint Research Center project: presents real-time predictive maps on the distribution and density concentration of hake juveniles, which could allow fishers to avoid such areas during fishing trips.

A short discussion on North African fleets followed the presentation. Mazara fishers protested against the depletion of shared stocks and habitat damage actuated by North African fleets, in particular in the south-western grounds (zona di ponente). Mazara fishers underlined their availability to respect the recently established FRAs, but were concerned about the likelihood of North African fleets respecting FRAs in in the southern side of the strait. Fiorentino reminded the similarity between current North African fishing habits an Italian fishing habits in the past, prior the implementation of the CFP. He highlighted the positive effects obtained by the CFP implementation on the European side of the strait (i.e increase in sharks and rays abundance and ecosystem recovery since 1980) and stressed the need to manage the SS as a whole unit.

## 2. PARTICIPATORY MAPPING





Fishermen and ship-owners were asked to draw on the provided maps the juveniles-rich areas for the 4 target species. Nursery grounds were identified mostly on the Tunisian plateau and, for red shrimp, also further South along Lybian coasts. (Fig.1-4). Some spawning grounds were also identified for mullets and white shrimp (Fig.3-4). Additional requested information included reference points (miles from coast, local names, etc.), season and depth of occurrence of the juveniles. All supplementary information provided was annotated on flipcharts and is reported in Tab. 2.



Fig.1 Participatory maps. From left to right, in order: white shrimp, mullet, hake and red shrimp nursery grounds.



Fig.2 Digitalised map of red shrimp (red) and hake (blue) nursery grounds







Fig.4 Digitalised map of white shrimp nursery (N) and spawning (G) grounds

SPECIES	VITAL PHASE	POINT ON MAP	DEPTH (local U.M)	U.M	DEPTH (m)	LOCAL NAME	REFERENCE POINTS	MONTHS	HABITAT	FROM (Lat-Lon)	TO (Lat-Lon)	MID POINT (Lat-Lon)
Hake	Nursery	N1	100-300	braccia	180-550	Secca Capoduono		1-12				
Hake	Nursery	N2	100-300	braccia	180-550			1-12				
Hake	Nursery	N3	120	braccia	220	Scirocco	22 miglia E-SE Lampedusa, Capo Grecale	1-12	roccia			
Hake	Nursery	N4	120	braccia	220	Fondaletto		1-12	graniglione			
Hake	Nursery	N5	90-120	braccia	170-220	Scivolare		1-12				
Hake	Nursery	N6	80-100	passi	150-180	W Curva		1-12				
Hake	Nursery	N7					Da Grecale, Levante e Scirocco La Galita fino a Levante Capoduono	1-12				
Red shrimp	Nursery	N1	320-330	passi	590-600		Fino al 32° parallelo	2,3,9				
Red shrimp	Nursery	N2	300	passi	550		40 miglia Est Lampedusa	2,3,9				
Red shrimp	Nursery	N3	320	passi	590		25 miglia NE Linosa	2,3,9				
Red shrimp	Nursery	N4	310-320	passi	570-590		46-47 miglia Sud Malta	2,3,9		35.01		
Mullet	Nursery	N1	80	braccia	150	Scivolare/Ponente Testata		1				
Mullet	Nursery	N2	70-80	braccia	130-150	Fondaletto a Girare	Girare (Zona fondaletto)	1.2				
Mullet	Nursery	N3	40	braccia	70	Sud Ovest 29		2				
Mullet	Nursery	N4	35-40	braccia	60-70	Zona Ponente, Capo Ponente		2.3				
Mullet	Spawn.	S1	150	braccia	270	Scirocco		4.5				
Mullet	Spawn.	S2	140-150	braccia	260-270	Fondaletto		4.5				
Mullet	Spawn.	S3	140-150	braccia	260-270	Scivolare		4.5				
White shrimp	Nursery	N1	120-130	braccia	220-240	Secca Capoduono	Dentro la batimetrica delle acque territoriali	12,1,2				
White	Nursery	N2	140-150	passi	260-270	Scirocco Testata		12,1,2				
White	Nursery	N3	100	passi	180	W Fondaletto		12,1,2				
shrimp White	Nurserv	N4	100	passi	180	W Curva	40 miglia Nord Ovest Tripoli	1-4				
shrimp	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			<b>P</b>			· · · · · · · · · · · · · · · · · · ·					
White	Nursery	N5										
White	Nursery	N6	110-120	braccia	200-220	Scivolare	80 miglia Sud Lampedusa	12,1,2				
shrimp												
White	Spawn.	G1										
White	Nursery	Nvito1	90-140	braccia	170-260					33.52-	34.16-	34.08-12.12
shrimp	•									12.07	12.24	
White shrimp	Nursery	Nvito2								37.22- 10.30	37.20.5- 10.36.5	

White	Nursery	Nvito3	A Nord di Zembra	37.17.00-	37.17.5- 10 52 5
White shrimp	Nursery	Nvito4	Canale tra le isobate dei 200m,tra la sabbia piattaforma continentale di Capo Bon e il Banco di Auria. Fondo sabbioso	10.12.50	10.51.5
White shrimp	Nursery	Nvito5	Nursery lunga 4 miglia e larga 5, circondata da isobata 100m, si estende da 14 a 18 miglia a Levante delle Isole Kuriat. Circonda una secca a 73 m.		

Table 1. Details of the nursery and spawning points drawn on maps (Fig.2-4). Points Nvito1-5 for white shrimp are not drawn on Fig. 2-4, but are provided with detail coordinates in the table.

## Discussion on discards monitoring and Article 15 CFP

Once participatory maps were finalised, Marco Costantini presented a mobile application to monitor fishing discards under a stakeholder-based data collection program. The app was developed by the MINOW project (Science, Technology, and Society Initiative to minimize Unwanted Catches in European Fisheries) and meets the need of providing real-time discard data to national and EU authorities, to allow them to define logical and coherent regulations. The availability of fishermen from Mazara to adopt the app was explored, however fishermen were worried that declaring the real amount of discards through the app could lead the European commission to reduce fishing days, in the perspective of reducing discards. Fishers also raised concerns about the old age and small size of their vessels, which do not allow to stock large amounts of discards on board during long fishing trips (40-days). During such trips they would be forced to return to ports several temps, resulting in large economic losses. Fishermen claimed that more modern vessels are needed, in order to ensure the stocking of discards on board and thus the implementation of the landing obligation.

Fiorentino drew participants' attention to the existence of a new-generation vessel developed within a scientific project, equipped with all necessary facilities to stock and transform products on board. Such vessel can only be used for scientific purposes, however some projects exist to develop similar vessels for off-shore fishing. He proposed to organise a presentation about existing projects, but also reminded how the best solution to allow implementation of the landing obligation would be the avoidance of areas rich in under-sized individuals.

At the end of the meeting, participants were acknowledged for their collaboration, and explained that their input will be integrated with existing scientific data on the distribution of nursery grounds in the Strait of Sicily. Overall, the meeting allowed to set the basis for further cooperation with local stakeholders during the project's lifetime.



WWF Italia Sede Nazionale Via Po, 25/c 00198 Roma Tel: 06844971 Fax: 068554410 e-mail: wwf@wwf.it sito: <u>www.wwf.it</u>

Facilitatore: Marco Costantini /Giulia Prato	Inizio Meeting: h 9.30
Data meeting 6 settembre 2016	Fine Meeting: h 13
<b>Luogo</b> meeting : IAMC-CNR in Via Luigi Vaccara, 61 Mazara del Vallo	

### I. Obiettivo del meeting:

1.	Informare i partecipanti sugli obiettivi del progetto MANTIS, sulle tempistiche, sulle modalità di coinvolgimento degli stakeholders e sulle relazioni di Mantis con altri progetti finalizzati alla
	gestione sostenibile delle attività di pesca (ad esempio il progetto MINOUW)
2.	Valutare ed aggiornare le problematiche della pesca nello Stretto di Sicilia e raccogliere i
	suggerimenti dei partecipanti sulle strategie di gestione adeguate.
R	Mappatura partecipativa degli habitat essenziali delle specie target (gambero rosa, merluzzo, triglie
5.	e gambero rosso) nello Stretto di Sicilia e mari adiacenti
4.	Compilazione del questionario MANTIS

### II. Partecipazioni richieste

Fabio Fiorentino (CNR)	Marco Costantini (WWF Medpo)	Marie Louise Pace (MSDEC-DFA)
Marco Toccaceli (CNR)	Giulia Prato (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 nello Stretto di Sicilia
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.
1.5	Restituzione progetto Minow

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### IV. Attribuzione dei compiti:

	Descrizione	Persona Responsabile	Tempi
1.	Presentazione dei partecipanti e agenda del meeting (cosa faremo, come, i risultati previsti)	Marco Costantini	5 min
2	La riforma della politica comune della pesca, il progetto MANTIS e gli altri progetti sulla gestione sostenibile della pesca nello Stretto di Sicilia	Fabio Fiorentino/Marco Costantini	10 min
3	Discussione pubblica guidata	Marco Costantini/Giulia Prato	40 min
4	Protezione degli habitat essenziali e sostenibilità della pesca a strascico nello Stretto di Sicilia	Fabio Fiorentino	10 min
5	Mappatura habitat essenziali nello Stretto di Sicilia	Fabio Fiorentino/ Giulia Prato/	40 min
6	Promozione dell'uso della APP predisposta dal progetto MINOUW	Marco Costantini	20 min
	Coffe break		10 min
7	Questionari a gruppi	Marco Costantini/Giulia Prato	50 min
8	Prossime tappe e chiusura	Marco Costantini	5 min
	Durata		3h10

### V. Metodo di gestione della discussione pubblica

#### Domande guida

- Come valuti lo stato della tua attività di pesca nel Canale? Quali sono i problemi che affliggono la tua attività?
- 2. Le aree protette o le chiusure spaziali potrebbero aiutare a risolvere i problemi citati? Quali sono le cause alla base di questi problemi? Cosa suggerisci per risolvere questi problemi?
- 3. Quali zone causano maggior scarto dovuto a pesci sotto taglia? Dove si trovano le aggregazioni riproduttive?
- Saresti interessato a collaborare ulteriormente con noi compilando un questionario? Saresti disposto ad adottare delle soluzioni che condividi con l'aiuto di esperti? A quali condizioni?
  Saresti disposto ad utilizzare la APP predisposta dal progetto MINOUW per ridurre la produzione dello scarto di pesca?

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Mazara del Vallo 6 settembre 2016-09-01

Nome	Organizzazione/Professione	Contatto	
KARIA RINAUDO	A.M.P. ISOLE EGADI	I. RINAUD CATIPISCESS	SADI.
ANTONINO BONS	C.R.E.A. Soc. Cool	SIGANE170 HOTMAIL. COM	1
PINO Gullo	LEGACEOP AGROACINE NAM	pino. pullo@pmail.co	or
FADIO GIARDINA	A.M.P. ISOLE PELAGIE	FABLOGIAR SINA 20GHAIL	L.C.
ENANDO CATAGNAN	DIP. PESCA - Nagione Sicilie	liocordo, celegicen	R
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Felato Colato	FIUME MARADO SOF GOP.		
MARCO BOSTANTINIA	WWFHEDPO	meanti Querfmedh	na . er
Valeano Anton	the Siengrocaro	· ·	
HARIA VIELMINI	OCEANA	iviermini@ccearo.	ory
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