*Accord sur la Conservation des Cétacés de la Mer Noire, de la Méditerranée et de la zone Atlantique adjacente*

ACCOBAMS

*Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic Area*

# FINAL REPORT OF THE PROJECT INCREASE THE REGIONAL CAPACITY FOR DEVELOPING CETACEAN DISTRIBUTION AND ABUNDANCE STUDIES


**Romulus-Marian PAIU**

**26.07.2017**

**Final report**

# Increase the regional capacity for developing cetacean distribution and abundance studies

**Study funded by:**

ACCOBAMS Secretariat
Jardin de l'UNESCO
Les Terrasses de Fontvieille
MC 98000 Monaco

**Responsible(s) of the study:**

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**In charge of the study:**

Romulus-Marian PAIU, expert in ecology and environmental protection Mare Nostrum NGO

**Reference of the study:**

Memorandum of Understanding No. 10/2016/AC and
Memorandum of Understanding No. 15/2016/LB 6900 et LB 1201

**With the participation of :**

Philip S. Hammond, BA, DPhil, University of St Andrews, Sea Mammal Research Unit

**Photography credit:**

Romulus-Marian PAIU, Mare Nostrum NGO

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# CONTEXT OF THE PROJECT

### Identity of the project responsible

| | |
|---|---|
| Full legal name | MARE NOSTRUM Non-Governmental Organization |
| Acronym | Mare Nostrum NGO |
| Legal status | Non-Guvernamental Organization – Civil Sentence No 358/23.08.1995 |
| Official address | 1 Decembrie 1918 Blvd., No 3, 900711, Constanta, ROMANIA |
| Contact person | Mihaela Elena MIREA CANDEA – Executive Director<br>Romulus-Marian PAIU – Expert in ecology and environmental protection |
| Telephone number | 0040241-612422; 0040341-407432; 0040763-255731 |
| Fax number | 0040241-612422; 0040341-407432 |
| E-mail address | office@marenostrum.ro<br>marian_paiu@marenostrum.ro |
| Collaborators | Philip S. Hammond BA, DPhil (Professor of Marine Ecology) affiliated to the Sea Mammal Research Unit, University of St. Andrews<br>Dr. Lindsay Porter, SMRU Consulting Asia Pacific |

### Justification

In 2004, Romanian Ministry of Environment and Waters Management issued the Order No. 374 for approval of the National Action Plan for the Conservation of the Dolphins in the Black Sea Romanian Waters. It has in view the provisions outlined in the ACCOBAMS Conservation Plan and Strategic Objectives. Present project acts to contribute of fulfilling of the overall objectives of this plan: Improvement of the scientific knowledge by research (B.4; B.4.2; B.4.3), monitoring and dissemination of information (B.1.3.1); Awareness (B.3), training and public involving local communities and professional associations in dolphin protection and conservation programs; providing a timely response to emergency situations; building institutional capacities.
In order to fulfil this, Romania and at the regional level, the other countries, stress the need of qualified specialists who will support the ACCOBAMS Objectives in present and future.

There are still many unknowns about the abundance and distribution of dolphins, who visit the Romanian Black Sea waters, as was noted at the workshop „The state and distribution of Cetaceans from Black Sea and Mediterranean". The only relevant study in this direction is Adverse Fisheries Impacts on Cetacean Population in the Black Sea of MEP (2014). It can represent a mile stone for Black Sea cetacean research for the future monitoring programs of Black Sea countries and ACCOBAMS Black Sea second survey initiative. Now we can agree on an accepted methodology which can be applied by all scientists in Black Sea, in order to have comparative results on cetacean distribution and abundance.

## Objectives

1. Increase the capacity of local and regional researchers to address the issues related to cetacean distribution and abundance (B.4) and aims to respond to ACCOBAMS strategic objective (R.5.1; B.1.1.3) on improving understanding of the conservation status of cetaceans in Black Sea.
2. Assure continuity, quality and quantity of data regarding Romanian Black Sea cetaceans.
3. Increase awareness and involvement of local population and tourists in cetacean conservation (stranding monitoring network, task force, emergency, appropriate behaviour etc.).

## Area of the project

The Romanian Black Sea coastline extends for over 240 km, which can be divided into two main geographical and geomorphologic sectors: **the northern sector** (about 158 km in length) lies between the secondary delta of the Chilia branch and Constanta, is constituted of alluvial sediments; the shallow waters up to 20m depth of this sector is included in the Biosphere Reserve of Danube Delta (declared through the Low no. 82/1993); and **the southern sector** (about 85 km in length) lies between Constanta and Vama-Veche characterized by promontories with active, high cliffs, separated by large zones with accumulative beaches often protecting littoral lakes. The distance from the sea shore to the shelf limits (200 m depth) varies from 100-200 km in the northern sector to 50 km in the southern one. The submarine slope of the shelf is very gentle in the north, with the 10 m depth in front of Danube mouths, while in the southern sector the 10 m depth is nearly 1,5 km offshore.
The project is implemented mainly in the southern part of the Romanian marine area (Fig. 1), between Constanta and Vama-Veche. The activities conducted in the Northern part cover land surveys, awareness, training of the monitoring network members and emergency interventions.

Fig. 1. Map of the area of the project

# ACTIVITIES CARRIED OUT DURING THE REPORTING PERIOD

For achieving the objectives of the project the activities were split in two categories. The first category includes the activities related to reinforcing local/regional capacities to conserve cetaceans by developing cetacean distribution and abundance studies (A1-A4) and the second category covers activities assuring continuity of Mare Nostrum Program for monitoring and conservation of Black Sea cetacean (A5-A8). The last activity (A9) covers the reporting segment of the project, with a progress report and a final report.

**A1. International training workshop for researchers/students on marine mammal distribution and abundance**

Activity finalized under the interim report, December 2016.

**A2. Establish a local survey plan for 12Nm area between Agigea (North 44.0823445N 28.6417866E) and Vama-Veche (South 43.7425146N 28.5793877E)**

The activity provided the opportunity for the Romanian trainees to use the knowledge from the training as good practice example and a step forward in establishing a common methodology for cetacean monitoring in all the Black Sea. The training give the necessary information and the trainers were able to give us advices and work with us at the development of the survey plans and also for the assessment of the data.

First survey plan was sent to the ACCOBAMS secretariat for consultation, and did not receive any comments for modification. The survey plan included 8 line transects, perpendicular on the shore line, covering the 12 NM area of Romanian Black Sea (Fig.2.). The length of the transects vary between 25.395 km and 28.295 km (for the Spring survey) respective 25.415 km and 28.852 km for the (Summer survey), with a distance between transects of 5 km.

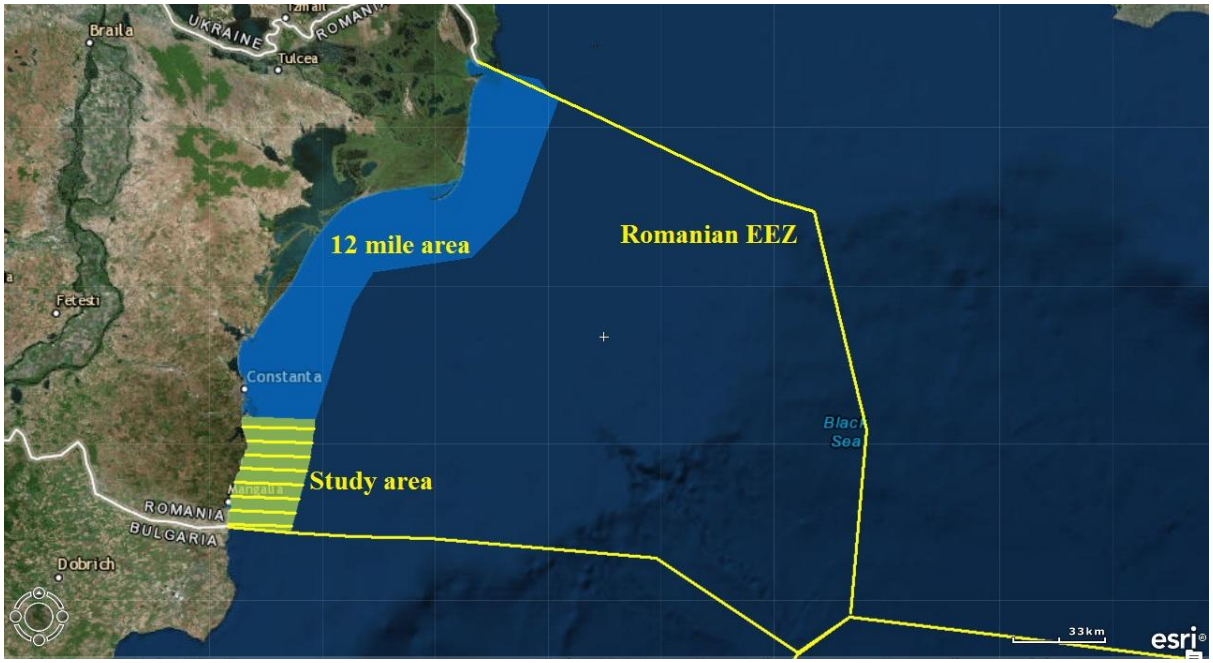


**Fig.2. Romanian EEZ and territorial waters where the surveys took place**

The method used was distance line transect, the vessel followed pre-determined track lines throughout the territorial sea/internal waters. Double platform line transect techniques were used to

collect distance sampling data. Surveying was conducted when the wind was Beaufort force four or below and the visibility was good. The survey was carried out in "passing mode": the vessel did not approach any cetaceans sighted. All sightings data were recorded on pre-prepared data sheets and entered into a database at the end of a survey day.
The data was treated as a single platform survey by combining the sightings from observation platform and photographer platform and removing duplicate sightings. The data was processed and analyzed by means of Distance 7.0 program package[1]. The surface of the survey was 1063 km$^2$, with 211.95 km of track and coverage of 0.39%.
Comparing two models Systematic random sampling and Equel Spaced ZigZag for the same line length the coverage of first model was higher and more appropriate to the surveyed area.

Due to the restrictions imposed by the budget and existing facilities was chosen to develop a combine methodology, a mix between single platform survey and photo identification platform (which was acting as tracker and for increasing the confidence of data by checking the observations of the observer platform).

Coordinates and map for the first survey plan (Spring survey):

| **GPS coordinates of the transects for the Spring survey** | |
|---|---|
| Sampler 1<br>28.57929 43.7458<br>28.86415 43.7382 | Sampler 5<br>28.63548 43.92311<br>28.92835 43.91528 |
| Sampler 2<br>28.58916 43.79024<br>28.88015 43.78248 | Sampler 6<br>28.65504 43.9673<br>28.94258 43.9596 |
| Sampler 3<br>28.59172 43.83487<br>28.89618 43.82674 | Sampler 7<br>28.66259 44.0118<br>28.95229 44.00404 |
| Sampler 4<br>28.60894 43.87912<br>28.91224 43.87101 | Sampler 8<br>28.64347 44.05702<br>28.96203 44.04847 |


**A3. Conduct the two sea surveys according to the agreed plan**

The area is overlapping several protected areas (Natura 2000): ROSCI 0269 Vama Veche-2Mai, ROSCI 0273 Marine area from Cape Tuzla, ROSCI0094 Submarine sulphurs springs from Mangalia, ROSPA0076 Black Sea and it was 1063 km$^2$.

There were conducted two vessel surveys one in Spring and one in Summer, on the same area but on different survey plan (other transects, this was a suggestion of Dr. Phil Hammond). The second survey plan output the tracks beginning and finishing more North.

[1]*Thomas, L., Laake, J.L., Rexstad, E., Strindberg, S., Marques, F.F.C., Buckland, S.T., Borchers, D.L., Anderson, D.R., Burnham, K.P., Burt, M.L., Hedley, S.L., Pollard, J.H., Bishop, J.R.B. and Marques, T.A. 2010. Distance 7.0. Release 1. Research Unit for Wildlife Population Assessment, University of St. Andrews, UK. http://www.ruwpa.st-and.ac.uk/distance/*

There were conducted two trainings, one before each survey, because the team members from the first survey changed. In the first training were trained 10 observers and for the second 13 observers, which were used in the survey in teams of 7 observers for first survey (Spring survey) and 6 observers for the second survey (Summer survey) (Fig.3.).

**Fig 3. Spring and Summer vessel survey**

First survey was done in April 2017, on 7, 28, 29, over three days, recording 59 sightings with a total of 137 individuals, but just from two species: *Tursiops truncatus ponticus (Fig.4.)* and *Phocoena phocoena (Fig.5.).* The data collected and analyzed revealed an estimation of: 359 harbour porpoise and 667 bottlenose dolphins ( table 2).

**Fig.4. *Tursiops truncatus ponticus* sighted in April 2017 vessel survey**

**Fig. 5. *Phocoena phocoena relicta* sighted in April 2017 vessel survey**

The second survey was done in June 2017, between 26-28, recording 216 sightings with 340 individuals (Fig.6.), from all the three species inhabiting the Black Sea.

**Fig. 6. Cetacean sightings registered in the second survey (from left to right: Harbour porpoise; Common dolphins; Bottlenose dolphins)**

A total of 275 sightings of Black Sea cetaceans of all three species have been recorded and analysed as is presented in the table 1.

Table 1. Observation effort and number of animals recorded during the two boat surveys in the 12-mile wide inshore zone of South Romanian Black Sea

| Season | Survey area, $km^2$ | Observation effort | | | Sighted animals | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | *P. p. relicta* | | *D. d. ponticus* | | *T.t. ponticus* | |
| | | km | hours | min | sightings | animals | sightings | animals | sightings | animals |
| Spring | 1063 | 211.95 | 18 | 13 | 36 | 73 | 0 | 0 | 23 | 64 |
| Summer | 1063 | 212.39 | 18 | 48 | 183 | 281 | 7 | 9 | 26 | 50 |

**Results of the two surveys:**

**Spring survey:**

Over the 8 transects surveyed in April were sighted two from the three species of cetacean inhabiting the Black Sea, *Tursiops truncatus ponticus* and *Phocoena phocoena relicta* with 23 sightings of bottlenose dolphin and 36 sightings of harbour porpoise (Table 2). There were four transects with no sighted cetaceans and on other three with just one sighting (one with singe animal and two groups of three)(Fig. 7).

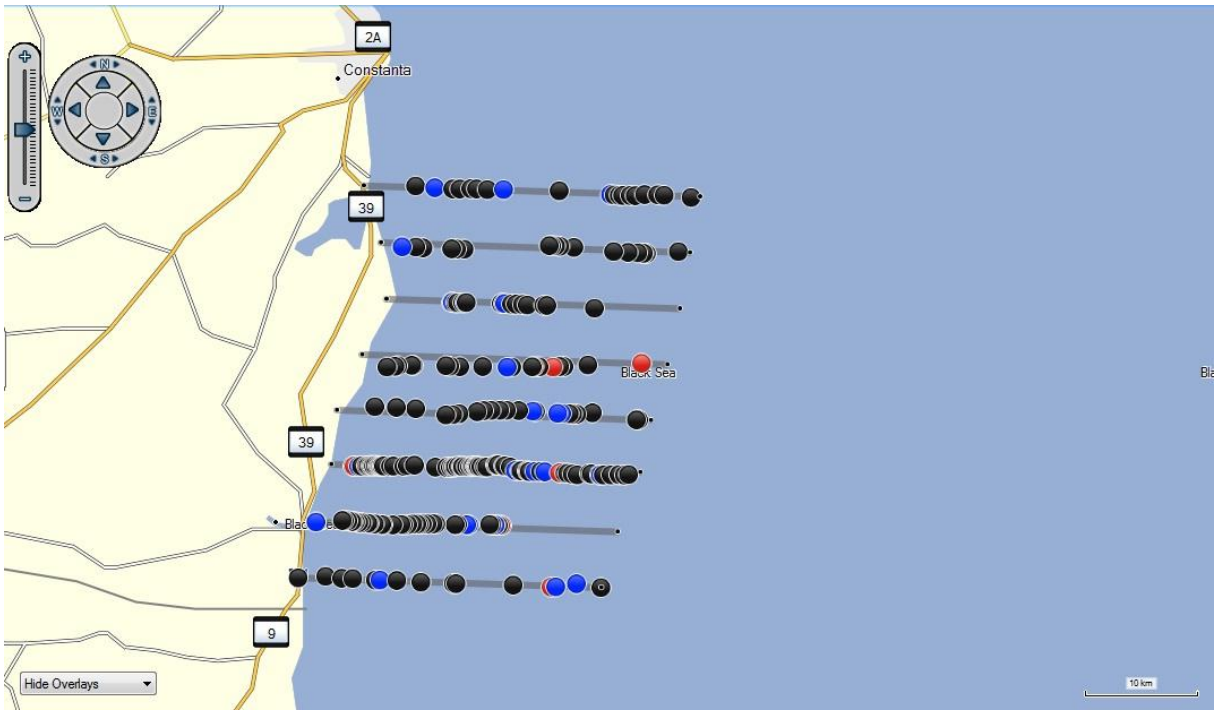


**Fig. 7. Cetacean sightings during the vessel-based survey from Spring (April) in the surveyed area (Black dots – Harbour porpoise; Red dots – Common dolphins; Blue dots – Bottlenose dolphins)**

The uncorrected values of the two species sighted in the spring survey density and absolute numbers estimated are shown in table 2.

Table 2. Density and abundance of Harbour porpoises and Bottlenose dolphins in Spring for the surveyed area

| Specie | Density of gropus, groups/km | | Density of animals, indiv./km$^2$ | | Number of animals | | CV% |
|---|---|---|---|---|---|---|---|
| | DS | 95% CI | D | 95% CI | N | 95% CI | |
| *P.p. relicta* | 0.166 | 0.592-0.467 | 0.337 | 0.119-0.955 | 359 | 127-1015 | 50.87 |
| *T. t. ponticus* | 0.216 | 0.708-0.659 | 0.627 | 0.201-1.957 | 667 | 214-2080 | 59.92 |

Harbour porpoises (36 sightings; 73 animals) have been observed on the study area (Fig. 8.). The distribution of sightings was more or less homogenous over the study area with higher density in the

southern half. The data collected show that porpoises are solitary animal (13 sightings; 36% of the total) or live in pair (12 sightings; 34% of the total), the largest group in a single sighting was composed of 4 animals (3 sightings; 8 % of the total)(Fig.9).

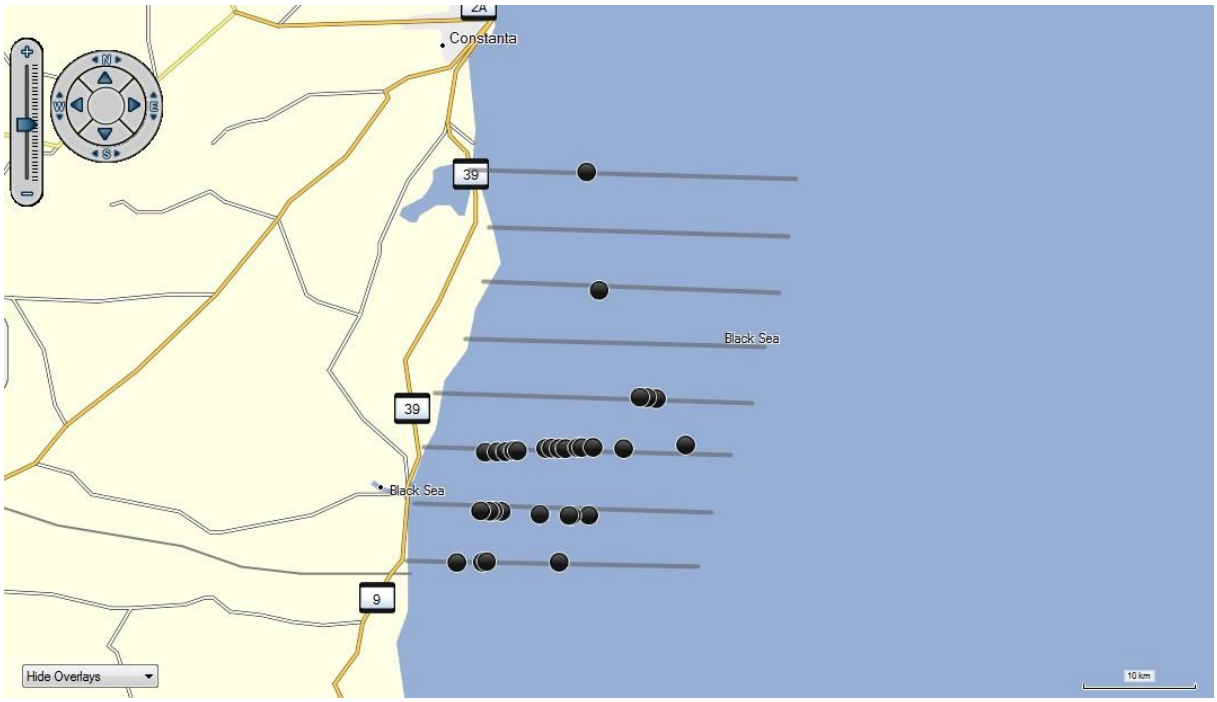


**Fig. 78. Sightings of Harbour porpoise (black spots) during the vessel-based survey in the internal waters of Romania, South part.**

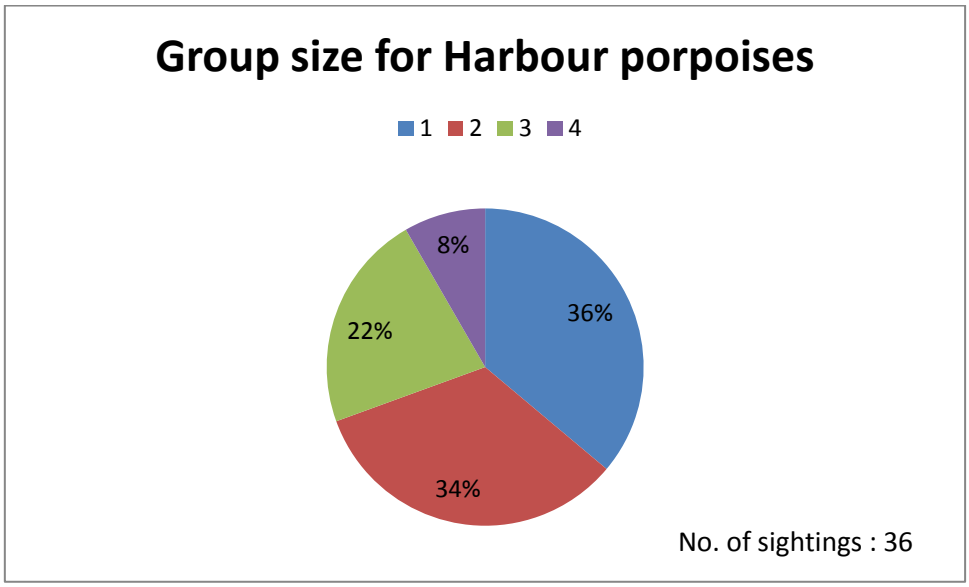


**Fig.9. Group size for *Phocoena phocoena relicta* (Harbour porpoise)**

Bottlenose dolphins (23 sightings; 64 animals) have been observed on the study area (Fig. 10.). The distribution of sightings was more or less homogenous over the study area with higher density in the southern half. The data collected show that bottlenose dolphins are like the porpoises solitary animal

(6 sightings; 26% of the total) or live in pair (7 sightings; 31% of the total), the largest group in a single sighting was composed of 8 animals (3 sightings; 4 % of the total)(Fig.11.).

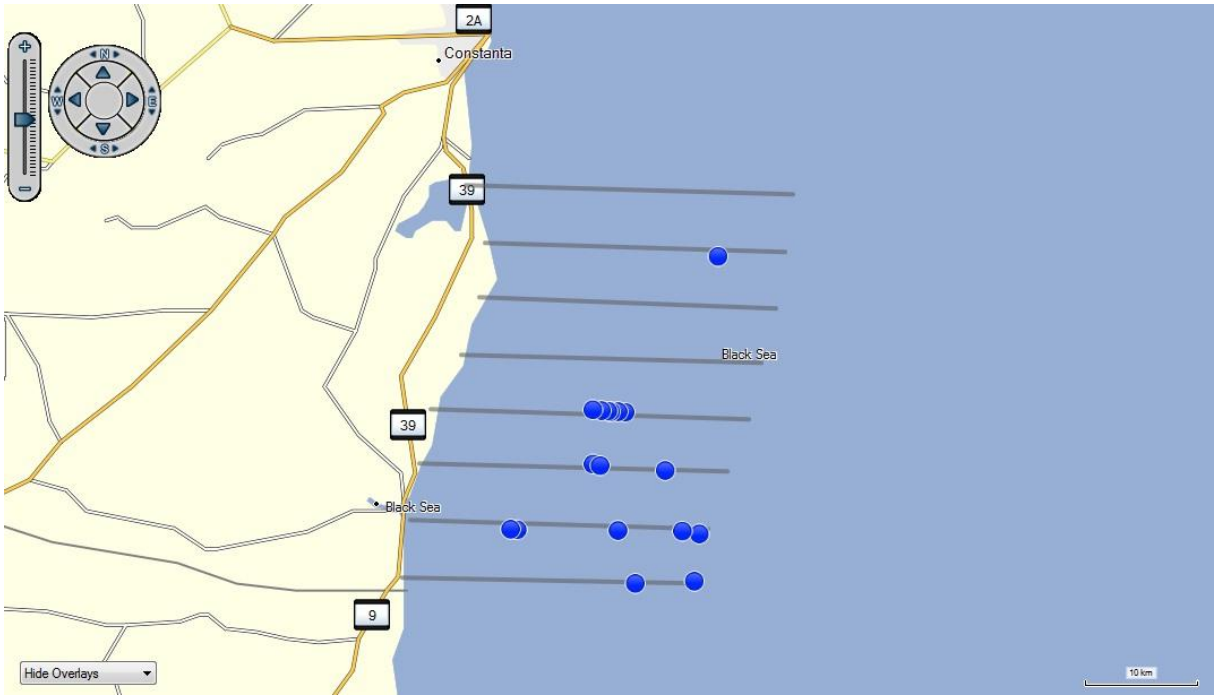


**Fig. 10. Sightings of Bottlenose dolphin (blue spots) during the vessel-based survey in the internal waters of Romania, South part.**

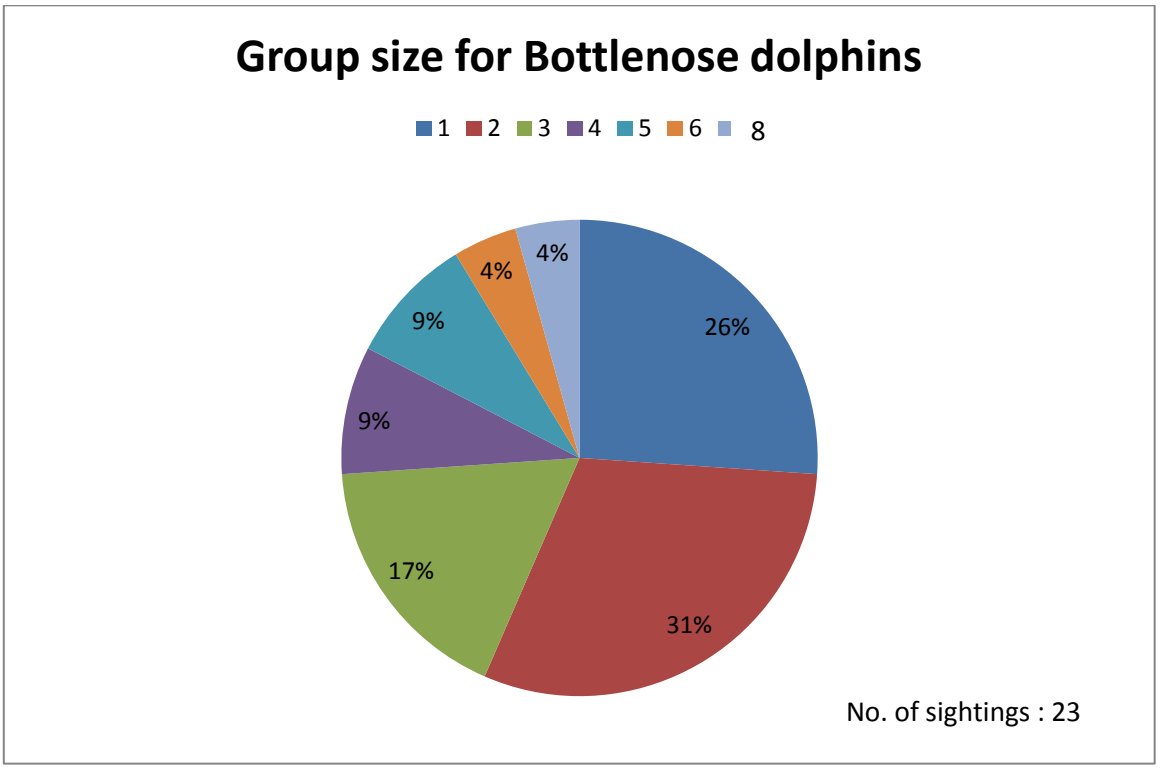


**Fig.11. Group size for *Tursiops truncatus ponticus* (Bottlenose dolphin)**

**Summer survey:**

Over the 8 transects surveyed in June were sighted all the three species of cetacean inhabiting the Black Sea, *Tursiops truncatus ponticus, Delphinus delphis ponticus* and *Phocoena phocoena relicta* with 26 sightings of bottlenose dolphin, 7 sightings of common dolphin and 183 sightings of harbour porpoise (Table 2)(Fig. 12).

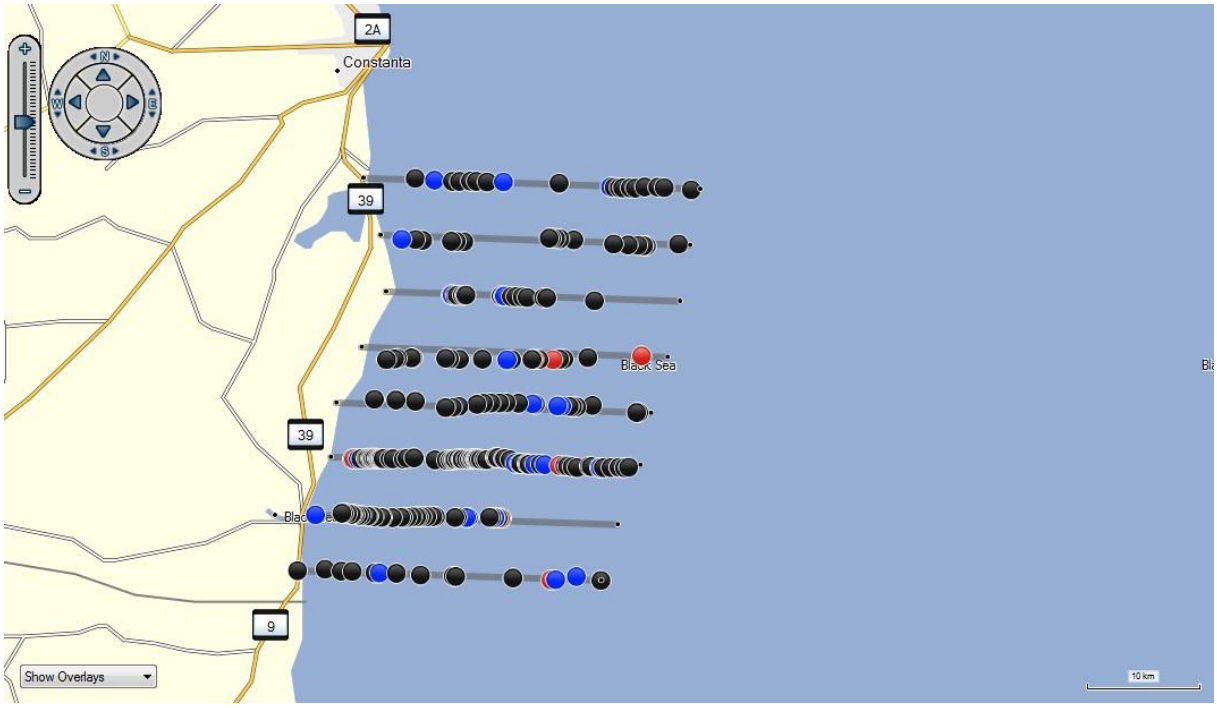


**Fig. 12. Cetacean sightings during the vessel-based survey in Summer (June) in the surveyed area (Black dots – Harbour porpoise; Red dots – Common dolphins; Blue dots – Bottlenose dolphins)**

The uncorrected values of the three species sighted in the Summer survey density and absolute numbers estimated are shown in table 3.

Table 3. Density and abundance of Harbour porpoises and Bottlenose dolphins and Common dolphins in Summer for the surveyed area

| Specie | Density of gropus, groups/km | | Density of animals, indiv./km$^2$ | | Number of animals | | CV% |
|---|---|---|---|---|---|---|---|
| | DS | 95% CI | D | 95% CI | N | 95% CI | |
| *P.p. relicta* | 3.47 | 1.834-6.563 | 5.359 | 2.821-10.183 | 5697 | 2999-10824 | 28.64 |
| *T. t. ponticus* | 0.22 | 0.105-0.461 | 0.424 | 0.194-0.927 | 451 | 207-986 | 38.75 |
| *D. d. ponticus* | 0.119 | 0.389-0.366 | 0.153 | 0.491-0.480 | 163 | 52-510 | 56.94 |

Harbour porpoises (183 sightings; 281 animals) have been observed on the study area (Fig. 13.). The data collected show that porpoises are solitary animal (133 sightings; 72.68% of the total) or live in

pair (31 sightings; 16.94% of the total), the largest group in a single sighting was composed of 12 animals (1 sightings; 0.55% of the total)(Fig.14).

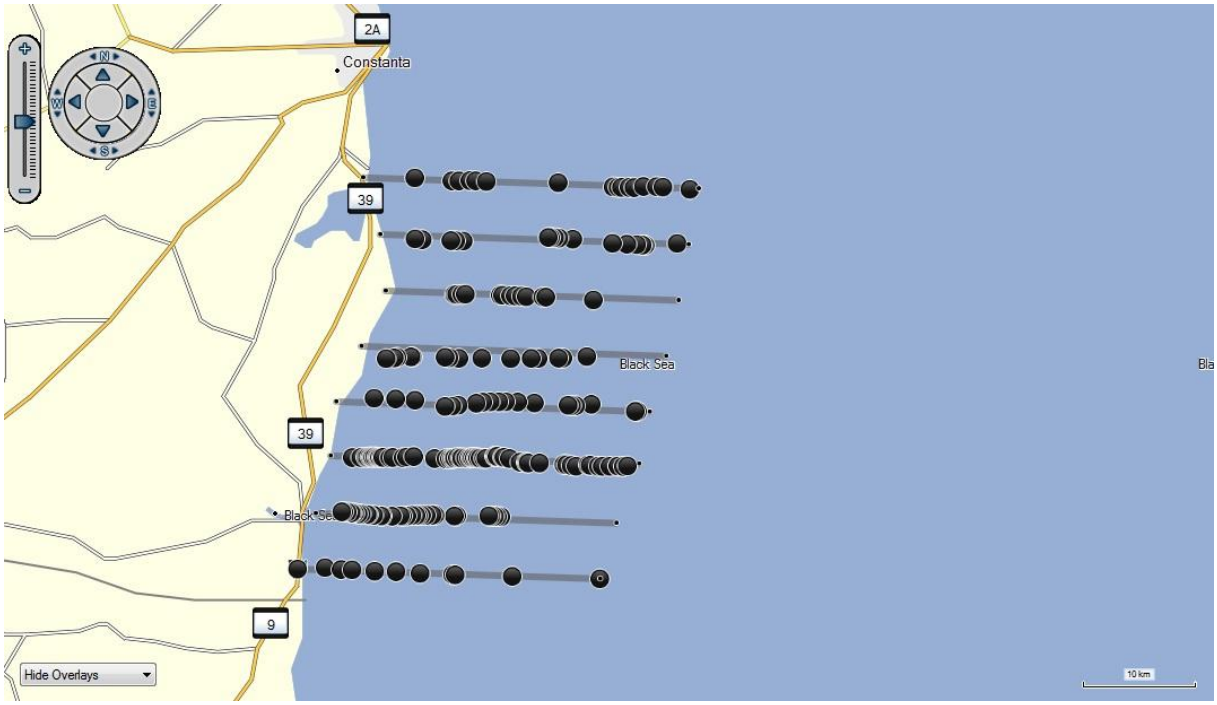


**Fig. 13. Sightings of Harbour porpoise (black spots) during the vessel-based survey in the internal waters of Romania, South part.**

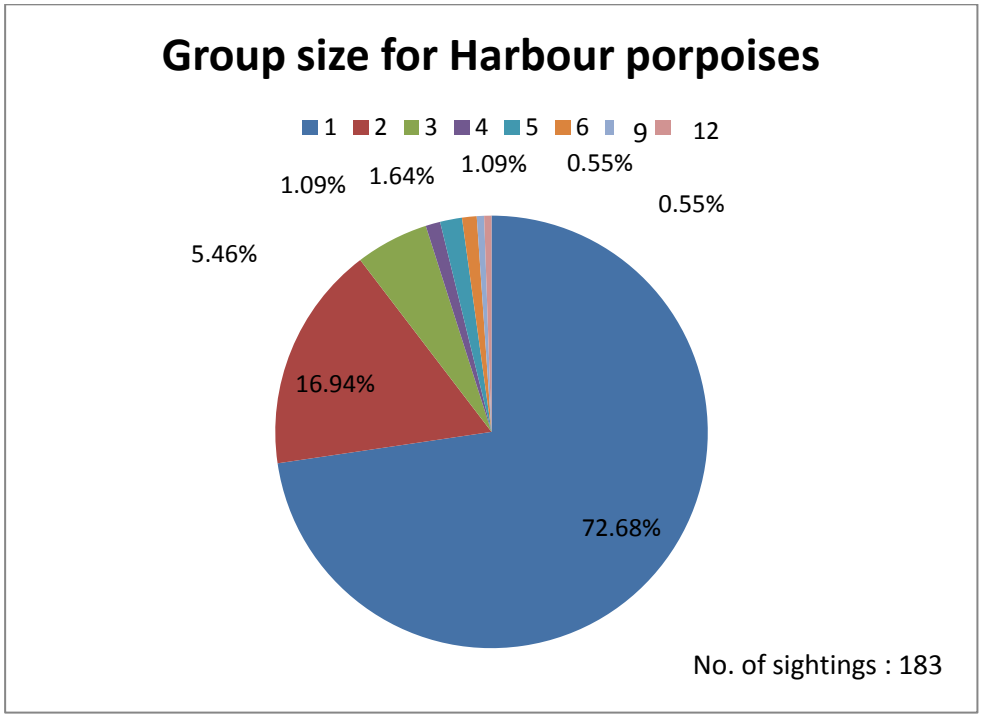


**Fig.14. Group size for *Phocoena phocoena relicta* (Harbour porpoise)**

Bottlenose dolphins (26 sightings; 50 animals) have been observed on the study area (Fig. 15.). The data collected show that encountered bottlenose dolphins were solitary animal (13 sightings; 50% of the total) followed by live in pair (9 sightings; 34% of the total), the largest group in a single sighting was composed of 8 animals (1 sightings; 4 % of the total)(Fig.16.).

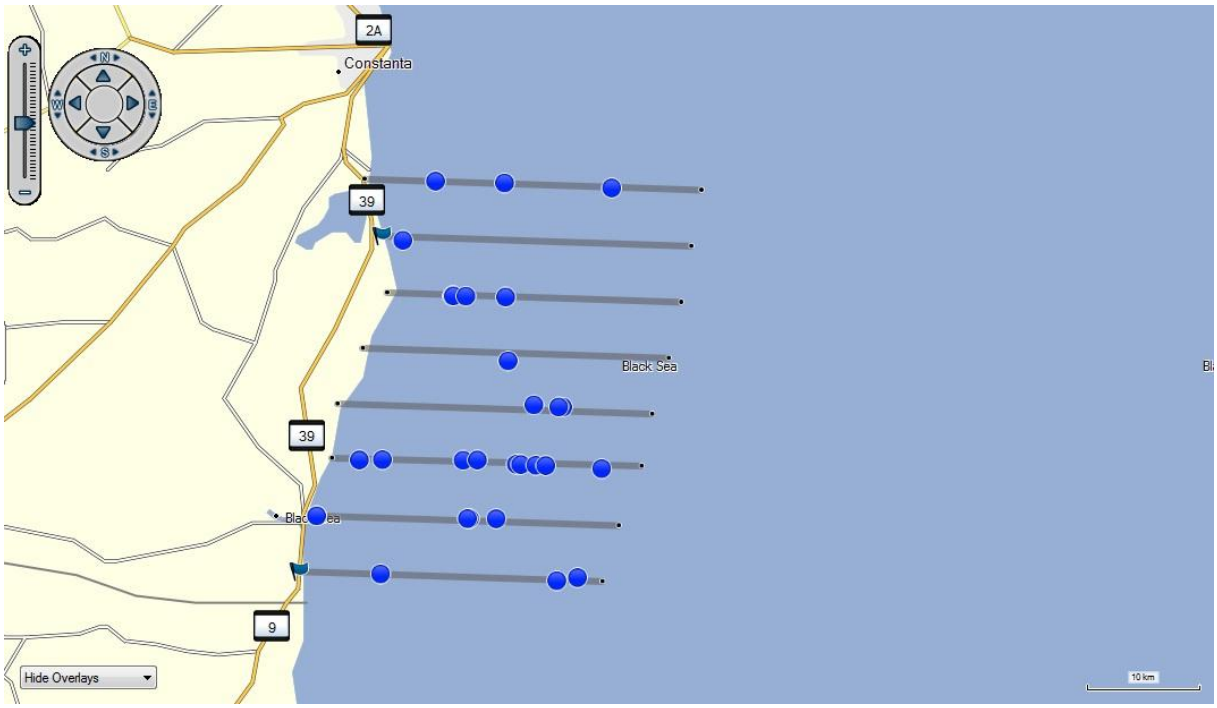


**Fig. 15. Sightings of Bottlenose dolphin (blue spots) during the vessel-based survey in the internal waters of Romania, South part.**

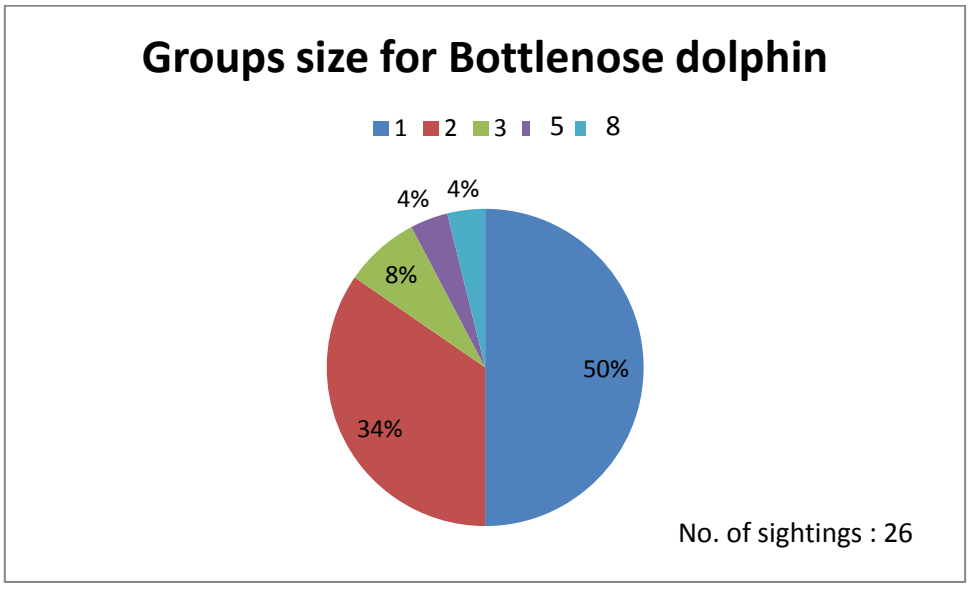


**Fig.16. Group size for *Tursiops truncatus ponticus* (Bottlenose dolphin)**

Common dolphins (7 sightings; 9 animals) have been observed on the study area (Fig. 17.). The data collected show that encountered common dolphins were solitary animal (5 sightings; 83% of the total) and two in pair (2 sightings; 17% of the total)( Fig.18.).

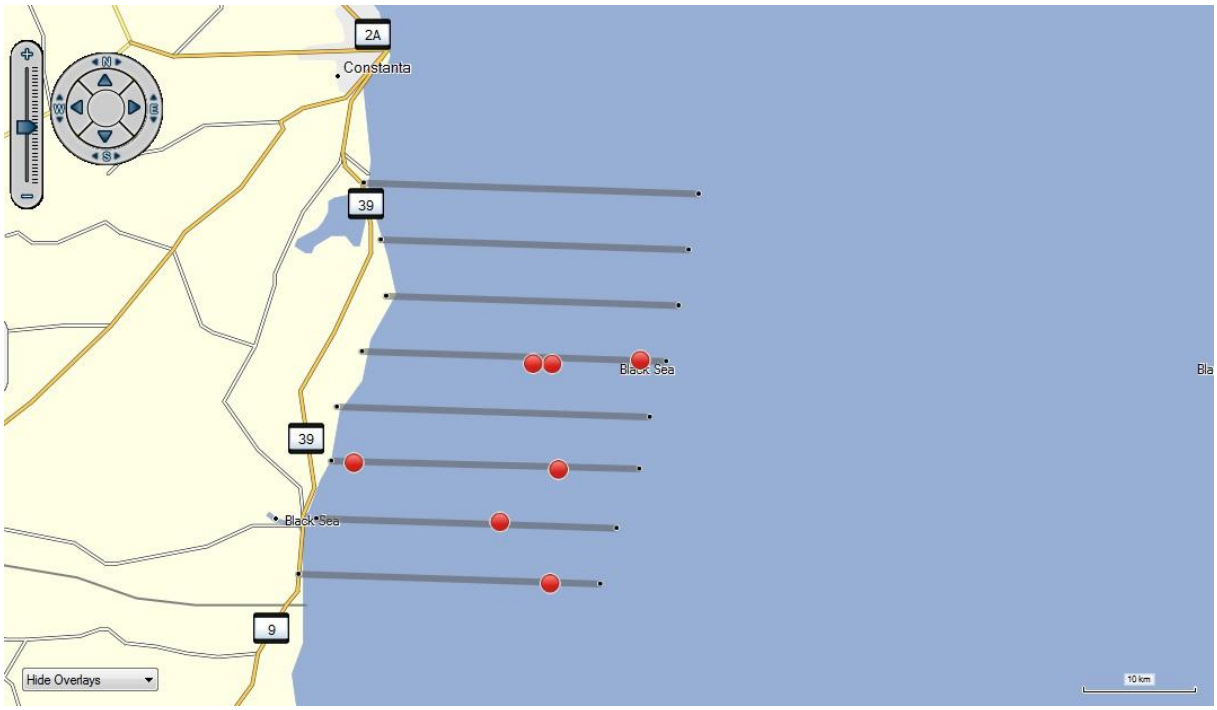


**Fig. 17. Sightings of Common dolphin (red spots) during the vessel-based survey in the internal waters of Romania, South part.**

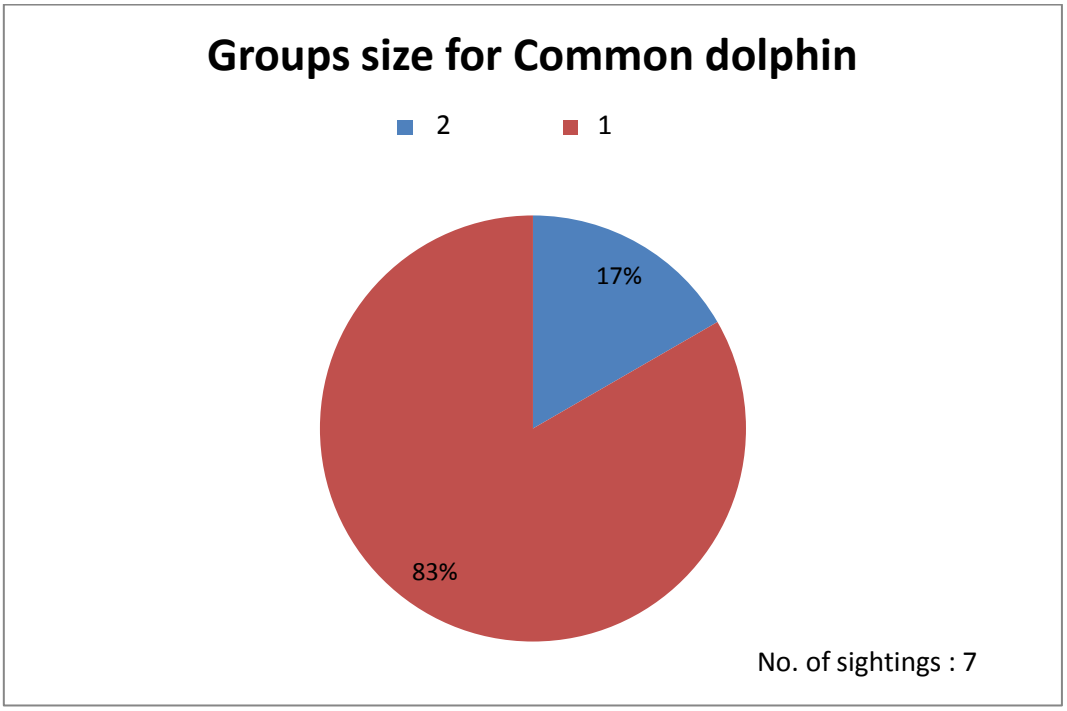


**Fig.18. Group size for *Delphinus delphis ponticus* (Common dolphin)**

**A4. Revision of the survey plan according to in situ situations**

After the first survey, done in April, the survey plan was first changed in order to have different tracks and also the team's position was modified on the boat but furthered was kept the mix platform method. The result was the second survey plan, for the Summer period which was covering the same 1063 $km^2$ area over 8 track lines perpendicular on shore (Fig. 19)(Table 4).

The passage period allowed the team members to rest and lower the number of observes on board. Still was chosen to have a spare observer in case of health problem of one of the team members or incapacity to work. Even though the daylight could provide plenty hours of work, the rough conditions of the sea and weather forced the team to work just from the sunrise till short after lunch.

Second survey plan, was also done using the Distance 7 software package using the knowledge and support from the training in December, lead by Dr. Phil Hammond, over the same parameters with a random start point which give a new survey plan which was starting 1.65 km north than the first survey plan.

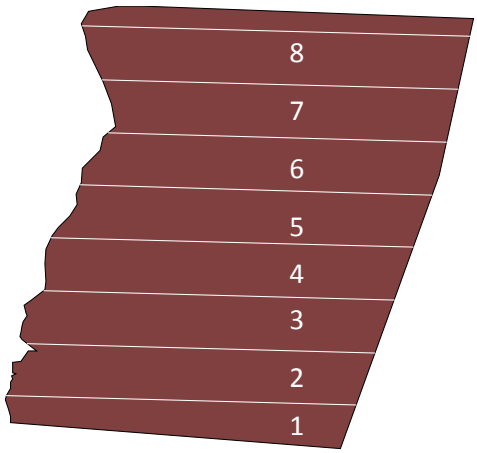


**Fig.19 Map of the distribution of transects for the second survey plan**

Tabel 4. GPS coordinates of the transects for Summer survey

| GPS coordinates of the transects | |
|---|---|
| Sampler 1<br>28.57929 43.7458<br>28.86415 43.7382 | Sampler 5<br>28.63548 43.92311<br>28.92835 43.91528 |
| Sampler 2<br>28.58916 43.79024<br>28.88015 43.78248 | Sampler 6<br>28.65504 43.9673<br>28.94258 43.9596 |
| Sampler 3<br>28.59172 43.83487<br>28.89618 43.82674 | Sampler 7<br>28.66259 44.0118<br>28.95229 44.00404 |
| Sampler 4<br>28.60894 43.87912<br>28.91224 43.87101 | Sampler 8<br>28.64347 44.05702<br>28.96203 44.04847 |

Spacing between lines was 5 km, with a total length of the trackline of 257.946 km, with a coverage of 423,31 $km^2$ giving a 0.398% of the stratum sampled.

**A5. Develop the Cetacean Stranding Monitoring Network (called Ocroteşte delfinii!/Preserve the dolphins!)**

From 2010, Mare Nostrum NGO is managing the cetacean stranding monitoring network for Romania. The members are split in two categories students + teachers and workers from companies, authorities, NGO`s who are working or their work is related to the sea and coastal area.

The 23 educational institutions enrolled in the CSMN for 2016-2017 were conducting monthly or bimonthly monitoring sessions over the given beach sector. In June, with the end of the school year we finalized this session and prepared and deliver the diplomas for the active members, over 800 (Fig.20).

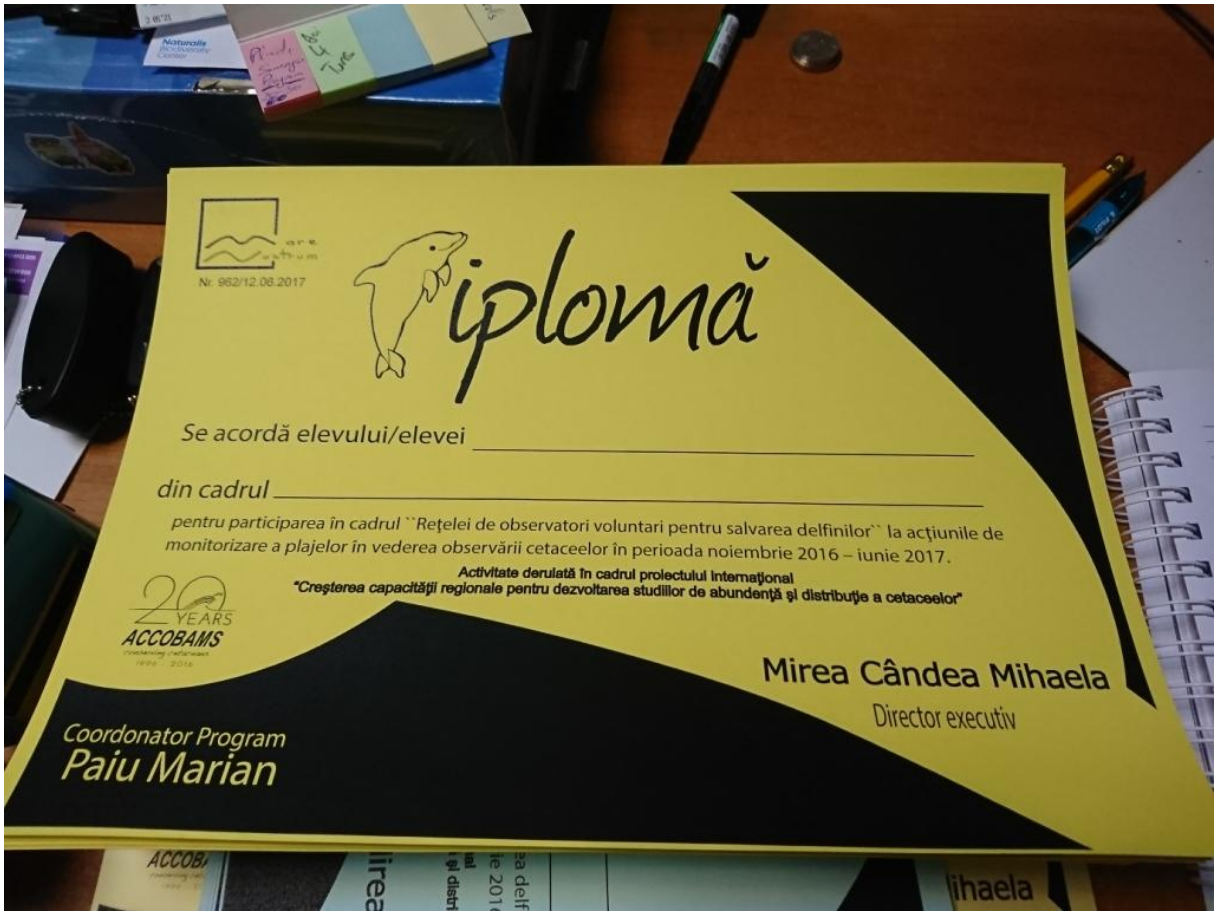


**Fig.20. Diploma for active members of the Cetacean Stranding Monitoring Network**

For a better acknowledge and support of the network were made three training sessions for the employees of the Romanian Water Administration, a total of 22 persons trained, and established a more suitable way to collaborate and share information. Were updated the contacts and working flux with the Danube Delta Biosphere Reserve, Coastal Guard, Fisheries, Danube Delta Research Institute, National Research Institute for Marine Research and Development whit which we manage

to establish an sampling laboratory for collecting samples from dead stranded cetaceans in respect with the MoU for cetacean disease research established in the past with Veterinary Universities from Romania and Czech Republic but also research and educational institutions from the area. The collaboration grows with the Parasitological Lab from University of Valencia from which we had also a student working with us from April to June, 2017 (Fig. 21).

**Fig. 21. Necropsy and sampling dead stranded porpoise from May 2017**

**A6. Emergency Task Force**

24/7 a team is ready to response at distress signal (received at the nonstop phone number 0040763255731) related to cetacean. In order to cover as much as possible the necessities of an emergency situation, we collaborate closely with the County Sanitary Veterinary Inspectorate, Coastal Guard, Port Administrations, National Institute of Marine Research and Development, National Institute Danube Delta, Danube Delta Biosphere Reserve Administration and Veterinary Universities from Bucharest, Cluj (Romania) and Brno (Czech Republic). Beside this core, we keep close collaboration with local universities and research institutes.

Over the second period of the project till 21 of July 2017, there were enrolled 110 interventions, after receiving distress call for strandings along the coast as presented in table 5 of the present report. From the 110 cetaceans assessed were identified: 101 harbour porpoises (*Phocoena phocoena relicta*), 6 bottlenose dolphins (*Tursiops truncatus ponticus*) and 3 common dolphins

(*Delphinus delphis ponticus*) (Table 5). There were 20 more recordings of harbour porpoies (*Phocoena phocoena relicta*) and bottlenose dolphins (*Tursiops truncatus ponticus*) stranded in the North part of Romanian coast, between Sulina and Sfântul Gheorghe but with evidence just for 6 individuals, received till the prearation of the report.

**Tabel 5. Cetacean stranding registered over emergency interventions between July-December 2016**

| No. crt. | Date | Specie | No of indiv. | GPS Coordinates | Sex | Length | State of decomposition |
|---|---|---|---|---|---|---|---|
| 1 | 04.04.2017 | *Tursiops truncatus ponticus* | 1 | 43.8047N 28.58965E | F | 130 | 3 |
| 2 | 22.04.2017 | *Phocoena phocoena relicta* | 1 | 44.2545595N 28.6221528E | F | 58 | 3 |
| 3 | 22.04.2017 | *Phocoena phocoena relicta* | 1 | 44.3202252N 28.6363363E | M | 50 | 4 |
| 4 | 29.04.2017 | *Tursiops truncatus ponticus* | 1 | 43.7710396N 28.5796559E | NI | 140 | 5 |
| 5 | 02.05.2017 | *Phocoena phocoena relicta* | 1 | 44.2571491N 28.6220241E | F | 125 | 2 |
| 6 | 05.05.2017 | *Delphinus delphis ponticus* | 1 | 43.9597967N 28.6447102E | M | 183 | 2 |
| 7 | 05.05.2017 | *Phocoena phocoena relicta* | 1 | 43.9603701N 28.6456114E | M | 64 | 4 |
| 8 | 07.05.2017 | *Tursiops truncatus ponticus* | 1 | 44.0336242N 28.6539853E | M | 174 | 4 |
| 9 | 08.05.2017 | *Phocoena phocoena relicta* | 1 | 43.8197006N 28.5903472E | F | 142 | 2 |
| 10 | 08.05.2017 | *Phocoena phocoena relicta* | 1 | 44.2151863N 28.6473441E | M | 101 | 4 |
| 11 | 13.05.2017 | *Phocoena phocoena relicta* | 1 | 44.0683625N 28.641293E | M | 100 | 2 |
| 12 | 13.05.2017 | *Phocoena phocoena relicta* | 1 | 44.0475N 28.6447833E | M | 105 | 2 |
| 13 | 13.05.2017 | *Tursiops truncatus ponticus* | 1 | 44.219333333333N 28.645316666667E | M | 143 | 4 |
| 14 | 15.05.2017 | *Phocoena phocoena relicta* | 1 | 44.21935N 28.645316666667E | F | 73 | 4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15 | 18.05.2017 | *Phocoena phocoena relicta* | 1 | 44.040238333333N 28.6496E | F | 59 | 3 |
| 16 | 19.05.2017 | *Phocoena phocoena relicta* | 1 | 44.243016666667N 28.62455E | M | 89 | 4 |
| 17 | 22.05.2017 | *Phocoena phocoena relicta* | 1 | 44.1889167N 28.6565E | F | 60 | 3 |
| 18 | 22.05.2017 | *Phocoena phocoena relicta* | 1 | 44.2737667N 28.6221167E | M | 60 | 4 |
| 19 | 22.05.2017 | *Tursiops truncatus ponticus* | 1 | 44.2737667N 28.6221167E | F | 222 | 3 |
| 20 | 22.05.2017 | *Phocoena phocoena relicta* | 1 | 44.0826833N 28.6423833E | F | 105 | 3 |
| 21 | 23.05.2017 | *Phocoena phocoena relicta* | 1 | 44.0706442N 28.6388201E | F | 60 | 4 |
| 22 | 25.05.2017 | *Phocoena phocoena relicta* | 1 | 44.3128667N 28.6326E | M | 62 | 3 |
| 23 | 25.05.2017 | *Phocoena phocoena relicta* | 1 | 44 18.799N 28 37.969E | F | 59 | 3 |
| 24 | 25.05.2017 | *Phocoena phocoena relicta* | 1 | 44.3181333N 28.63535E | M | 104 | 3 |
| 25 | 25.05.2017 | *Phocoena phocoena relicta* | 1 | 44.31875N 28.6357167E | M | 123 | 4 |
| 26 | 25.05.2017 | *Phocoena phocoena relicta* | 1 | 44.3098167N 28.6310333E | F | 90 | 4 |
| 27 | 25.05.2017 | *Phocoena phocoena relicta* | 1 | 44.3093704N 28.6305213E | F | 62 | 4 |
| 28 | 25.05.2017 | *Phocoena phocoena relicta* | 1 | 44.3060691N 28.6291051 E | M | 70 | 4 |
| 29 | 25.05.2017 | *Phocoena phocoena relicta* | 1 | 44.3060691N 28.6291051 E | F | 70 | 4 |
| 30 | 25.05.2017 | *Phocoena phocoena relicta* | 1 | 44.2919096N 28.6243629E | F | 70 | 4 |
| 31 | 27.05.2017 | *Phocoena phocoena relicta* | 1 | 43.8164608N 28.588078E | F | 72 | 3 |
| 32 | 28.05.2017 | *Phocoena phocoena relicta* | 1 | 44.0547009N 28.642087E | M | 75 | 4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 33 | 28.05.2017 | *Phocoena phocoena relicta* | 1 | 44.0749167N 28.640066666666666E | F | 84 | 3 |
| 34 | 28.05.2017 | *Phocoena phocoena relicta* | 1 | 43.7523964N 28.5758364E | F | 108 | 3 |
| 35 | 31.05.2017 | *Phocoena phocoena relicta* | 1 | 44.3206N 28.6369333E | M | 95 | 3 |
| 36 | 31.05.2017 | *Phocoena phocoena relicta* | 1 | 43.7608044N 28.5758686E | F | 120 | 4 |
| 37 | 2.06.2017 | *Tursiops truncatus ponticus* | 1 | 43.923866666667 N 28.636033333333 E | F | 150 | 3 |
| 38 | 3.06.2017 | *Phocoena phocoena relicta* | 1 | 44.08288147N 28.6425591E | F | 130 | 4 |
| 39 | 4.06.2017 | *Phocoena phocoena relicta* | 1 | 44.32045N 28.636766666667E | F | 116 | 2 |
| 40 | 4.06.2017 | *Phocoena phocoena relicta* | 1 | 43.74662254N 28.5787439E | F | 116 | 2 |
| 41 | 4.06.2017 | *Phocoena phocoena relicta* | 1 | 43.860534N 28.6067462 E | F | 60 | 3 |
| 42 | 4.06.2017 | *Phocoena phocoena relicta* | 1 | 43.3435995N 28.6382568E | M | 112 | 4 |
| 43 | 5.06.2017 | *Phocoena phocoena relicta* | 1 | 44.0465117N 28.6452198E | M | 120 | 4 |
| 44 | 5.06.2017 | *Phocoena phocoena relicta* | 1 | 44.0823445N 28.6409712E | M | 70 | 4 |
| 45 | 5.06.2017 | *Phocoena phocoena relicta* | 1 | 44.374484N 28.7098932E | F | 70 | 4 |
| 46 | 5.06.2017 | *Phocoena phocoena relicta* | 1 | 44.3706188N 28.7069321E | M | 78 | 4 |
| 47 | 6.06.2017 | *Phocoena phocoena relicta* | 1 | 44.32045 N 28.6367666 E | F | 146 | 3 |
| 48 | 7.06.2017 | *Phocoena phocoena relicta* | 1 | 44.2472895N 28.6234403E | M | 117 | 2 |
| 49 | 11.06.2017 | *Phocoena phocoena relicta* | 1 | 44.27584171N 28.6221313E | F | 127 | 3 |
| 50 | 11.06.2017 | *Phocoena* | 1 | 43.8692037N | F | 120 | 4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | *phocoena relicta* | | 28.6057806E | | | |
| 51 | 12.06.2017 | *Phocoena phocoena relicta* | 1 | 44.2388042N 28.6256504E | M | 87 | 3 |
| 52 | 12.06.2017 | *Phocoena phocoena relicta* | 1 | 44.0582168N 28.6411643E | M | 101 | 3 |
| 53 | 13.06.2017 | *Phocoena phocoena relicta* | 1 | 44.2083268N 28.6513031E | F | 60 | 4 |
| 54 | 14.06.2017 | *Phocoena phocoena relicta* | 1 | 44.2317936N 28.6286116E | F | 140 | 2 |
| 55 | 16.06.2017 | *Phocoena phocoena relicta* | 1 | 43.8228201N 28.588652E | F | 120 | 4 |
| 56 | 18.06.2017 | *Phocoena phocoena relicta* | 1 | 44.1540682N 28.6682224E | M | 100 | 4 |
| 57 | 29.06.2017 | *Delphinus delphis ponticus* | 1 | 44.4735N 28.8178E | F | 176 | 2 |
| 58 | 03.07.2017 | *Phocoena phocoena relicta* | 1 | 43.9921063N 28.6658353E | F | 76 | 2 |
| 59 | 03.07.2017 | *Phocoena phocoena relicta* | 1 | 44.0274687N 28.6572683E | F | 100 | 3 |
| 60 | 03.07.2017 | *Phocoena phocoena relicta* | 1 | 44.2390809N 28.6256933E | M | 70 | 3 |
| 61 | 04.07.2017 | *Phocoena phocoena relicta* | 1 | 44.043801N 28.6470008E | M | 78 | 3 |
| 62 | 04.07.2017 | *Phocoena phocoena relicta* | 1 | 43.9416667N 28.6382167E | M | 120 | 3 |
| 63 | 05.07.2017 | *Phocoena phocoena relicta* | 1 | 44.3134167N 28.6319833E | F | 72 | 2 |
| 64 | 05.07.2017 | *Phocoena phocoena relicta* | 1 | 44.2836333N 28.6231333E | M | 130 | 3 |
| 65 | 05.07.2017 | *Phocoena phocoena relicta* | 1 | 44.0447072N 28.6459279E | F | 81 | 3 |
| 66 | 05.07.2017 | *Phocoena phocoena relicta* | 1 | 43.943136N 28.6383909E | F | 80 | 4 |
| 67 | 05.07.2017 | *Phocoena phocoena relicta* | 1 | 43.7561395N 28.5744524E | M | 70 | 4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 68 | 05.07.2017 | *Phocoena phocoena relicta* | 1 | 43.7522802N 28.5758686E | M | 114 | 3 |
| 69 | 05.07.2017 | *Phocoena phocoena relicta* | 1 | 43.7516757N 28.5767055E | F | 130 | 3 |
| 70 | 05.07.2017 | *Phocoena phocoena relicta* | 1 | 43.7516757N 28.5767055E | F | 81 | 3 |
| 71 | 05.07.2017 | *Phocoena phocoena relicta* | 1 | 44.0573379N 28.6413574E | M | 70 | 4 |
| 72 | 05.07.2017 | *Phocoena phocoena relicta* | 1 | 44.916012N 29.6255779E | F | 112 | 2 |
| 73 | 05.07.2017 | *Phocoena phocoena relicta* | 1 | 44.9065295N 29.6242046E | M | 112 | 2 |
| 74 | 6.07.2017 | *Phocoena phocoena relicta* | 1 | 44.28335N 28.6233167E | M | 115 | 3 |
| 75 | 6.07.2017 | *Phocoena phocoena relicta* | 1 | 44.3790545N 28.7141204E | F | 133 | 4 |
| 76 | 6.07.2017 | *Phocoena phocoena relicta* | 1 | 44.2275769N 28.6305642E | F | 60 | 3 |
| 77 | 8.07.2017 | *Phocoena phocoena relicta* | 1 | 44.2832771N 28.6229682E | F | 108 | 3 |
| 78 | 8.07.2017 | *Phocoena phocoena relicta* | 1 | 44.2028509N 28.6544251E | F | 69 | 3 |
| 79 | 8.07.2017 | *Phocoena phocoena relicta* | 1 | 44.2938333N 28.6250818E | M | 112 | 4 |
| 80 | 9.07.2017 | *Phocoena phocoena relicta* | 1 | 44.2841104N 28.6232042E | M | 120 | 3 |
| 81 | 9.07.2017 | *Phocoena phocoena relicta* | 1 | 43.8812667N 28.6079667E | M | 119 | 3 |
| 82 | 9.07.2017 | *Phocoena phocoena relicta* | 1 | 44.2418172N 28.6249638E | F | 100 | 4 |
| 83 | 11.07.2017 | *Phocoena phocoena relicta* | 1 | 44.0524957N 28.643294E | F | 100 | 4 |
| 84 | 11.07.2017 | *Phocoena phocoena relicta* | 1 | 45.1433047N 29.6842003E | M | 89 | 4 |
| 85 | 12.07.2017 | *Phocoena phocoena relicta* | 1 | 43.7483974N 28.577832E | M | 85 | 4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 86 | 12.07.2017 | *Phocoena phocoena relicta* | 1 | 44.3774135N 28.7123179E | M | 100 | 4 |
| 87 | 13.07.2017 | *Phocoena phocoena relicta* | 1 | 44.3747755N 28.7099576E | M | 130 | 4 |
| 88 | 13.07.2017 | *Phocoena phocoena relicta* | 1 | 43.7515052N 28.5767967E | F | 106 | 4 |
| 89 | 15.07.2017 | *Delphinus delphis ponticus ponticus* | 1 | 44.375783N 28.711403E | F | 165 | 4 |
| 90 | 16.07.2017 | *Phocoena phocoena relicta* | 1 | 43.7491630N 28.5776350E | F | 110 | 4 |
| 91 | 17.07.2017 | *Phocoena phocoena relicta* | 1 | 43.9920195N 28.6659157E | F | 132 | 4 |
| 92 | 17.07.2017 | *Phocoena phocoena relicta* | 1 | 44.0481813N 28.6446351E | F | 90 | 4 |
| 93 | 17.07.2017 | *Phocoena phocoena relicta* | 1 | 44.0531N 28.6426333E | F | 73 | 3 |
| 94 | 17.07.2017 | *Phocoena phocoena relicta* | 1 | 43.8989824N 28.6138916E | F | 70 | 4 |
| 95 | 18.07.2017 | *Phocoena phocoena relicta* | 1 | 44.0291167N 28.6547667E | F | 60 | 4 |
| 96 | 18.07.2017 | *Phocoena phocoena relicta* | 1 | 44.0291167N 28.6547667E | F | 136 | 4 |
| 97 | 18.07.2018 | *Phocoena phocoena relicta* | 1 | 44.26975N 28.6217333E | F | 140 | 3 |
| 98 | 18.07.2017 | *Phocoena phocoena relicta* | 1 | 43.7451809N 28.5791516E | M | 140 | 4 |
| 99 | 18.07.2017 | *Phocoena phocoena relicta* | 1 | 43.8662722N 28.6060166E | M | 120 | 4 |
| 100 | 19.07.2016 | *Phocoena phocoena relicta* | 1 | 44.1942360N 28.6560240E | F | 81 | 2 |
| 101 | 19.07.2016 | *Phocoena phocoena relicta* | 1 | 44.1838970N 28.6563790E | F | 120 | 4 |
| 102 | 19.07.2016 | *Phocoena phocoena relicta* | 1 | 44.0543539N 28.6433208E | F | 90 | 3 |
| 103 | 19.07.2017 | *Phocoena phocoena relicta* | 1 | 44.8884719N 29.6215439E | M | 110 | 2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 104 | 19.07.2017 | *Phocoena phocoena relicta* | 1 | 44.8884719N 29.6215439E | F | 130 | 2 |
| 105 | 19.07.2017 | *Phocoena phocoena relicta* | 1 | 44.1788833N 28.6606167E | F | 112 | 4 |
| 106 | 20.07.2017 | *Phocoena phocoena relicta* | 1 | 43.9995447N 28.6627293E | M | 110 | 4 |
| 107 | 20.07.2017 | *Phocoena phocoena relicta* | 1 | 43.8458210N 28.6007550E | F | 96 | 4 |
| 108 | 20.07.2017 | *Phocoena phocoena relicta* | 1 | 44.0540500N 28.6426200E | M | 90 | 4 |
| 109 | 20.07.2017 | *Phocoena phocoena relicta* | 1 | 44.2455800N 28.6237410E | F | 120 | 4 |
| 110 | 21.07.2017 | *Phocoena phocoena relicta* | 1 | 44.2961650N 28.6257220E | F | 100 | 4 |

2017 is the second time with high number of dead cetacean strandings, exceeded just by 2012 year in which were recorded 177 strandings.

Also this year brought the first mass stranding event on the Romanian sea shore in the last 7 years, with 8 harbour porpoises stranded on 800 m of beach in Navodari area, individuals of both sexes and ages but most of them in advance state of decomposition.

**A7. Collecting data concerning cetacean strandings, accidental catches and near coast appearance in the area between Vadu and Vama Veche** (land survey)

A total of 18 monitoring expeditions (from the first month of the project to the last) along the coast between Vadu and Vama-Veche are planned to be done during the implementation of the project. The frequency of the monitoring expeditions was 2/month (May-October) in the warm period and 1/month (November-April). In the reporting period 8 land surveys were done, involving 36 volunteers (Fig. 22).

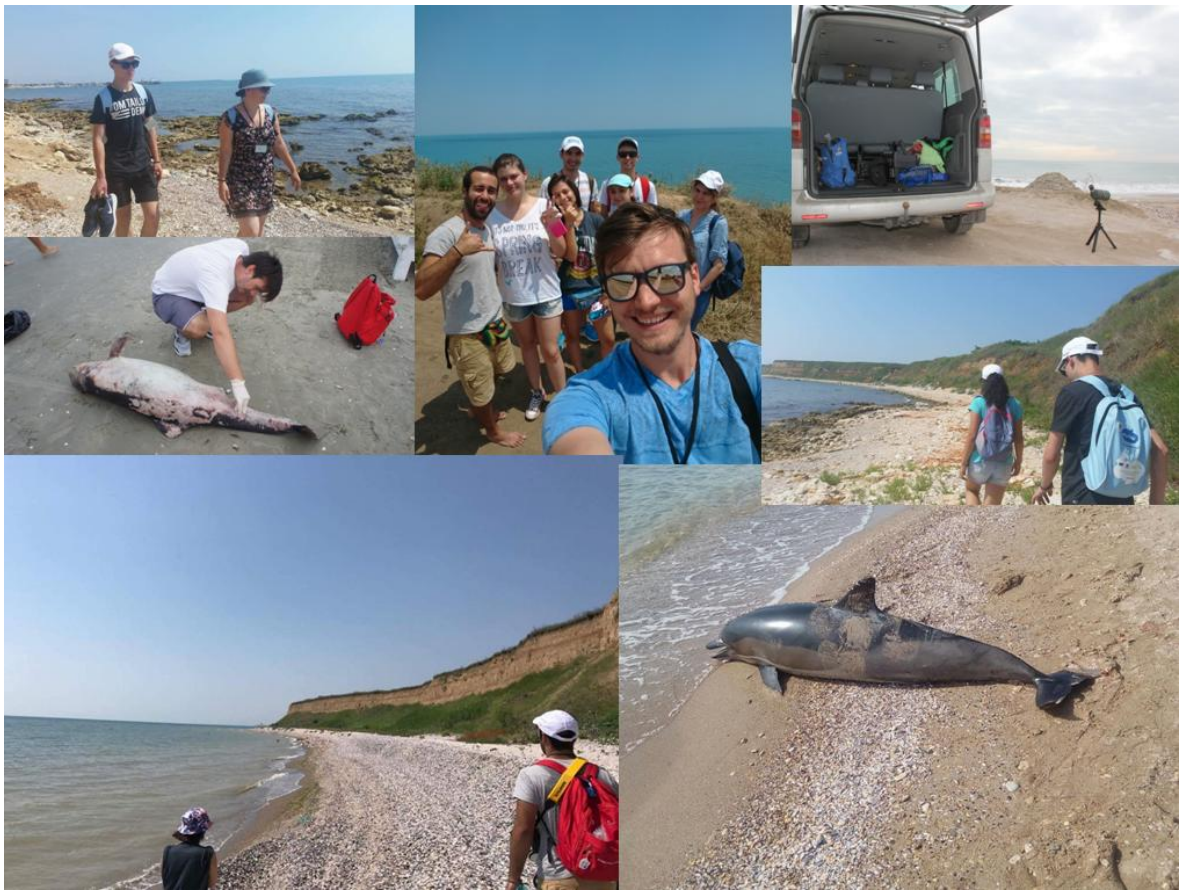

**Fig. 22. Land survey with the volunteers**

In two of this surveys were identified stranded cetaceans, calfs/juvenils of *Phocoena phocoena relicta* and *Tursiops truncatus ponticus* (Annex 1). In addition the Cetacean Stranding Monitoring Network observers from the 23 schools were covering the sectors monthly (Fig. 23).

**Fig. 23. Land surveys done by the CSMN members**

The effort from the last years and also from the project reveal that in order to assess the strandings, a stranding network with an emergency line is highly recommended instead of regular monitoring, as the high number of interventions shows(result of the functional stranding monitoring network).

Still land surveys for identifying stranded cetaceans has two major objectives: one **educational** for the volunteers and people involved and second checking of the **remote areas**, where usualy peoples are not going and the chances of having information in relation with possible strandings in the area are very low to none.

Concluding, just in two of the eight monitoring expeditions were registered stranded cetaceans. One in Vama Veche and one in Mamaia Nord as showed in the tabel 6.

Tabel 6. Stranding events recorded over land suveys

| No. crt. | Date | Specie | No of indiv. | GPS Coordinates | Sex | Length (cm) | State of decomposition |
|---|---|---|---|---|---|---|---|
| 1 | 31.01.2017 | *Phocoena phocoena relicta* | 1 | 43.74848N 28.578E | M | 81 | 2 |
| 2 | 16.05.2017 | *Tursiops truncatus ponticus* | 1 | 44.282016666667N 28.622933333333E | F | 109 | 3 |

**A8. Activities of awareness for fishermen and decision-makers regarding the need to mitigate the impact of the fisheries and tourism on cetacean populations**

One of the key activities of the project was related to the awareness, throught awareness campaing and dissemination of the information on the different channels (facebook, newsletter, press release, website, TV interviews etc.) but also on events, meetings, workshop, trainings (scientific sessions, meetings of the Black Sea Advisory Council, MSFD meetings debates, trainings given to the collaborator in order to facilitate a common protocol of intervention in cases of strande dolphins). For awareness sessions were used fridge magnets, monthly newspaper, www.delfini.ro website and Mare Nostrum`s education web portal, not least the facebook page “Delfinii din Marea Neagra/Black Sea dolphins”.

The Photo exhibition opened in 2016 with the occasion of Dolphin Day remained permanent there in order to be visited by the peoples who visit the Museum, estimate that more than 200.000 visitors had the opportunity to enjoy and learn about Black Sea cetaceans, visiting the exhibition at the Natural Science Museum Complex from Constanta. In this way also the partnership with the ACCOBAMS was promoted and people had the chance once again to get aware of ACCOBAMS and its efforts for improving the state of cetaceans from the seas under the agreement and not only (Fig. 24).


**Fig. 24. Event poster**

The pressure over cetacean was represented also at the last meeting of the Black Sea Advisory Council for Fisheries in Constanta, Romania, where Mare Nostrum is one of the members. From this position the organization has the possibility of working towards diminishing the impact between fisheries and cetaceans. In the same time discussions are carried on with the fishermen from Romania and continue the effort of finding ways to raise their awareness about the important role of marine mammals in the ecosystem.

Another important meeting at which we had the chance of bringing on the line the needs of a monitoring program for cetaceans was the public hearing for the MSFD national measures plan where Romulus Marian Paiu and Mihaela Mirea Candea were attending.

At the beginning of the Summer season were rolled sessions for promoting the emergency line (0763255731), also spreading magnets with the line (Fig. 25) to the safeguards and diver, sailors and fishermen, beach managers and authorities. For the Romanian Waters Authority – Dobrogea Litoral we made special trainings for the personal dealing with cleanup of the beach in order to understand why is important to register the cases, to inform us as soon as possible and also how to manage the carcase and how to collect information (Fig.26.).


**Fig. 25. Magnets used in awareness campaigns in order to promote the emergency line and Task Force**

**Fig. 26. Training for employees of ABADL**

The high number of strandings encountered made the project and mostly the Emergency Team Force existence together with the emergency line more visible in media (audio and video, paper) and also over the social networks. We were receiving distress calls from citizens, tourists, authorities even from the National Emergency Line (112).

## DIFFICULTIES ENCOUNTERED AND MEASURES TAKEN TO OVERCOME PROBLEMS

The experience in coordinating project helped in managing this wonderful and necessary project and the continuous focus of Mare Nostrum team in continuing the program of monitoring and conservation of Black Sea cetacean brought the success for the project.

One of the main difficulties raised was because of the delayed date of the training, according to the trainers (Philip Hammond) agenda, which postpone the activities dedicated to the survey. But the delay was taken in consideration from the beginning being included in the timetable of the project proposal, was discussed with the ACCOBAMS Secretariat and we decided that it is better to include it from the beginning. In the end not being a difficulty entirely, the two surveys were made in April (for spring seasons) and in June (for Summer season). But the real difficulty came with the bad weather registered this year at the Romanian Black Sea Area (and not only), strong winds and high waves which made the survey to be postponed several times because of the bad weather, leaving the assessment of data and preparation of the project report outside the project period completed with the high number of strandings which blocked the team on the field for several hours almost every day. The measure taken was to ask for a postpone with one month of the project in order to finish all the activities but also to include as many information as possible related to the strandings.

## CHANGES INTRODUCED IN THE IMPLEMENTATION

There were two major modification, one discussed from the previous reporting period – the postpone of the vessel surveys and one related to the project period – extension with one month of the project.

## ACHIEVEMENTS/RESULTS

1. Using Distance 7 software for designing and assessing a survey and completing the methodology used for data collection;
2. 2 surveys in the south part of the Romanian Black Sea territorial waters, one in Spring and one in Summer, 2017;
3. Assessment of the two surveys and establishing the abundance and distribution in the study area and for the periods of the study. Including maps of the cetacean sighted;

4. Establish of a link between the Black Sea cetacean researchers which will be the main source for developing projects. Already had applied for Black Sea Cross Border Cooperation Programme with a project proposal in which was included an aerial survey as support for ASI;
5. 897 students and 103 teachers doing monthly cetacean stranding monitoring in the frame of Cetacean Stranding Monitoring Network;
6. 8 land monitoring expeditions for data collection on cetacean stranding, by-catches and near coast appearance (land monitoring reports);
7. 110 emergency interventions with the task force for strandings
8. 3 major events in which participants were informed about the project and the cetacean issues and needs;
9. 1 photo and poster exhibition about cetaceans and research in this field in Romania, with a daily visitor number between 100 (winter season) and 5000 people for June and July;
10. 1 awareness sessions on the beach with more than 500 tourists and locals approached and informed;
11. Capacity building for Mare Nostrum and riparian organizations participating in the project.

## RECOMMENDATION

It is highly recommended to continue the monitoring of cetaceans in the Black Sea area for more accurate data and estimations of the Black Sea cetacean population, migration pattern and habitats to reveal the real stats of the species and measures to be taken on short, medium and large period.

The human resource formed in the frame of the project should be further use by the agreement and for a basin assessment.

Strictly to Romania, but after discussing with the participants to the training, more of the riparian countries need trainings on necropsy exam and sampling which to be the mile stone for a coherent program of cetacean disease monitoring.

## SUMMARY (a short article with the most important outcomes to be published on the website)

The project “Increase the regional capacity for developing cetacean distribution and abundance studies” started in July 2016, under the implementation of Mare Nostrum NGO and financed by the ACCOBAMS Secretariat under Supplementary Conservation Funds.

Within this project, Mare Nostrum aimed to increase the capacity of local and regional researchers to address the issues related to cetacean distribution and abundance, responding in this way to ACCOBAMS strategic objective on improving understanding of the conservation status of cetaceans in Black Sea. Also, is assured continuity, quality and quantity of data regarding Romanian Black Sea cetaceans and is increased awareness and involvement of local population and tourists in cetacean conservation (stranding monitoring network, task force, emergency, appropriate behaviour, etc.)

The last months of the project meant the period in which to apply all the knowledge gathered true designing and achieving 2 trial surveys for the South part of the territorial waters of Romania, one in Spring and one in Summer. Over the two surveys were recorded 275 sightings with 477 animals from

all the three species in the Black Sea. There are rough estimations of the abundance and distribution maps for the surveyed area.

Cetacean Stranding Monitoring Network, which had enrolled for the project period 1000 students and teachers, together with the Emergency Task Force managed a very good coverage of the stranding recorded at the Romanian coast between January and July, recording 110 stranding events. Unfortunately it meant almost a negative “record” being close to the situation in 2012 when we were recording for the entire year 177 dead stranded cetaceans.

To support the effort for recording the stranding events, were conducted 8 land monitoring expeditions for data collection on cetacean stranding, by-catches and near coast appearance and had awareness sessions for making public the emergency number on which people can alarm a stranding (dead or alive).

The local community has supported us and answered in a positive way to the project and shared the information, media was making numerous articles to signal the danger over the cetaceans and sharing the emergency line.

The project and Mare Nostrum activity attracted foreign students willing to come and work with us at the implementation of the activities, in this way both reporting periods we had the pleasure of working with students from Czech Republic and Spain, Barbora and Raul which we want to acknowledge for their effort and dedication.

And not least we like to thank Philip S. Hammond from University of St Andrews, Sea Mammal Research Unit, for the great help that he was giving to the project in all the activities related to cetacean assessment.

All the data collected under the project, related to sightings and strandings will be available on OBIS Seamap portal till the end of 2017.









**Picture for the summary**

# Annexes

## ANNEX 1. LAND SURVEY REPORTS

### TABEL 1. MONITORED SECTORS FOR CETACEAN STRANDINGS

| Sector no. | Name of the sector | South limit | North limith | Distance |
|---|---|---|---|---|
| 1 | Vama Veche | Camping Vama Veche | Unitate militara | 1.5 |
| 2 | 2 Mai | Unitate militara | Santier naval DMHI | 1.5 |
| 3 | Mangalia | Hotel President | Plaja Diana | 1.8 |
| 4 | Saturn | Plaja Diana | Hotel Adriana(statiunea Venus) | 2 |
| 5 | Venus | Hotel Adriana | Hotel Diamant | 1.5 |
| 6 | Cap Aurora | Hotel Diamant | Hotel Meteor | 1.2 |
| 7 | Jupiter | Hotel Meteor | Plaja Steaguri (Neptun) | 1 |
| 8 | Neptun | Plaja Steaguri | Hotel Panoramic | 1 |
| 9 | Olimp | Hotel Panoramic | Popasul pescarilor | 1.7 |
| 10 | 23 August | Popasul pescarilor | Manastirea Sf. Elena | 2 |
| 11 | 23 August II | Manastirea Sf. Elena | Hotel Forum | 2 |
| 12 | Costinesti | Hotel Forum | Epava | 2.2 |
| 13 | Costinesti II | Epava | Tuzla | 3.5 |
| 14 | Tuzla | Plaja Tuzla | Far Tuzla | 1.5 |
| 15 | Eforie Sud | Izvoarele cu apa potabila | Tabara | 2 |
| 16 | Eforie Nord | Tabara | Port Belona | 1.5 |
| 17 | Eforie Nord II | Port Belona | Cherhana Agigea | 1.5 |
| 18 | Constanta | Port touristic | Universitate | 1 |
| 19 | Constanta II | Universitate | Cartierul de la malul marii | 1 |
| 20 | Constanta III | Plaja delfinariu | Pescarie | 1.5 |
| 21 | Mamaia | Hotel Malibu | Hotel Melody | 1.5 |
| 22 | Mamaia II | Hotel Melody | Hotel Histria | 1 |

| Sector no. | Name of the sector | South limit | North limith | Distance |
|---|---|---|---|---|
| 23 | Mamaia III | Hotel Histria | Hotel Modern | 1 |
| 24 | Mamaia IV | Hotel Modern | Hotel Comandor | 1 |
| 25 | Mamaia V | Hotel Comandor | Camping GPM | 1.3 |
| 26 | Navodari | Camping GPM | Cartier Green Wave Mamaia | 1 |
| 27 | Navodari II | Cartier Green Wave Mamaia | Camping S | 1.2 |
| 28 | Navodari III | Camping S | Sea breeze rezidential | 1 |
| 29 | Navodari IV | Sea breeze rezidential | Tabara Navodari | 1.2 |
| 30 | Navodari V | Tabara Navodari | Dig Midia | 1 |
| 31 | Corbu | Dig Midia | Unitate militara | 2 |
| 32 | Vadu | Pescarie Vadu | Pescarie Ion | 5 |

## RAPORT DE EXPEDIŢIE 15

**1. Tipul expediţiei:** terestră

**2. Data:** 31.01.2017

**3. Componenţa grupei de observatori voluntari**
(a se specifica CL – Coordonator Local): Marian PAIU

- Paiu Angelica
- Paiu Alexandru
- Robert Mirea
- Dan Kessler

**4. Locul desfăşurării observaţiei:**

- Codul sectorului: 1 - 31
- Repere sector: Vama Veche - Corbu

**5. Descrierea activităţii în sine:**

a. Prezenţă delfin eşuat DA X NU ☐

☐

b. Completare *Fişă de Observaţie* DA X NU

**6. Observaţii:**

Cer acoperit în totalitate, vânt moderat spre tare, valuri mijlocii.

Pe parcursul expediţiei a fost observat un cetaceu eşuat, mort, aparţinând speciei *Phocoena phocena relicta* cu urme de plasă şi plăgi, datorate cel mai probabil pescăruşilor, în zona ochilor. Exemplarul a fost preluat pentru investigaţii şi depozitat în cadrul INCDM Grigore Antipa, Constanţa. Urmând a fi incinerat.

Pentru o buna desfăşurare a expediţiei pe lângă obiectele necesare (aparat foto, hartă, fişă de observaţie + pix, GPS, binoclu şi trusă pentru analizele de apă) s-au mai utilizat următoarele matereiale: o pungă ermetică şi o ruletă.

Expediţia a fost realizată cu autoturismul Mare Nostrum, ATV şi pe jos.

## RAPORT DE EXPEDITIE 16

**1. Tipul expediţiei:** terestră

**2. Data:** 26.02.2017

**3. Componenţa grupei de observatori voluntari**
(a se specifica CL – Coordonator Local): Marian PAIU

- Dragos Viceaga
- Anca Gheorghe
- Maria Viceaga
- Patru Dan

**4. Locul desfăşurării observaţiei:**

- Codul sectorului: 1 - 32
- Repere sector: Vama Veche - Vadu

**5. Descrierea activităţii în sine:**

a. Prezenţă delfin eşuat DA ☐ NU X

b. Completare *Fişă de Observaţie* DA ☐ NU X

**6. Observaţii:**

Cer acoperit, ceaţă groasă dar care în orele următoare s-a risipit ieşind soarele, vânt moderat spre tare până la finalul expediţiei, valuri mici la primele ore ale dimineţii ce s-au mărit pe parcursul zilei.

Pe parcursul expediţiei nu au fost observate cetacee eşuate.

Pentru o buna desfăşurare a expediţiei pe lângă obiectele necesare (aparat foto, hartă, fişă de observaţie + pix, GPS, binoclu şi trusă pentru analizele de apă) s-au mai utilizat următoarele matereiale: o pungă ermetică şi o ruletă.

Expediţia a fost realizată cu autoturismul Mare Nostrum şi pe jos.

## RAPORT DE EXPEDITIE 17

**1. Tipul expediţiei:** terestră

**2. Data:** 30.03.2017 – 4.04.2017

**3. Componenţa grupei de observatori voluntari**
(a se specifica CL – Coordonator Local): Marian PAIU

- Angelica Paiu
- Mihaela Candea Mirea
- Ionica Mihai
- Diana Manzala
- Patricia Tomasian
- Anca Gheorghe
- Andra Fratila

**4. Locul desfăşurării observaţiei:**

- Codul sectorului: 1 - 32
  - Repere sector: Vama Veche – Vadu

**5. Descrierea activităţii în sine:**

a. Prezenţă delfin eşuat DA [ ] NU X

b. Completare *Fişă de Observaţie* DA [ ] NU X

**6. Observaţii:**

Observatiile au fost efectuate pe parcursul mai multor zile datorita conditiilor meteorologice precare, ploaie şi vânt puternic.

Pe parcursul expediţiei nu au fost observate cetacee eşuate.

Pentru o buna desfăşurare a expediţiei pe lângă obiectele necesare (aparat foto, hartă, fişă de observaţie + pix, GPS, binoclu şi trusă pentru analizele de apă) s-au mai utilizat următoarele matereiale: o pungă ermetică şi o ruletă.

Expediţia a fost realizată cu autoturismul Mare Nostrum şi pe jos.

## RAPORT DE EXPEDITIE 18

**1. Tipul expediţiei:** terestră

**2. Data:** 08.04.2017

**3. Componenţa grupei de observatori voluntari**
(a se specifica CL – Coordonator Local): Marian PAIU

- Raul Zabala Belenguer
- Popescu George
- Olariu Bogdan
- Mara Osneanu
- Mara Preda
- Balcescu Stefan
- Parita Andrei
- Ionescu Victor
- Maria Barba

**4. Locul desfăşurării observaţiei:**

- Codul sectorului: 1-30
  - Repere sector: Vama Veche - Navodari

**5. Descrierea activităţii în sine:**

a. Prezenţă delfin eşuat DA ☐ NU X

b. Completare *Fişă de Observaţie* DA ☐ NU X

**6. Observaţii:**

Observatiile au fost efectuate cu ajutorul unui grup de voluntari, veniti din Bucuresti, pentru a afla mai multe despre cetaceele din Marea Neagră. Neidentificând nici un delfin eşuat am derulat un scenariu cu ajutorul unui manechin în formă de delfin pentru a-i instrui cu privire la ce au de făcut atunci când întalnesc cazuri de esuare.

Pe parcursul expediţiei nu au fost observate cetacee eşuate.

Pentru o buna desfăşurare a expediţiei pe lângă obiectele necesare (aparat foto, hartă, fişă de observaţie + pix, GPS, binoclu şi trusă pentru analizele de apă) s-au mai utilizat următoarele matereiale: o pungă ermetică şi o ruletă.

Expediţia a fost realizată cu autoturismul Mare Nostrum şi pe jos.

## RAPORT DE EXPEDITIE 19

**1. Tipul expediţiei:** terestră

**2. Data:** 27.04.2017

**3. Componenţa grupei de observatori voluntari**
(a se specifica CL – Coordonator Local): Marian PAIU

- Raul Zabala Belenguer
- Robert Mirea

**4. Locul desfăşurării observaţiei:**

- Codul sectorului: 1-20
  - Repere sector: Vama Veche - Constanta

**5. Descrierea activităţii în sine:**

a. Prezenţă delfin eşuat DA ☐ NU X

b. Completare *Fişă de Observaţie* DA ☐ NU X

**6. Observaţii:**

Observatiile au fost efectuate de echipa Mare Nostrum, utilizând atât atv-ul cât şi microbuzul organizaţiei. Condiţiile meteo în prima parte a zilei au fost mai puţin

prielnice prin ceaţa groasă ce acoperea orizontul însă aceasta s-a disipat în cea de-a doua parte a zilei, vânt moderat şi valurii mijlocii.

Pe parcursul expediţiei nu au fost observate cetacee eşuate.

Pentru o buna desfăşurare a expediţiei pe lângă obiectele necesare (aparat foto, hartă, fişă de observaţie + pix, GPS, binoclu şi trusă pentru analizele de apă) s-au mai utilizat următoarele matereiale: o pungă ermetică şi o ruletă.

**RAPORT DE EXPEDIŢIE 20**

**1. Tipul expediţiei:** terestră

**2. Data:** 16.05.2017

**3. Componenţa grupei de observatori voluntari**
(a se specifica CL – Coordonator Local):Paiu Marian

- Raul Zabala
- Stanila Andrei Nicolae
- Anca Gheorghe
- Ionica Mihai
- Vlad Samargiu
- Andrei Radoi

**4. Locul desfăşurării observaţiei:**
- Codul sectorului: 1 - 32
- Repere sector: Vama Veche - Vadu

**5. Descrierea activităţii în sine:**

a. Prezenţă delfin eşuat DA X NU ☐

b. Completare *Fişă de Observaţie* DA X NU ☐

**6. Observaţii:**
Cer însorit, parţial acoperit, vânt moderat, valuri mijlocii.

Pe parcursul expediţiei a fost observat un pui de afalin (*Tursiops truncatus ponticus*).

Pentru o buna desfăşurare a expediţiei pe lângă obiectele necesare (aparat foto, hartă, fişă de observaţie + pix, GPS, binoclu şi trusă pentru analizele de apă) s-au mai utilizat următoarele matereiale: o pungă ermetică şi o ruletă.

**RAPORT DE EXPEDIŢIE 21**

**1. Tipul expediţiei:** terestră

**2. Data:** 31.05.2017

**3. Componenţa grupei de observatori voluntari**
(a se specifica CL – Coordonator Local):Paiu Marian

- Raul Zabala
- Lazar Raul
- Anca Gheorghe
- Matei Anastasia
- Mociu Cosmina
- Sabau Raul
- Vizireanu Andrei

**4. Locul desfăşurării observaţiei:**
- Codul sectorului: 1 - 32
- Repere sector: Vama Veche - Vadu

**5. Descrierea activităţii în sine:**

a. Prezenţă delfin eşuat DA ☐ NU X

b. Completare *Fişă de Observaţie* DA ☐ NU X

**6. Observaţii:**
Cer însorit, parţial acoperit, vânt moderat, valuri mijlocii.

Pe parcursul expediţiei nu au fost observate cetacee eşuate.

Pentru o buna desfăşurare a expediţiei pe lângă obiectele necesare (aparat foto, hartă, fişă de observaţie + pix, GPS, binoclu şi trusă pentru analizele de apă) s-au mai utilizat următoarele matereiale: o pungă ermetică şi o ruletă

**RAPORT DE EXPEDIŢIE 22**

**1. Tipul expediţiei:** terestră

**2. Data:** 23.06.2017

**3. Componenţa grupei de observatori voluntari**
(a se specifica CL – Coordonator Local): Marian PAIU

- Voinea Georgiana
- Andreea Bratu
- Raul Zabala
- Dan Kessler
- Ciopa Cristian
- Duta Teodora
- Ghitescu Iulia
- Lazar Daniel
- Lazar Raul

**4. Locul desfăşurării observaţiei:**
- Codul sectorului: 1 - 32
- Repere sector: Vama Veche - Vadu

**5. Descrierea activităţii în sine:**

a. Prezenţă delfin eşuat DA ☐ NU X

b. Completare *Fişă de Observaţie* DA ☐ NU X

**6. Observaţii:**
Cer însorit, vânt moderat, valuri mijlocii.

Pe parcursul expediţiei nu au fost observate cetacee.

Pentru o buna desfăşurare a expediţiei pe lângă obiectele necesare (aparat foto, hartă, fişă de observaţie + pix, GPS, binoclu şi trusă pentru analizele de apă) s-au mai utilizat următoarele matereiale: o pungă ermetică şi o ruletă.

**Conclusion and remarks:**

1. A total of 8 land surveys were rolled, involving 36 volunteers, monitoring mainly the sectors between Vama Veche and Vadu.
2. The effort from the last years and also from the project reveal that in order to assess the strandings, a stranding network with an emergency telephone number is highly recomanded instead of regular monitoring. See the high number of interventions (result of the functional stranding monitoring network).
3. Still land surveys for identifiying stranded cetaceans has two major objectives: one educational for the volunteers and people involved and second checking of the remote areas, where usualy peoples are not going and the chances of having informations in relation with posible strandings in the area are very low to none.

Concluding, just in two of the eight monitoring expeditions were registered stranded cetaceans. One in Vama Veche and one in Mamaia Nord as showned in the tabel 2.

Tabel 2. Stranding events recorded over land suveys

| No. crt. | Date | Specie | No of indiv. | GPS Coordinates | Sex | Length (cm) | State of decomposition |
|---|---|---|---|---|---|---|---|
| 1 | 31.01.2017 | *Phocoena phocoena relicta* | 1 | 43.74848N 28.578E | M | 81 | 2 |
| 2 | 16.05.2017 | *Tursiops truncatus ponticus* | 1 | 44.282016666667N 28.622933333333E | F | 109 | 3 |