LIFE MEDTURTLES

COLLECTIVE ACTIONS FOR IMPROVING THE CONSERVATION

STATUS OF THE EU SEA TURTLE POPULATIONS: BORDERING AREAS

ACTION D5: Monitoring the Impact of

Action C5: Rescue centres and networks: increasing sea turtle rehabilitation capacity

Report on marine turtle rescuing: Baseline (2019), Year 1 (2020), Year 2(2021), Year 3 (2022) and Year 4 (2023) Reports

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LIFE18 NAT/IT/000103

Collective actions for improving the conservation status of the EU sea turtle population (**LIFE18 NAT/IT/000103**) Project is carried out with the assistance of LIFE financial instruments of the European Union

ACTION D5: Monitoring the Impact of Action C5
Year 1 (Baseline)

1. Overview

Action D5 is designed to monitor the progress and outcomes of action of "C5: Rescue Centres and Networks: Increasing Sea Turtle Rehabilitation Capacity". Action C5, aims to improve the capacity of the current rescue centres and the effectiveness of rescue networks. In this way, a larger number of injured turtles will be reported, admitted more promptly at rescue centres, treated successfully, and return to their natural environment. Action C5 will also contribute to public awareness (turtle release events, visits to the renewed rescue centres).

To this aim, planned activities include:

- Upgrading and adding to existing facilities: tanks, pumps and plumbing systems, veterinary equipment, office equipment

- Distribution of 'rescue kits' for better and safer transport of injured turtles to port authorities and fishermen

4 beneficiaries from 4 countries participate in actions C5 and D7:

In **Albania**, the **HAS** participates by upgrading its Patok Sea Turtle Research and First Aid Center into a rescue center and through activities related to the Rescue/stranding Network.
In **Italy** the **FC** will upgrade the facilities of the Rescue Centre in Riccione, create a first aid center and implement activities related to the Rescue/stranding Network.
In **Tunisia**, **FSS** will upgrade the facilities of the Rescue Centre in Monastir, create a first aid center in Sfax and will implement activities related to the Rescue/stranding Network.
In **Turkey**, **PSCA** will upgrade the facilities of the Rescue Centre (DEKAMER) in Dalyan and will implement activities related to the Rescue/stranding Network.

The UVEG team (Spain) is not participating in this activity throughout the project since the Valencia region counts with a well-established stranding network a full equipped rescue centres for sea turtle rehabilitation. **The University of Pisa (UniPi)** is also not participating this action as **FC** in Italy already in this action.

3. D5 Indicators – overview

Baseline

It is assumed that the baseline for comparing data relevant to the Rescue Centres' and Rescue Networks effectiveness should be an average of the past years, since events and circumstances in one year could lead to biased numbers of reported or admitted and/or successfully treated turtles, thus resulting in baseline numbers which are not indicative of the usual activity. For the purposes of simplicity, a time period of the last 5 years is assumed (2015 – 2018) to extract an average annual number for each baseline indicator.

Indicators

Specific indicators are used to monitor the effectiveness of action C5's implementation. The number of turtles reported, admitted, as well as successfully treated and released each year of the project's duration, compared to a 'baseline' and combined with information from their injuries, could give an indication on the effect of upgrading the Rescue Centres and Rescue Networks.

Number of turtles reported

If the number of reported injured turtles is increased, especially in the project areas, this could be an indicator of the effectiveness of the upgrading of the rescue network, due to action C5.

Time lag between reporting and rescuing

The prompt intervention of the responsible agency in case of a reported injured or trapped turtle could be crucial for the animal's survival. Better instructions to fishermen, the general public and the Port Authorities (Coast Guard) (as intended by the activities of action C5) could lead in a decrease on the time lag between reporting and rescuing.

% of turtles rescued (admitted to the Rescue Centre) among those reported

This is another indicator for the effectiveness of the Rescue Networks' upgrading

Number of turtles successfully treated and released

Upgrading the effectiveness of the Rescue Centres due to action C5, will potentially result in an increase of the number of successfully treated and subsequently released turtles.

% of turtles successfully treated and released among those reported

The percentage of injured turtles which have been successfully treated and released among those reported, is an indicator of the effectiveness of action C5 as a whole (combination of the improvement of both the rescue centre and the associated rescue network).

4. D7 Indicators – Baseline (2015-2019)

As mentioned before, a time period of the last 5 years (2015 – 2019) is assumed to extract average annual figures for each baseline indicator.

Indicator	First Aid Center in Patok, Rescue Network in Albania	Rescue Centre in Riccione, Rescue Network in Italy	Rescue Centre in Monastir, Rescue Network in Tunisia	Rescue center in Dalyan, Rescue Network in Turkey
No of turtles present at the RC at the beginning of the year	NA*	9 (medium)	3	5
No of turtles admitted to the RC annually	32	65,5 (medium)	8	80
No of turtles successfully treated and released annually	19	47,25 (medium)	2	34
No of turtles that died at the RC annually	NA*	14,75 (medium)	1	39
No of turtles present at the RC at the end of the year	NA*	9 (medium)	4	9
No of injured turtles reported annually	58	14 (medium)	30	37
% of turtles rescued (admitted to the RC) among those reported	55%	90%	26.7%	75%
% of turtles successfully treated and released annually among those reported	33%	77,49%	6.7%	54%
Notes	Since the Patok center is a FAC the turtles could be hospitalized at the center for 72 hours maximum. After providing the first aid the turtle	The period of greatest hospitalization at the rescue center is in winter and spring especially of animals caught in nets or hypothermia. In summer,	The rescue center of Monastir (Centre of Tunisia) is established since 2004, it is the only rescue center in Tunisia	DEKAMER Rescue center is established in 2009 and a total of 373 injured turtles were admitted over the last 10 years. The

	is released back to the wild even though in some cases that is not the best practice as it needs to be hospitalized and take care of for longer period. For the above reasons topics such as No of turtles present at the RC at the beginning of the year, No of turtles that died at the RC annually, No of turtles present at the RC at the end of the year, is not applied.	wounded turtles often arrive. Turtles are hospitalized and treated according to their problems and the length of recovery varies according to the pathology, there are cases of several years. Treatments may also require physiotherapy. The center always has turtles and in recent years hospitalizations have increased especially in winter.	and in the south shore of the Mediterranean. During the last years the center receives more turtles as a result of awareness mainly with fishermen and collaboration with NGOs in the region. The new center planned to be established in the FSS located in the gulf of Gabès which is the most important fishing area in Tunisia and where turtle highly interact with fishing activity, will allow treating more turtles and playing a big role in awareness raising effort in the region.	annual reporting is increased to 82 ((in 2019) as a result of the awareness of the center. There are three other first aid stations but they are not active all year around. We are planning to create two additional first aid stations where we got majority of injured turtles nearby provinces.

5. D7 Indicators – First Year (2020)

Annual value of 2020 were given below by each partner. The totals and relevant calculations were given in the last column.

Indicator	First Aid Center in Patok, Rescue Network in Albania	Rescue Centre in Riccione, Rescue Network in Italy	Rescue Centre in Monastir, Rescue Network in Tunisia	Rescue center in Dalyan, Rescue Network in Turkey	**Total In all partners**
No of turtles present at the RC at the beginning of the year	NA*	4	4	5	**13**
No of turtles admitted to the RC annually	41	52	15	49	**157**
No of turtles successfully treated and released annually	16	43	9	21	**89**
No of turtles that died at the RC annually	NA*	6	3	22	**31**
No of turtles present at the RC at the end of the year	NA*	7	3	6	**16**
No of injured turtles reported annually	87	52	30	49	**218**
% of turtles rescued (admitted to the RC) among those reported	30%	100%	50%	100	**Average 70%**
% of turtles successfully treated and released annually among those reported	21%	87,75%	30%	42,85	**45,4**
Notes	No of turtles present at the RC	The Covid19 emergency in		Due to covid 19, the	**In general, the beaches were**

	at the beginning of the year, No of turtles that died at the RC annually, No of turtles present at the RC at the end of the year, is not applied in Patok Center before and in this year, because this center is still just e center for giving the first aid, not for recovering of the injured sea turtles. Starting form the second year the first aid center will change due to LifeMedTurtles, and lot's of turtles in the future will be hospitalized in this center. Due to the situation and the restrictions, we lost some cases of sea turtles reported.	Italy has probably affected the number of injured turtles reported because we have had a period when the boats did not go out to fish.		reporting of injured turtles were relatively less to compare with previous years.	**empty due to covid nearly until the mid summer in all countries. This might affect the reporting of injured animals. We hope to get a better picture in the following years, if our rescue center infrastructures improved.**

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5. D7 Indicators – Second Year (2021)

Annual value of 2021 were given below by each partner. The totals and relevant calculations were given in the last column.

Indicator	First Aid Center in Patok, Rescue Network in Albania	Rescue Centre in Riccione, Rescue Network in Italy	Rescue Centre in Monastir, Rescue Network in Tunisia	Rescue center in Dalyan, Rescue Network in Turkey	**Total In all partners**
No of turtles present at the RC at the beginning of the year	0	7	3	3	**13**
No of turtles admitted to the RC annually	49	69	39	53	**210**
No of turtles successfully treated and released annually	41	39	27	32	**139**
No of turtles that died at the RC annually	3	27	4	16	**50**
No of turtles present at the RC at the end of the year	5	10	11	5	**31**
No of injured turtles reported annually	72	69	52	53	**246**
% of turtles rescued (admitted to the RC) among those reported	68%	100%	75	100	**85,75**
% of turtles successfully treated and released annually among those reported	57%	59,09%	51.92	55,2	**55,80**
Notes		Between the months of July and October 2021, 23 seriously weakened turtles			**Data gathered from each partner**

		were admitted to the FC rescue centre after being found stranded on the beaches. Many of them died within a few hours despite all the efforts made by the FC team. Analyses are being carried out to determine the causes of this condition.			**and analysed.**

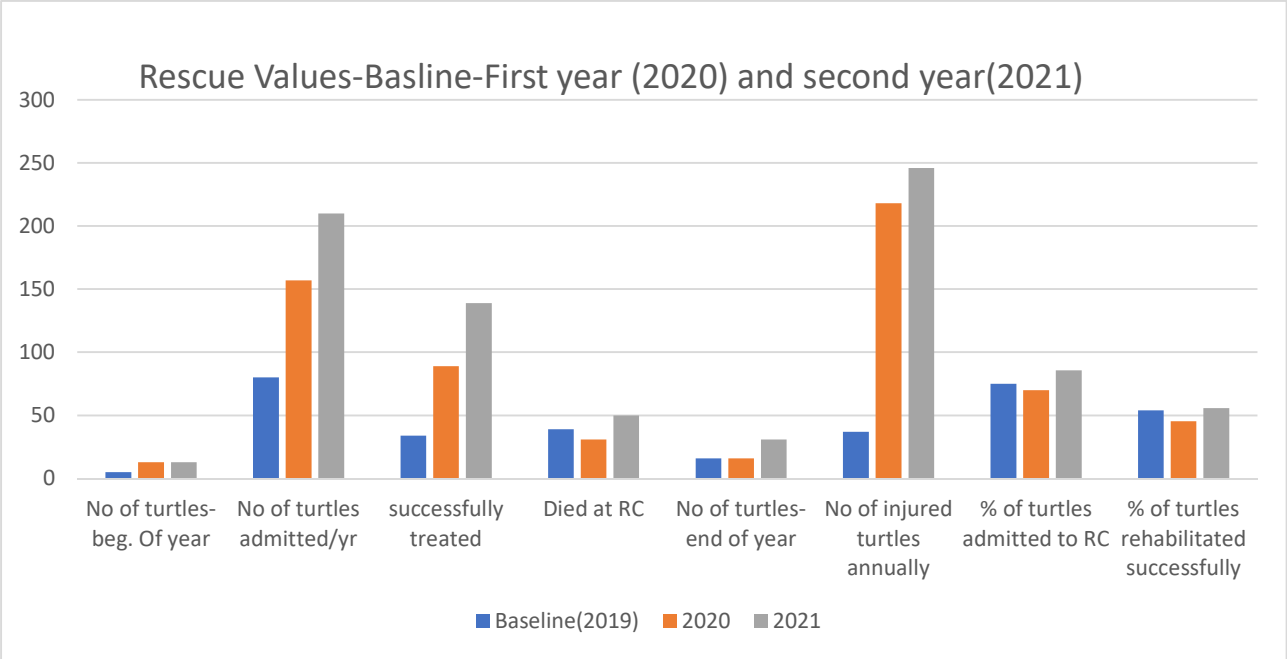

Fig.1. Histograms of the data collected to show the rescue data among the project partners.

There were 13 turtles at the beginning of the year at RC of project partners. The number of turtles admitted to RC in the second year was 210 and 139 (56%) of them successfully rehabilitated. Mortalities are inevitable and there were 50 turtles died at RC in the second year. 86% of the turtles were admitted to the RCs.

5. D7 Indicators – Third Year (2022)

Annual value of 2022 were given below by each partner. The totals and relevant calculations were given in the last column.

Indicator	First Aid Center in Patok, Rescue Network in Albania	Rescue Centre in Riccione, Rescue Network in Italy	Rescue Centre in Monastir, Rescue Network in Tunisia	Rescue center in Dalyan, Rescue Network in Turkey	**Total In all partners**
No of turtles present at the RC at the beginning of the year	3	16	11	5	**35**
No of turtles admitted to the RC annually	45	31	50	37	**163**
No of turtles successfully treated and released annually	38	16	45	11	**99**
No of turtles that died at the RC annually	1	12	4	22	**39**
No of turtles present at the RC at the end of the year	6	3	3	7	**19**
No of injured turtles reported annually	74	31	55	37	**197**
% of turtles rescued (admitted to the RC) among those reported	60.8%	100%	90.90%	100%	**87,925**
% of turtles successfully treated and released annually among those reported	51.5%	51,61%	81.81%	29,72%	**49,91**

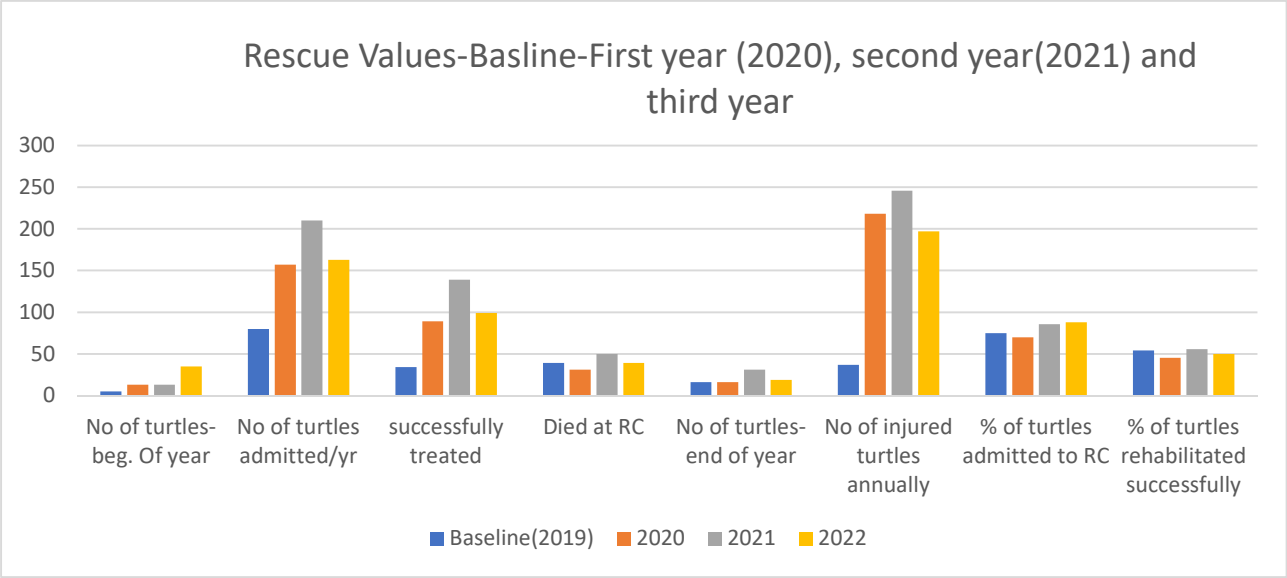

Fig.2. Histograms of the data collected to show the rescue data among the project partners.

There were 35 turtles at the beginning of the year at RC of project partners. The number of turtles admitted to RC in the third year was 163 and 99 (%49,91) of them successfully rehabilitated. There were 39 turtles died at RC in the third year. As a summary of third year, 87.92% of the turtles were admitted to the RCs.

Highlights for the Action:

- 361 turtles were treated and released back to sea by four partners.
- At the end of third year, 51% of the turtles rehabilitated successfully.
- 80% of the turtles were admitted to the RC.
- 698 turtles were injured and 610 of them admitted to the rescue centres.
- Number turtles at the beginning of each year were 66 in total and this reached to 82 at the end of the year. This both shows the capacity increased and the treatment durations took longer.
- 159 turtles were unfortunately died at RC during the treatment process.

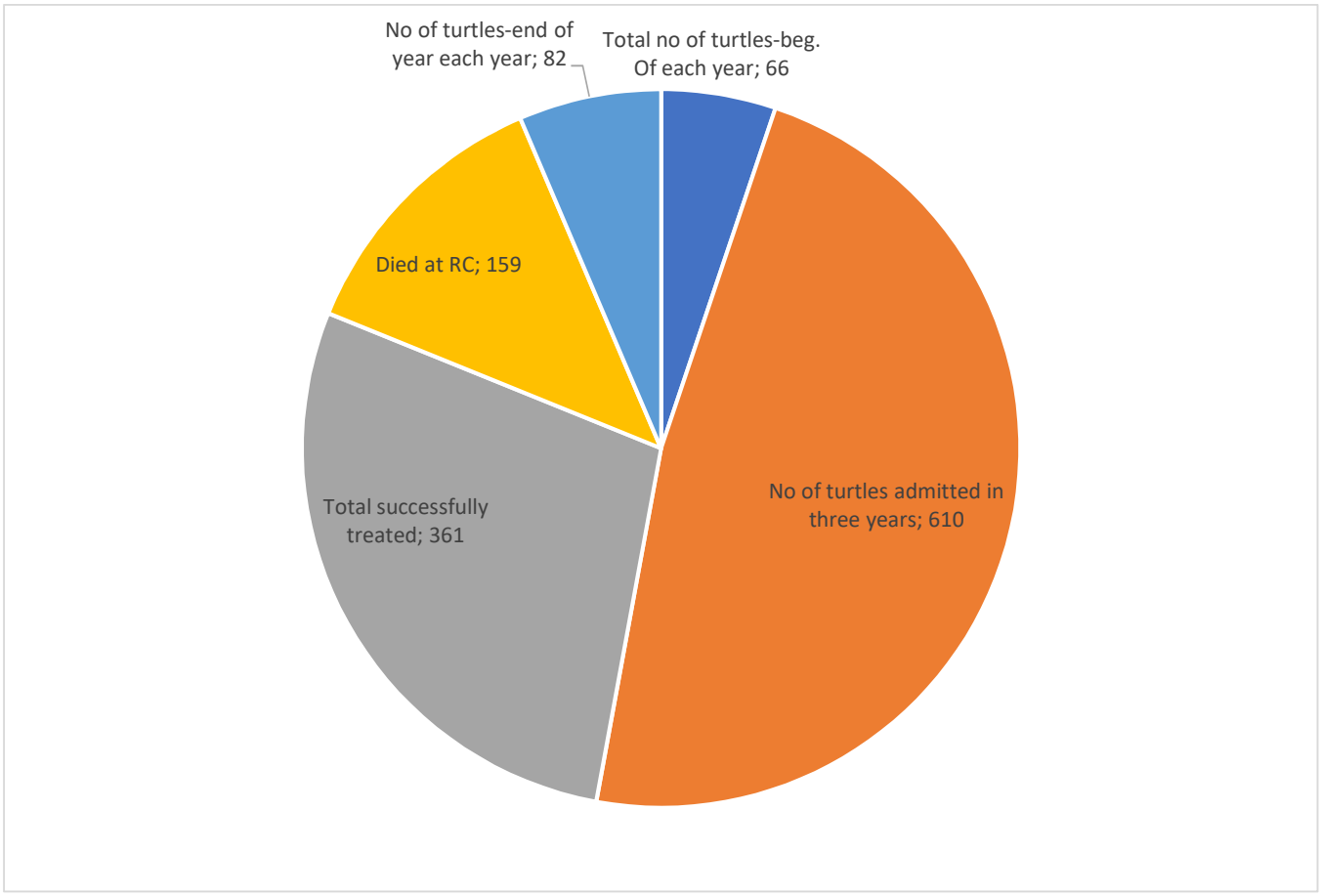

Fig. 3. The summary information at the end of third year.

5. D7 Indicators – Fourth Year (2023)

Annual value of 2023 were given below by each partner. The totals and relevant calculations were given in the last column.

Indicator	First Aid Center in Patok, Rescue Network in Albania	Rescue Centre in Riccione, Rescue Network in Italy	Rescue Centre in Monastir, Rescue Network in Tunisia	Rescue center in Dalyan, Rescue Network in Turkey	**Total In all partners**
No of turtles present at the RC at the beginning of the year	1	4	8	7	**20**
No of turtles admitted to the RC annually	41	51	37	51	**180**
No of turtles successfully treated and released annually	37	38	30	32	**137**
No of turtles that died at the RC annually	2	8	8	17	**35**
No of turtles present at the RC at the end of the year	1	8	6	9	**24**
No of injured turtles reported annually	41	51	23	51	**166**
% of turtles rescued (admitted to the RC) among those reported	100%	100%	100%	100%	**100%**
% of turtles successfully treated and released annually among those reported	90%	85%	81.1%	63%	**79%**

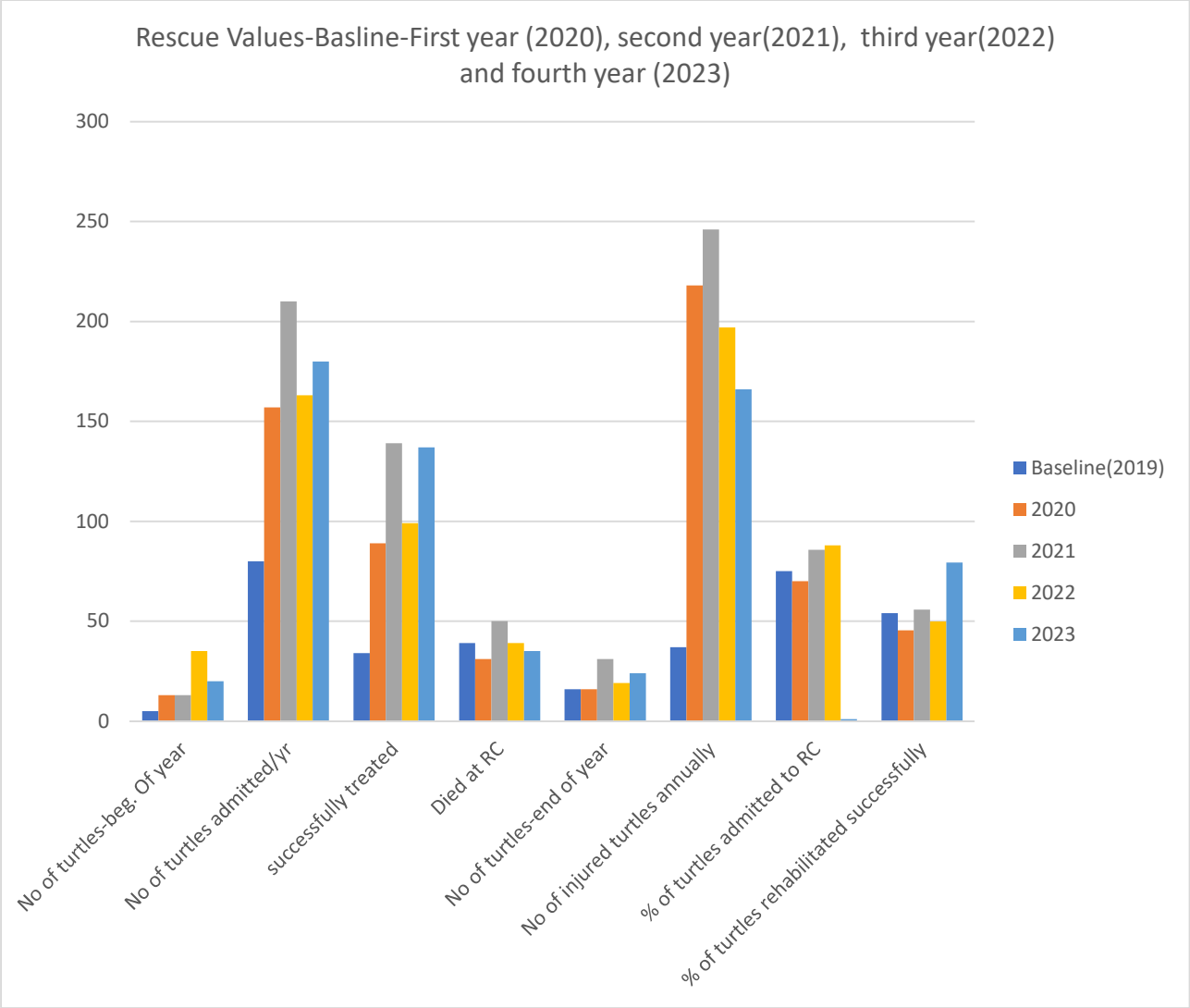

Fig.4. Histograms of the data collected to show the rescue data among the project partners.

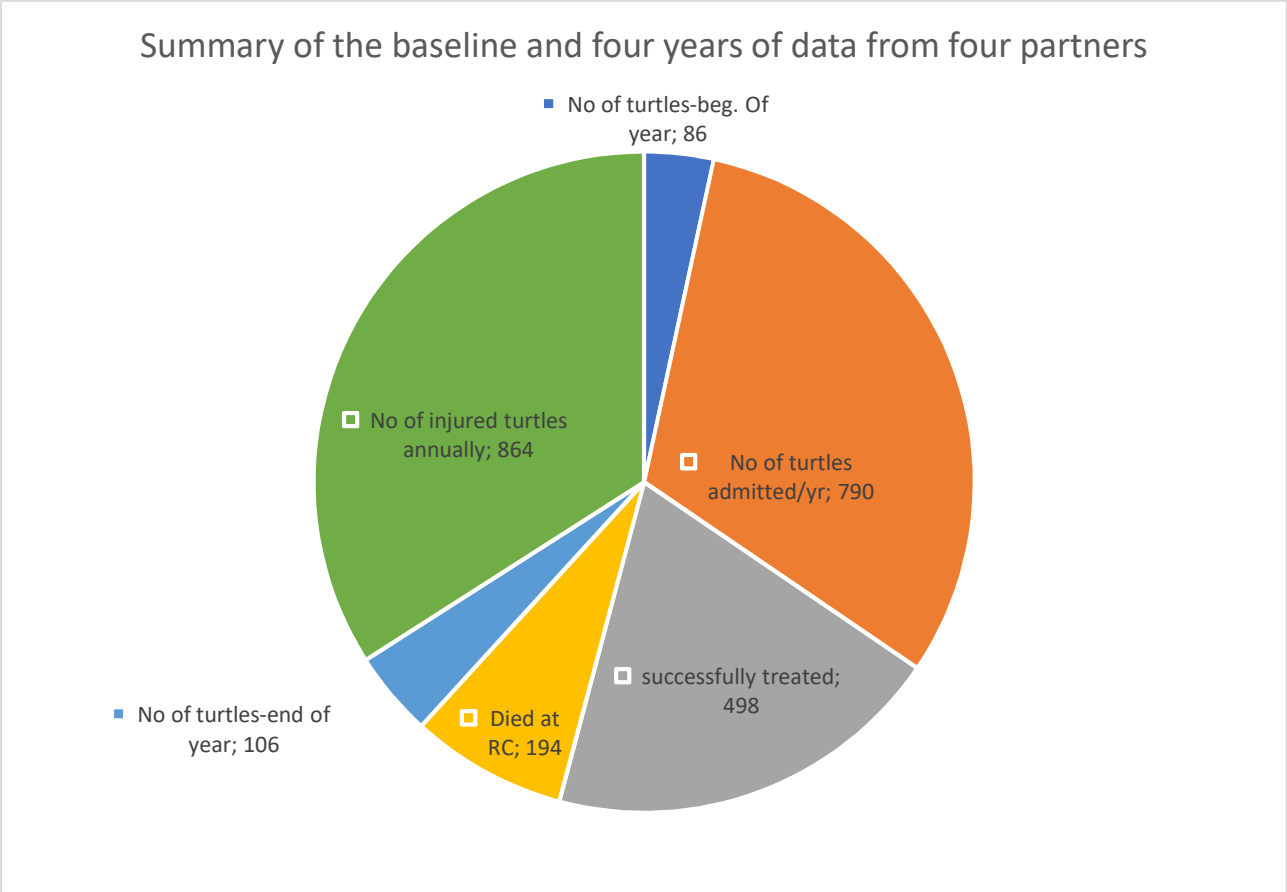

Fig. 5. The summary information at the end of four years(2023).

Highlights for the Action:

- 498 turtles were treated and released back to sea by four partners.
- At the end of four year, 57 % of the turtles rehabilitated successfully.
- 84 % of the turtles were admitted to the RC.
- 790 turtles were admitted to the rescue centres.
- Number turtles at the beginning of each year were 86 and thre were 106 turtles at the end of the year hat to be looked after during the winter period.
- 194 turtles were unfortunately died at RC during the treatment process.