LIFE MEDTURTLES

COLLECTIVE ACTIONS FOR IMPROVING THE CONSERVATION STATUS OF THE EU SEA TURTLE POPULATIONS: BORDERING AREAS (LIFE18 NAT/IT/000103)

ACTION D6

REPORT ON GHOST GEAR 3

Results of the period 2019-2022

June 2024

Collective actions for improving the conservation status of the EU sea turtle populations: bordering areas (LIFE18NAT/IT/000103). Project is carried out with the assistance of LIFE financial instrument of the European Union / info@medturtles.eu

INTRODUCTION

The estimated 640.000 tons of fishing gear lost, abandoned, or discarded annually exerts a large but uncertain impact on marine species. Using data from beach cleanups and fisheries in northern Australia, we assessed this biodiversity threat in an area where high densities of “ghost nets” encounter globally threatened turtles. (Conservation Letters, Volume 6, Issues4, Pages i-ii,217-286,2013). In 2019, during a 90-day survey conducted by the Save the Med Foundation (STM)2 in waters of the National Park of the Cabrera Archipelago (the largest offshore National Park in the Mediterranean, covering 90.000 Ha), 122 ghost FADs3 and 2 ghost loglines were retrieved. According to research colleagues, partner organizations, fishers and sea turtle recovery centers, ghost loglines, illegal driftnets and FADs are the number one cause of mortality for sea turtles in the Western Mediterranean Sea. (Save the Med Foundation, August 2020). Ghost fishing is a severe threat for all seven species of sea turtles found worldwide. Turtles must come to the surface to breathe so when they are caught in a net or on a fishing hook, they cannot surface and drown. According to a survey conducted by a team of conservation biologists, ~85,000 turtles were recorded caught in fishing gear between 1990 and 2008. However, due to the small percentage of fishing effort observed and reported, this likely is a severe underestimation. [1]In the Mediterranean, the results of another study indicate that more than 150,000 turtles are captured in ghost gear per year with possibly over 50,000 deaths. [2]In 2018, more than 300 sea turtles were found dead off the coast of Mexico during their annual attempt to lay their eggs. (L.B. (2010), Global patterns of marine turtle bycatch).[2]Casale P. (2008). Italy, Rome.

ACTION D6: Monitoring action C6

1.Overview

Action D6 is designed to monitor the progress and outcomes of Action C6: Reducing the impact of ghost gear in turtles.

5 beneficiaries from 5 countries participate in actions C6:
In Albania, the **HAS**. (module 1-4)
In Italy, **FC** and **UNIPI**. (module 3-4)
In Spain**, UVEG** (module 4)
In Tunisia, **FSS**. (module 1-4)
In Turkey, **PSCA**. (module 1-4)

Four specific indicators are used to monitor the effectiveness of action C6's implementation:

A) **% bottom area covered by ghost gear** (difference in the % ghost gear at the beginning of the project and at the end the Action C6, in each location identified in Action C6)

B) **number and % decrease of turtles caught** thanks to the Action C6 (difference between turtle catch in ghost gears at the beginning of the project and at the end the Action C6)

C) **% ghost gear discarded at sea by fishermen** (difference in the % ghost gear discarded at sea by fishermen at the beginning of the project and at the end the Action C6)

D) **number and % increase of fishermen that are aware of the possible impact** that the discarded at sea fishing gear can cause to turtles (at the beginning of the project and at the end the Action C6)

The data needed for these indicators are collected through multiple approaches, including the results of action C6 and specific structured interviews of fishers. Therefore, not all indicators can be calculated for all countries, depending on the type of activity that is implemented in each country as planned by the project.

The results about the indicators for the period covered by this Report are presented below in the form of one table for each indicator, by Country/Beneficiary and at project level.

Indicator A: % Bottom area covered by ghost gear (Mod 1-2)

(difference in the % ghost gear at the beginning of the project and at the end the Action C6, in each location identified in Action C6)

The only indicator in common for all countries is the number of ghost gears. Therefore, only this indicator is calculated at the project level.

Sub-Indicator	ALBANIA (HAS)	TUNISIA (FSS)	TURKEY (PSCA)	Total
Number of ghost gears located	67	13*	8	88
Combined length of ghost gears located (km)	gillnet: 7.4 trawl net: 6.1 static net: 3.6 total: 17.1	NA§	gillnet:33.1 static net:3 Total:36.1	53.2
Combined mass of ghost gears located (kg)	gillnet: 947 trawl net: 976 static net: 324 total: 2247	NA§	gillnet:4010 Set net:85 Total: 4095	6342
Number of ghost gears removed up to 2022	19	6	8	33
Combined length of ghost gears removed up to 2022 (km)	Gillnet: 1.3 Trawl net: 0.6 Static net: 1.4 Total: 3.3	Gillnet: 0.77 Trawl net: 0.350 Rope; 1.1 Plastic traps: 0.06 Total: 2.28	Gillnet:8.5 Set net:1.5 Total:10	15.58
Combined mass of ghost gears removed up to 2022 (kg)	Gillnet: 167 Trawl net: 96 Static net: 126 Total: 389	Gillnet: 800 Trawl net: 500 Rope: 1200 Plastic traps: 90 Total: 2590	Gilnnet:1300 Set net:96 Total: 1396	4375
% Decrease 2022	28.4 (N) 19.3 (length) 17.3 (weight)	46.2 (N)	100 (N) 27.7 (length) 34.1% (weignt)	37.5 (N)

* Shown on 1st hot spot map §Difficult to provide (data gathered based on surveys)

Indicator B: Number and % decrease of turtles caught (Mod 2-4)

(difference between turtle catch in ghost gears at the beginning of the project and at the end the Action C6)

Spain (UVEG): a lot of the the recorded entanglements in fisher nets show the similar characteristics: pieces of nets attached to plastic bottles (we provide photos to illustrate this type of entanglements). We have shared this information with colleagues of Balearic Islands and they have found the same type of items and it seems that could come from north Africa fisheries. We do not find this kind of "gears" in ports visited in Valencia.

The first 3 sub-indicators are taken from Indicators A, C and D

Sub-Indicator	ALBANIA (HAS)	ITALY (FC)	ITALY (UNIPI)	SPAIN (UVEG)	TUNISIA (FSS)	TURKEY (PSCA)	Average
Reduction in ghost gear based on mass removed (%) **(Table A)**	28.4				46.2	100.0	0.6
difference in the % ghost gear discarded at sea by fishers **(Table C)**	-35.4	0	0	100.0	NA	-60.0	0.9
% increase of fishermen that are aware of the possible impact of fishing gear **(Table D)**	13.4	2.8	12.6	8.3	12.3	18.2	11.3
Baseline: Turtles reported stuck due to ghost gear in 2019 (strandings?)	36 (30.7% of 117)	5(1,9 % of 261)	3 (4.9% of 61)	8(14.3 % of 56)	3% (2021 as baseline)	29 (30.8% of 94)	14.3

Turtles reported stuck due to ghost gear in 2022 (strandings?)	24 (27.6% of 87)	2(0,9 % of 204)	NA*	7(7.4 % of 95)	4 (2.1 % of 191)	21 (13.9% of 151)	10.4
Percentage change of turtles reported stuck due to ghost gear	**-10.1**	**-52.63**	**NA**	**-48.3**	**-30.0**	**-54.9**	**-39.2**

* at the time of this report, stranding data from third parties were not yet available

Indicator C: % Ghost gear discarded at sea (Mod 2-4)

(difference in the % ghost gear discarded at sea by fishermen at the beginning of the project and at the end the Action C6)

Sub-Indicator	ALBANIA (HAS)	ITALY (FC)	ITALY (UNIPI)	SPAIN (UVEG)	TUNISIA (FSS)	TURKEY (PSCA)	Average
Baseline: % of fishers who discard gear at sea in 2019-2020	13	0	0	1	23	10	7.8
% of fishers who discard gear at sea in 2022	8.4	0	0	2	NA	4	2.9
% Change	**-35.4**	**0**	**0**	**100.00**	**NA**	**-60.00**	**0.9**

Indicator D: Number and % increase of fishermen that are aware of the possible impact of fishing gear (Mod 4)

(at the beginning of the project and at the end the Action C6)

Sub-Indicator	ALBANIA (HAS)	ITALY (FC)	ITALY (UNIPI)	SPAIN (UVEG)	TUNISIA (FSS)	TURKEY (PSCA)	Total (N) or Average (%)
No. interviews made to collect information on ghost gear location	92				521	50	663
No. meetings with fishermen for awareness	54	9	61	364	5	360	853
Estimated number of fishermen contacted	210	162	61	364	750	404	1951
(a) N fishers interviewed/informed	208	162	61	364	521	360	1676
(b) % of fishers interviewed (a) who were already aware of the problem	11	80	31	88	39	24	46
(c) Tot fishers in the target ports	1380	1160	333	528	2586	1500	7487
(d) Number of fishers aware of the impact [(c-a)*b +a]	**337**	**960**	**145**	**508**	**1326**	**634**	**3911**
% change of fishers aware [a*(1-b)/c]	**13.4**	**2.8**	**12.6**	**8.3**	**12.3**	**18.2**	**11.3**