

Agenda Item 6.1

Project Funding through ASCOBANS  
Progress of Supported Projects

Document 6-03

**Project Report:**  
**Inventories of harbour porpoise**  
***Phocaena phocaena phocaena***  
**presence in Russian territorial waters**  
**of the Baltic Sea**

**Action Requested**

- Take note of the report

Submitted by

Secretariat / Biologists for Nature Conservation



**NOTE:**  
**IN THE INTERESTS OF ECONOMY, DELEGATES ARE KINDLY REMINDED TO BRING THEIR**  
**OWN COPIES OF DOCUMENTS TO THE MEETING**





**Convention on the Conservation of Migratory Species  
Agreement on the Conservation of Small Cetaceans  
of the Baltic, North East Atlantic, Irish and North Seas**  
*Joint Secretariat provided by the United Nations Environment Programme*



**REPORT**  
**UNDER PROJECT AGREEMENT No SSFA / ASCOBANS / 2010 / 1**  
**dated 24 January 2011**

**PROJECT NAME:**

**“Inventories of harbour porpoise *Phocaena phocaena phocaena* presence in  
Russian territorial waters of the Baltic sea”**

**St. Petersburg**

**2011**

**Saint-Petersburg Charitable Public Organization  
«BIOLOGISTS FOR NATURE CONSERVATION»**



## **Project implementers**

The project was implemented under coordination of SPbCPO “Biologists for Nature Conservation”, 199024, Universitetskaya emb., St. Petersburg, Russia with financial support from United Nations Environment Programme / Secretariat of the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (hereinafter referred to as “UNEP/ASCOBANS”), UN Campus, Hermann-Ehlers-Str. 10, 53113 Bonn, Germany

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## **Project duration**

01.05.2011 - 31.10.2011

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## 1. Project background

Harbour porpoise *Phocaena phocaena phocaena* (Linnaeus, 1758) was considered extinct in the eastern part of the Baltic Sea. Nevertheless there are some data obtained recently by Finish biologists on detection of *P.p. phocaena* in Finish water area. In the Russian Federation there were no recent studies devoted to determination of *P.p. phocaena* status in the Russian part of the Gulf of Finland. But there're still some concerns on whether this mammal is still exist in the area or not. Currently this species is included into Red Data Book of the Russian Federation as a subspecies with unknown status, poorly studied and low in number.

## 2. Project aims and milestones

Project aimed to find out if there were any observations or recordings of harbour porpoises made by fishermen or locals and also to try to find any remains or bones of the animals on the Gulf of Finland islands in order to prove or disprove occurrence of this subspecies in the Russian water area in the Baltic Sea. Depending on the results future investigation activities and/or conservation measures should be proposed.

The main activities were the following:

- To work out questionnaires for fishermen and locals working in the Russian Part of the Gulf of Finland or living near the coast line.
- To establish a network of contacts with commercial fishing brigades and individual fishermen in Kaliningrad region and Leningrad region.
- To implement questionnaire survey by distribution (and further collection) of questionnaires among target groups and conducting of verbal interviews.
- To implement a few field observations (using boat or catamaran) around the main islands, located in the Russian part of the Gulf of Finland in order to find bones or other remains of *P.p. phocaena* on the shores.
- To process collected data and write a report based on the results achieved. If the results are positive then develop a major project for more precise investigation of *P. p. phocaena* population in the Gulf of Finland and propose measures for its effective conservation.

### 3. Literature review

#### 3.1 Current knowledge on *P.p. phocaena* in Eastern part of the Baltic Sea

In early 20<sup>th</sup> century harbour porpoises were abundant in the Baltic Sea with their range extended into the easternmost part of the Gulf of Finland (Koschinski S., 2002). According to rather poor available data some individuals reached the Eastern part of the Gulf, were observed in the Neva river and even in Lake Ladoga (Tomilin, 1957). It's not known whether it was a part of regular movements or the visits were occasional. There are reasons to think that the distribution range of harbour porpoises has been decreasing starting from the beginning of 20<sup>th</sup> century. Today it's eastern limit is believed to be in Polish and Swedish territorial waters to the West from Gotland island (Pic.1). To the West from the line regular occurrence of low number of animals is suggested. In 1906 in Baltijsk area (today – Polish territory) a case of by-catch of 5 pregnant females was registered (Braun, 1906) which means that at that time porpoises used the area for long-term stays. Later, between 1922 and 1933 quite a lot of individuals were seen in that region (Skora et al, 1988).

In Lithuanian territorial waters the latest record of *P.p. phocaena* dates back to 1938, in Estonian waters – to 1961 (Timm et al., 1998). Taurins (1982) and Pilats (1994) reported by-catch cases in Latvia, in the Gulf of Riga in 1964 and 1974. The easternmost sightings in Finland were reported by Mattsson (Koschinski, 2002) in 1990-1991 when about a dozen of porpoises were seen near the town of Kotka.

No reliable data on harbour porpoise sightings in Russian territorial water in recent decades were found in literature. According to Red Data Book of the Russian Federation (Red Data Book, 2000) North Atlantic Subspecies of *P.phocaena* (both the Barents and the Baltic Sea populations) is categorized as subspecies with indefinite status, low in number or poorly studied (Category 4).



Pic. 1 Assumed distribution limit of harbour porpoises in the Baltic sea (according to Koschinski, 2002).

### 3.2. Characteristics of fish stocks available in the area

There are more than 100 fish species inhabiting in the Baltic Sea (Reshetnikov, 1998). The most important commercial species are: *Gadus morhua*, *Clupea harengus membras*, *Sprattus sprattus*, *Platichthys flesus*, *Pleuronectes platessa*. They make more than 96% of catches.

Secondary commercial important species are *Salmo trutta*, *Salmo salar*, *Hippoglossoides platessoides*, *Scophthalmus maximus*, *Osmerus eperlanus*. Percent of these species in catches is approximately 3%.

In littoral zone both fresh water and brackish water species occur: *Coregonus lavaretus*, *Perca fluviatilis*, *Stizostedion lucioperca*, *Abramis brama*, *Vimba vimba* and *Gasterosteus aculeatus*.

Occasional cases of ocean species catches are registered - *Belone belone*, *Scomber scombrus* and even *Xiphias gladius*. *Neogobius melanostomus* from the Azov and the Black Sea which appeared in early 90s seems to adapt to the Baltic Sea environment.

A group of anadromous species includes *Salmo salar*, *Salmo trutta*, *Alosa fallax* and *Osmerus eperlanus*. These species spawn in rivers, flowing into to the Baltic sea.

Semidiadromous fish species, *Clupea harengus membras* and *Coregonus lavaretus*,

spawn in lagoons. In 26<sup>th</sup> sub region they are Vistula and Cooranian bays.

A group of catadromous species includes only one fish - *Anguilla anguilla*, which spawn in the Sargasso Sea.

Ichthyofauna of the 26<sup>th</sup> sub-region is represented by 45 fish species including typically marine species, brackish and fresh water species. Commercial species are *Gadus morhua*, *Sprattus sprattus*, *Clupea harengus membra*, *Scophthalmus maximus*, *Platichthys flesus*, *Alosa fallax* and *Osmerus eperlanus*. Overall percent of these species in catches is 97%. Other important commercial species are *Salmo trutta*, *Salmo salar* and *Stizostedion lucioperca*. In coastal zone *Perca fluviatilis*, *Abramis brama* and *Rutilus rutilus* are caught.

Ichthyofauna of 32<sup>nd</sup> sub region is represented by 70 species including marine and fresh water ones. The most abundant and commercially valuable species (72% of catches in the Gulf of Finland) is *Clupea harengus membras*. Other commercial species are *Clupea sprattus* (8.2%), *Osmerus eperlanus* (8.1%), *Gymnocephalus cernuus* (6.9%), *Rutilus rutilus* (1.0%), *Stizostedion lucioperca* (0.6%), *Abramis brama* (0.8%), *Perca fluviatilis* (0.5%), *Lampetra fluviatilis* (0.2%), *Coregonus albula* (0.2%), *Coregonus pollan* (0.04%), *Salmo salar* (0.03%), *Salmo trutta trutta*, *Esox lucius*, *Vimba vimba*, *Lota maculosa*, *Anguilla anguilla*, *Gadus morhua* and *Pleuronectes flesus*.

#### 4. Materials and methods

Assessment of dolphin distribution and occurrence in the 26<sup>th</sup> and 32<sup>nd</sup> subregions of the Baltic Sea (economic zone and territorial water of the Russian Federation, Kaliningrad and Leningrad regions) was made according to the questionnaire survey results obtained from local people whose life style and work are closely related to the sea. Fishing brigades were visited (by car or by motor boat) and interviewed anonymously. We have worked out a simple questionnaire (Annex) for the fishermen and other target groups aimed to find out in there're any cases of harbour porpoise incidental by-catch or sightings in Russian territorial waters in the Gulf of Finland. Along with the questionnaire we aimed to distribute leaflets (in Russian) issued by ASCOBAN and delivered to St. Petersburg prior the project beginning. This could help people to better understand which species they're asked about and at the same time to raise public awareness in a question of small Cetaceans status in the Baltic.

The questionnaire form included the following questions (comments in *italic*):

1. Your fishing area and working season – *all area of economic zone and Russian territorial waters is divided into fishing squares which allows to determine the main by-catch areas. Fishing season is related to limitation measures determined by Fisheries Regulations.*
2. Fishing gear used (number, type) – *Different types of fishing gears are used for different fish species. Answer to this question could help to get data on dolphin behaviour and by-catch rate in relation to gear specifics.*
3. Commercial fish species you are interested in – *helps to find correlation between fish species distribution and dolphin by-catch cases.*
4. Do you know that one of small Cetaceans species – harbour porpoise – lives in the Baltic sea? – *gives an idea on public awareness on the issue, helps to organize informational campaign*
5. Have you or your colleagues ever seen harbour porpoise in your fishing area? (name exact place, number of animals seen, month, year) – *distribution of free ranging animals, correlation between by-catch cases and sightings*
6. Have you or your colleagues ever caught harbour porpoise incidentally in your fishing gears? (name region, number of animals caught, month, year) – *concrete question on by-catch cases*

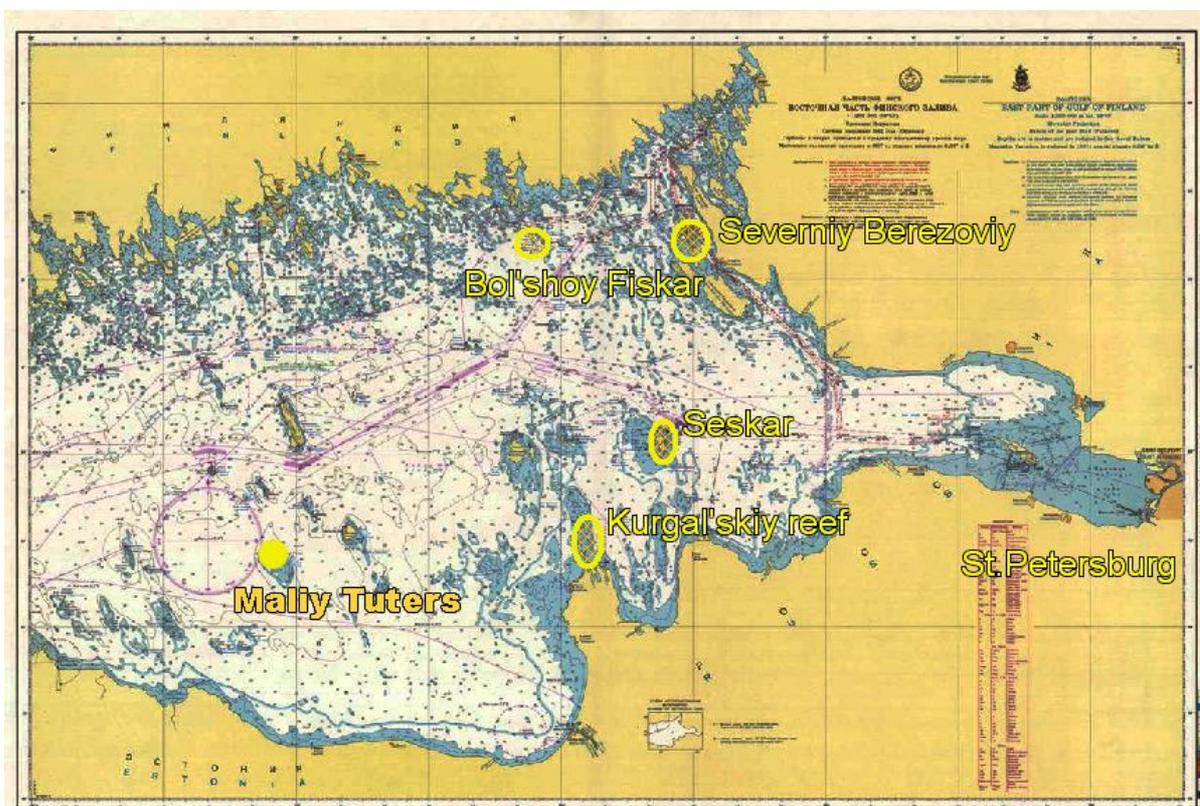
7. Which type of fishing gears did you catch an animal (trawling, nets, etc.)? -  
*Connection of by-catch cases with gear types*
8. Have you or your colleagues ever found carcasses of harbour porpoise on the coast? (name region, number of findings, month, year)

Zoological collections of two museums – AtlantNIRO (Atlantic Scientific and Research Institute of Fisheries and Oceanography) in Kaliningrad region and the museum of Zoological institute of Russian Academy of Sciences (St.Petersburg) were studied in order to get data on available dolphin findings from the Baltic Sea. The survey included 62 responders in Kaliningrad region and 32 in Leningrad region and revealed 3 reliable cases of dolphin sightings in the sea and 5 skulls of harbour porpoise stored in the museums.

In the Gulf of Finland coast line of 3 large and several smaller islands was investigated during catamaran and boat expeditions in July-September 2011 in order to find harbour porpoise remains.

## **5. Catamaran and boat investigations**

From 01.07.2011 till 07.07.2011 several islands located in the Russian part of the Gulf of Finland (Pic. 2) were investigated with an aim to find remains of harbour porpoise *Phocaena phocaena phocaena*. The expedition was conducted on board of catamaran Centaurus II (pic. 3) in the frames of larger project devoted to inventory of the biodiversity of the islands to be included in planned nature reserve Ingermanlandskiy (financed by Nord Stream AG, Project Agreement PO11-1119 from 11.04.2011 and co-financed by ASCOBANS).



Pic. 2 The Gulf of Finland, Baltic Sea. Circled – islands investigated.



Pic. 3 Catamaran Centaurus II.

The largest island **Seskar** was investigated on the 2<sup>nd</sup>, July. We inspected carefully Northern, Eastern and Southern coast line of the island between way points N 60°02.064', E 28°21.972' and N 60°00.322', E 028°23.085'. The coast line was represented mainly by sandy

beach with several areas with stones located along the water edge. (pic. 4) The most attention was paid on the storm drains line. Western coast was represented by dense near-water vegetation (mainly cane), was difficult to reach and study and due to this was excluded from the work.

On the Western coast we found a carcass of a juvenile grey seal, ear-bone of grey seal (presumably) and a large number of bird remains (mainly sea gulls). Moreover we talked to light house stuff who maintains the light house and radio location tower on the island through out the year. They've never seen a harbour porpoise in the area.



Pic. 4 Sescar island

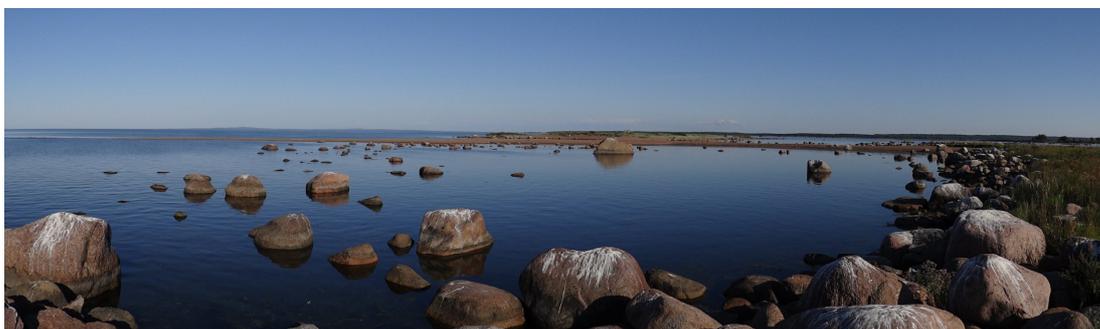
The second studied island was **Severniy Berezoviy**. The study was implemented on the 4<sup>th</sup>, July. The coast line represented mainly by stones of different size with cane vegetation (pic. 5) was investigated to the North from the way point N 60'20. 497' E 28'26.316'. Some additional search along the coast was done on the Southern part of the island. A single bone of a seal was found.



Pic. 5. Severniy Berezoviy island

The last island we visited during the expedition was **Bol'shoy Feskar** (07.07.2011). The island (N 60,4300' E 27,9590') consists of rocks. No bones or any other remains were found. Unfortunately due to severe weather conditions (speed of wind during 3 out of 7 working days was up to 15 m/sec) we were not able to visit a few more islands since the catamaran had to wait in a bay until the wind slow down.

On the 4-5<sup>th</sup> September 2011 we implemented a boat survey in the area of Kurgal'skiy peninsula (see map, pic. 2), studying coast line of small islands of **Kurgal'skiy reef** (between the coordinates N 59,8067' E28,1106' and N 59,8537' E 28,0954'). Two seal remains were found. No remains of harbour porpoise were determined.



Pic. 6. Kurgal'skiy reef

## 6. Survey results

### 6.1. Kaliningrad region

In order to get a reliable assessment of distribution and occurrence of dolphins (incl. *P. phocaena*) in the 26<sup>th</sup> sub region of the Baltic Seal in exclusive economic zone and territorial waters of the Russian Federation (Kaliningrad region) a hypothesis that the most accurate data can be obtained interviewing people who due to their work or lifestyle spend a lot of time in studying area and have an opportunity to observe sea surface was proposed.

It was assumed that such group of people includes commercial fishermen, amateur fishermen, inspectors of fisheries control service, state marine inspectorate, rangers of "Kurshskaya kosa" national park, border guard service, pilots of Military Marine Fleet, conducting aerial observations of coastal zone, scientific institution specialists, working in the water area. It was suggested that due to their work responsibilities these people have a lot of contacts with their colleagues as well which will help to increase number of responders.

List of organizations to be interviewed was worked out (table 1). The organizations listed were assumed to give the most reliable and accurate data on the issue. The survey had to be anonymous. In order to increase the scope of responders to be interviewed Internet was used. A question on possible dolphin observation in the coastal zone of the Baltic Sea was asked at the web-page of amateur fishermen. This question induced a broad interest among many people who provide a direct support in the investigations.

Commercial fishermen were interviewed directly during fishing operations. The captain of TB “Nord” vessel A.Skobitskiy and director of “Diva” company D. Stratanovich made a request to the fishing vessels’ captains using radio communication system.

A lot of help was provided by staff members of FSI “Zapbaltrybvod” I.Tkachev and V. Fedorov, as well as inspector of State marine inspectorate A. Shul’ga thanks to whom it became possible to interview fishermen during vessel unloading.

Interviews of helicopter pilots of MMF patrolling coastal zone was organized with a help of lieutenant colonel S. Shavrin.

Support in obtaining information was provided by oil platform LTD “Lukoil-Kaliningradmorneft” captain G. Kuz’min.

The most interesting data were provided by staff members of “AtlantNIRO”. V. Shopov and V. Severin told about their observations of dolphins in the sea. Staff members of “AtlantNIRO” museum provide information on dolphin skulls from the museum’s collection and gave an opportunity to take pictures of them. War-horses of marine mammal research in the Baltic Sea G. Budylenko and D. Tormosov shared some important information as well.

Table 1. Affiliations and institutions participated in the questionnaire survey in Kaliningrad region

№	Institution\affiliation	Number of people interviewed	Number of people who saw dolphins
1	Atlantic office of Oceanology Institute named after PP. Shirshov RAS	6	1
2	Atlantic Scientific and Research Institute of Fisheries and Oceanography (“AtlantNIRO”)	7	2
3	Fishery collective farms from Kaliningrad union of fishery collective farms	4	-

4	State Marine Inspectorate	1	-
5	Border Guard	1	-
6	“Kurshskaya kosa” national park	3	-
7	Aviation of Military-marine fleet	3	-
8	LTD “Lukoil – Kaliningradmorneft” (marine oil platform)	2	-
9	Commercial fishermen	22	-
10	Amateur fishermen	6	-
11	FSI «Zapbaltrybvod»	4	-
12	Fishery Agency of Kaliningrad region Government	3	-

Survey was implemented in two stages. On the first stage people were asked to answer only “yes/no” question. On the second stage in a case of positive answer responders were asked to fill in the questionnaire. Questionnaire survey was to give an idea on porpoise distribution in 26<sup>th</sup> sub region, seasonality of their movements and possible fisheries impact on them.

Prepared questionnaires almost were not used in practice in Kaliningrad region since only 3 responders who had seen harbour porpoise in the sea were found.

Other results of the survey conducted were the following: information on 2 dolphin skulls found in the Baltic Sea and which are stored in AtlantNIRO museum was obtained from institute’s specialists. Preliminary determination allows to say that they belong to *P. phocaena*.

#### **- Interview results**

Currently in the museum of AtlantNIRO (Kaliningrad) the following records concerning harbour porpoise are found: 1) skull of a small dolphin, obtained during scientific trawling survey in Kaliningrad region sector of the Baltic Sea (pic. 8-11); 2) skull of a small dolphin, obtained during scientific trawling survey in Kaliningrad region sector of the Baltic Sea, 60-70s (pic. 12-14).

Due to interviewing of 62 representatives of different organizations 3 reliable case of dolphin sightings in the sea were revealed. Besides, 2 dolphin skulls found during bottom trawling in the Baltic Sea are stored in AtlantNIRO museum.

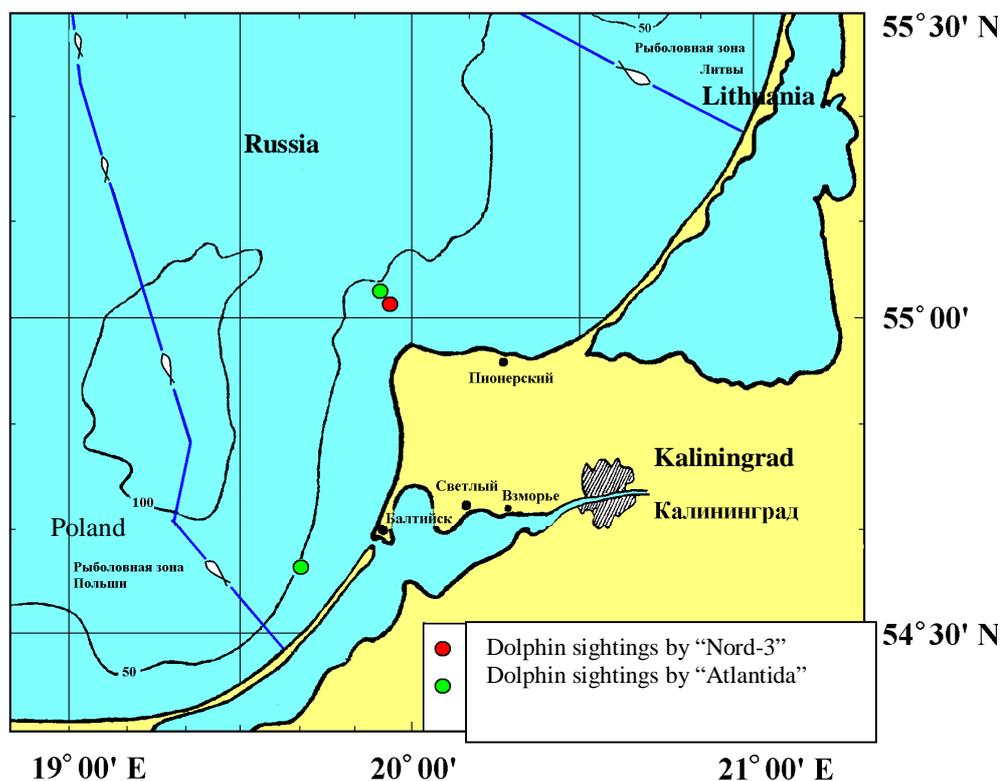
*Case 1.* 3 dolphins were observed by A.V. Guschin (Ichthyology Institute RAS) in Taran area (pic. 7) on the 15<sup>th</sup> July 1993 from TB “Nord-3” vessel.

Fishing vessel of commercial company “Nord”, TB “Nord-3” was fishing *Gadus morhua* using stationary net in a beam of Taran cape in 8km from the coast (approx N55°03’, E19°55’).

Depth was equal to 43m. The vessel was hauling in the nets and moving eastwards with a speed of 0,1-1.0 knots. At about 14pm (local time) a group of dolphins consisted of 3 animals passed the vessel in a distance of 100-150 m without paying considerable attention to it. Due to a considerably large distance to the dolphins species identification was difficult but regarding rounded shape of dorsal fin and rather small size of the animals (less than 2 meters long) it could be assumed that the species met was *P.phocaena*. Time of dolphin observation was about 2 min. Two cases of surfacing were noticed.

*Case 2.* Two dolphins (adult and juvenile) were observed by “AtlantNIRO” staff members V.Shopov and V. Sevevrin in light house Schukin’s beam in May 2006 from scientific research vessel “Atlantida”. The vessel belonged to “AtlantNIRO” was conducting standard hydro acoustic survey. On a transect, in Schukinskiy lighthouse beam in 10 km from the shore (N54°35’, E19°48’) 2 dolphins appeared, came close to a side of the vessel and accompanied it for almost 10 min. V. Shopov, who previously worked in marine mammal laboratory and now is a specialist of the Baltic Sea laboratory, identified the species as *Delphinus delphis*, due to pointed back beaked fin.

*Case 3.* V. Shopov, specialist of the Baltic Sea laboratory from “AtlantNIRO”, observed 2 dolphins in Taran cape’s beam in May 2006 during the same trip on SRV “Atlantida”. On a transect, in Taran cope beam in 12 km from the shore (N54°10’, E19°53’) two dolphins were observed in 100 m from the vessel. Dolphins did not come close to the vessel. V. Shopov identified them as *D. delphis*. There’s a possibility that that were the same animals met near Schukinskiy lighthouse.



Pic. 7. Dolphin sightings in Kaliningrad region water area.

*Case 4.* Dolphin's skull № «Д-1» from "AtlantNIRO" museum funds (pic. 8-11 ). The skull was delivered to the museum in late 70s. It was found during bottom trawling by one of the vessels belonged to "Zaprybpromrazvedka". Skull length 272mm, low jaw is absent. Traces of bottom sediments are found on the skull bones. Skull belongs to *P.phocaena*.



Pic. 8. Dolphin skull from “AtlantNIRO” museum funds № Д-1. The Baltic Sea. View from above.



Pic. 9. Dolphin skull from “AtlantNIRO” museum funds № Д-1. The Baltic Sea. View from below



Pic. 10. Dolphin skull “AtlantNIRO” museum funds № Д-1. The Baltic Sea. View from a side



Pic. 11. Dolphin skull “AtlantNIRO” museum funds № Д-1. The Baltic Sea. Rear view

Case 5. Dolphin’s skull № «Д-2» from “AtlantNIRO” museum funds (pic. 12-14). The skull was delivered to the museum in mid-2000s. It was found during bottom trawling within standard survey of “AtlantNIRO” in Taran cape area. Skull length – 208 mm, Low jaw is absent. The skull is damaged, with no cervical bone. The skull belongs to *P.phocaena*.



Pic. 12. Dolphin skull from “AtlantNIRO” museum funds № Д-2. The Baltic Sea. View from above.



Pic. 13. Dolphin skull from “AtlantNIRO” museum funds № Д-2. The Baltic Sea. View from below



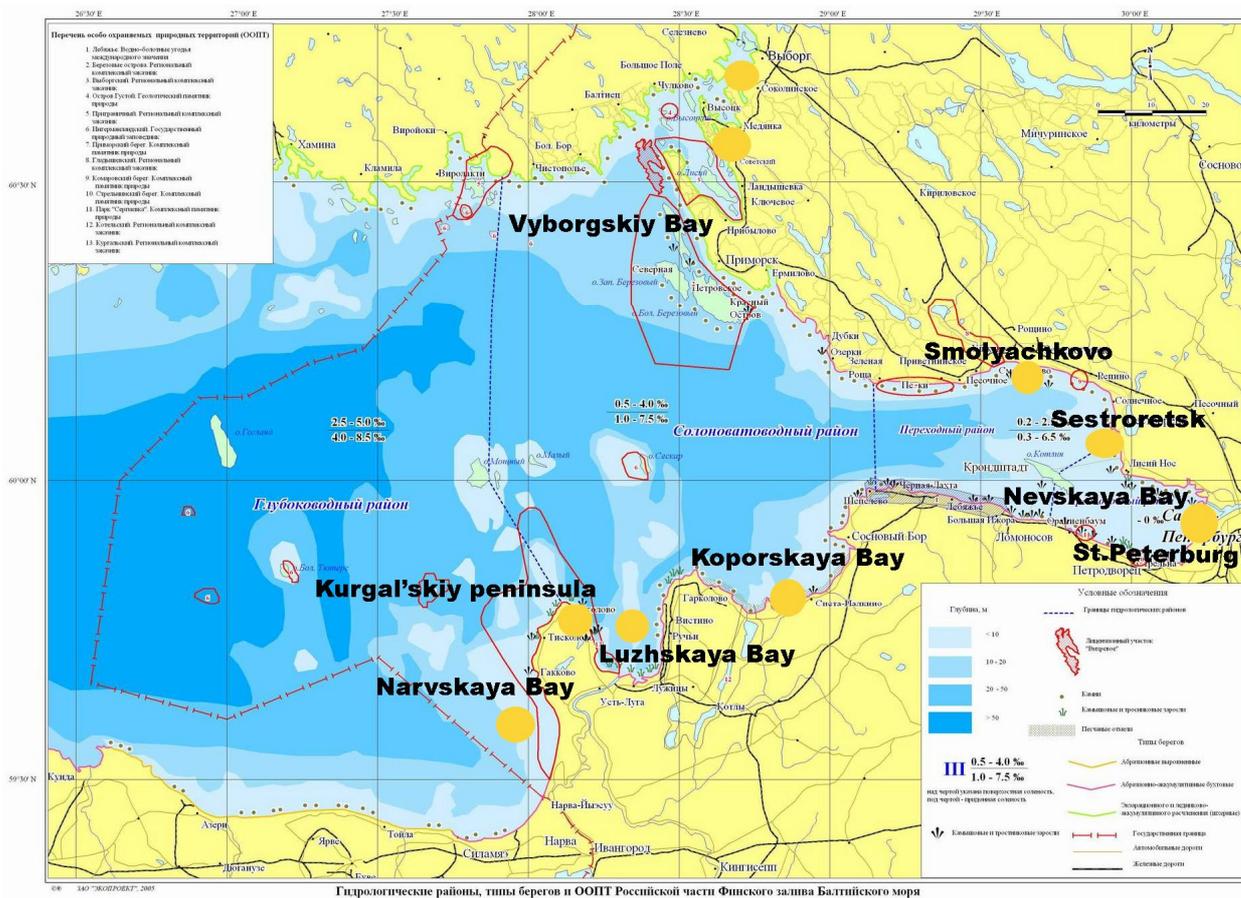
Pic. 14. Dolphin skull from “AtlantNIRO” museum funds № Д-2. The Baltic Sea. Rear view

## 6.2. Leningrad region

In August-September 2011 the representatives of commercial fisheries working in the Gulf of Finland we interrogated. With the help of fishing organization “Equator” we visited by motor boat and by car the main areas along the coast where fishing brigades are located. We distributed the leaflets issued by ASCOBANS and then asked fishermen to fill in the questionnaire form and/or answer the question concerning *P.p. phocaena* sighting in their fishing area. The following places were visited: Narva Bay, Kurgal’skiy peninsula, Vistino, Koporskaya Bay, Luzhskaya Bay (South coast), Nevskaya Bay, Sestroretsk, Smolyachkovo, Vyborg Bay (North coast), pic. 15. The interviews were organized with the help of Vadim Ben’kovskiy, director of fishing organization “Equator”.

During our survey we got the following result: in the easternmost part of the Gulf of Finland none of currently working fishermen, ichthyologists or other people whose work is related to the sea have seen dolphins in the area or heard about such sightings. All in all 28 forms

were filled in, 4 more people were interviewed. The interviewed group of fishermen included fishermen using different types of gears in order to find information on possible by-catch cases. The gear types were: nets, dragnets, trap nets, fishweirs. The target fish species included almost all main commercially important species fishing in the area.



Pic. 15 The Gulf of Finland. Regions covered by the questionnaire survey (orange dots).

The following fisheries brigades and organizations participated in the survey (see. Table. 2)

Table 2. Affiliations and institutions participated in the questionnaire survey in Leningrad region

№	Institution\affiliation	Number of people interviewed	Number of people who saw dolphins
1	Commercial fishing organization "Equator"	3	-
2	Fishing brigade "Sestra"	5	-
3	Commercial fishermen (undefined brigades)	20	-
4	Dredging and inwash works implementing	1	-

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	company		
5	Ichthyologists	3	-

The information on dolphin previous existence in Eastern Baltic was new for all the responders, although some of them have been working in this area for more than 30 years.

In the museum of Zoological institute of Russian Academy of Sciences (St. Petersburg) only the following harbor porpoise remains are found:

- Fragments of skull and skeleton (pic. 16-18), found in Petersburg, 1888;
- Skeleton (pic. 19-21) found in the Gulf of Finland (Ust'-Izenkof), 1915.

The following records are found in the Museum's catalogue:

- fresh harbor porpoise corps with meat, purchased in village Sarman', Ladoga Lake, 1901;
- harbour porpoise female caught in the Gulf of Finland, Ust'-Narova, 1895;
- stuffed animal, found – The Gulf of Finland (without date).

Due to our knowledge the last harbour porpoise remains finding occurred in 1992 on the Maliy Tuters Island (see pic.2) by Dr. R. Sagitov. Fragments of vertebrae column were determined as belonging to *P.phocaena* and transferred to Zoological museum RAS. Currently those remains seem to be impossible to find in the museum storage.

Sonar eavesdropping is one of the methods to gather information about porpoises and it's actively used in European countries including Estonia and Finland. Regarding the fact that harbour porpoise presence is detected in neighboring countries we can assume that there are occasional visits of these animals to Russian territorial waters. Using of passive acoustic monitoring devices in Russia in future would be very useful in order to confirm this assumption.



Pic. 16 Harbour porpoise limb from museum funds of Zoological institute RAS



Pic. 17 Fragment of harbour porpoise skull from museum funds of Zoological institute RAS



Pic. 18 Fragment of harbour porpoise vertebrae from museum funds of Zoological institute RAS



Pic. 19 Harbour porpoise skull from museum funds of Zoological institute RAS



Pic. 20 Harbour porpoise skull from museum funds of Zoological institute RAS



Pic. 21 Harbour porpoise vertebrae from museum funds of Zoological institute RAS

## 7. Conclusions and further actions proposed

Research implemented revealed 3 cases of dolphin observations (2 cases – *D. delphis*, 1 – *P. phocaena* in Russian territorial waters of the 26<sup>th</sup> sub region of the Baltic sea. 4 harbour porpoise skulls found in XX century in the studying area are currently stored in the museums of Zoological Institute RAS and “AtlantNIRO”. Information on precise place and time of finding are unavailable. Additionally there are 4 records dated back to the beginning of XX century in the Zoological Institute museum’s catalogue.

Questionnaire survey allowed to cover time period of about 20 years, which regarding very few dolphin sightings gives evidence on animals’ very occasional visits to South-Eastern Baltic.

Among the major risk factors for small Cetaceans in South-Eastern Baltic are environmental conditions, fisheries and vessel traffic impact. Another possible negative factor preventing harbour porpoise from more frequent visits to the area could be fish stocks decline due to overfishing and industrial development of the region. Construction of large capacity ports, underwater supply lines, dredging and inwash works in Eastern part of the Gulf of Finland led to deterioration of water quality and increase in disturbance level.

Questionnaire survey results showed that due to very rare harbour porpoise observation cases in Russian territorial waters that developed questionnaire form can’t be used effectively and another approach including cooperation with official marine agencies should be worked out.

We believe that it would be very useful to use passive acoustic monitoring systems in Russian territorial waters in order to reveal cetacean presence in the region. But we have to admit that in the Russian part of the Gulf of Finland this approach implementation could face certain difficulties due to the fact that this water area is under the jurisdiction of Russian marine military forces. In case of Kaliningrad region PAM could be an effective method to use in the future.

Project results will be presented to the Ministry of Natural Resources of the Russian Federation since Russia is an observing party of the ASCOBANS and to HELCOM. We also aim to inform scientific community about the implemented project during the European Cetaceans Society conference 2012 in Ireland.

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## Annex 1.

### Questionnaire for fishermen and local people

#### Questionnaire.

*This survey is anonymous and conducted in the frames of the project  
“Inventories of harbour porpoise *Phocaena phocaena phocaena* presence in Russian  
territorial waters of the Baltic sea”*

**Data collected will be used only for scientific purpose!**

1	Your fishing area and working season	
2	Fishing gear used (number, type)	
3	Commercial fish species you are interested in	
4	Do you know that one of small Cetaceans species – harbour porpoise – lives in the Baltic sea?	
5	Have you or your colleagues ever seen harbour porpoise in your fishing area? (name exact place, number of animals seen, month, year)	
6	Have you or your colleagues ever caught harbour porpoise incidentally in your fishing gears? (name region, number of animals caught, month, year)	
7	Which type of fishing gears did you catch an animal (trawling, nets, etc.)?	
8	Have you or your colleagues ever found carcasses of harbour porpoise on the coast? (name region, number of findings, month, year)	

*Thank you for cooperation!*