Barents Baltic Nature and People Programme

The results of sociological survey of tourists in Kurgalsky Nature Reserve important for the management of unregulated tourism.

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Introduction.
Kurgalsky Nature Reserve is unique protected area for the region of Eastern Baltic Sea. It is situated at the south-west coast of the Gulf of Finland, in Russian Federation, near to Estonian border. Its total area is 60 000 hectares including 38,4 hectares of marine area. It is characterized by highest biodiversity in the region, undisturbed terrestrial, marine and coastal biotope complexes and presence of key sites for a number of protected species. While it plays keystone role for ecosystem of the Gulf of Finland, it has a low status of reserve ('zakaznik') of regional importance in Russia. This means the ability of free visiting the territory by tourists. In the recent past the visiting was restricted as Kurgalsky Peninsula is a part of Border Security Zone of Leningrad region, but this restriction was abolished. Attractiveness of the territory, beautiful landscapes and sandy beaches lead to permanent increasing of tourist impact. Although there are several points in the Provision of the Reserve (2010) related with the tourism (prohibition on camps, bonfires, cutting of trees, leaving of garbage, using most of the roads with the exception of public roads and attendance of some parts of the reserve) most of the visitors ignore the rules. Unregulated tourism gradually turns to a real scourge of the reserve. Competent management of the tourism requires complete knowledge on tourists' characteristics and motivations. Such kind of research has never taken place there. Together with the Barents-Baltic Nature and People Programme we initiated the pilot survey to obtain the information on unregulated tourism. As the study was started close to the end of the season the results should be considered as preliminary. Nevertheless it provides essential substratum for the development of management plan for sustainable tourism.

Materials and methods.
We designed special anonymous questionnaire form for the purposes of the study. The questions primarily concerned origin of tourists, their awareness about Kurgalsky Reserve existence, the reasons why they choose this place and their opinion on the reserve and it's provision. Total questionnaire form is presented above (table 1).

The survey was taken place 24-31.07.16 and 5-23.09.16. The data were collected at three sites: Lipovskoe Lake, sea beach near Tiskolovo and Beloe Lake (fig.1). The last two sites are formerly prohibited for recreation.
Table 1. Questionnaire form for sociological survey of representatives of unregulated tourism.

<table>
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<th>Data of survey:</th>
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<td>Place of survey:</td>
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<td>Gender and age of responders:</td>
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<td>Violation of the provision: recorded by interviewer</td>
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1. Where did you come from to recreate at the peninsula?
2. Why did you choose this place?
3. How did you know about this place? Please, indicate the source.
4. Have you ever visited the peninsula before? How many times did you visit it this summer?
5. Did you know about Kurgalsky Nature Reserve existence on the territory of peninsula when you planned your recreation?
6. Do you know about any restrictions imposed by the Provision of Kurgalsky Nature Reserve? Which ones?
7. Do you agree to follow this points?
8. Which category of recreants do you belong to?
   - family
   - group of friends
   - participants of a corporate trip
   - private tourist group
   - participants of an organized camping
   - other (indicate)
9. Which kind of transport did you use to achieve this place?
10. Are you going to distribute the information about this place among friends, in social networks, on Internet forums etc.?
11. Are you going to recommend this place for someone?
12. If you find out that the place of your recreation is valuable for conservation of nature, are you ready to refuse from its visiting?
Fig. 1 The sites of data collection. Only the northern one is permitted for recreation of residents.

Results.
60 tourist groups were interviewed during the period of time. Distribution of tourists by gender and age are presented in fig. 2

Fig. 2 Gender and age characteristics of tourists at Kurgalskyi Peninsula.
Most of the tourist groups belonged to the category 'group of friends', 'family' or was represented by both relatives and friends ('mixed group') (fig.3).

![Figure 3](image)

**Fig.3** Answers to the question 'Which category of recreants do you belong to?'

Near a half of respondents (42%) did not know about Kurgalsky Nature Reserve at all when they had planned their week-ends. Only one person visited the territory with the purposes of birdwatching and he was the only visitor who knew all points of the Provision. Almost all tourists used the territory for trivial recreation including swimming, sunbathing, fishing, camping and boating. We wrote the answers about the reasons of place selection verbatim so some of them are overlap between each other or might be illogical. The reasons probably may change in relation to a season but general trends are traced. The most popular answers were 'this is the closest place to my home' or 'there are no other good places in our region'. During oral conversation the responders explained that they mean no pods for swimming or fishing in the surrounding of their place of residence in the exception of Kurgalsky Peninsula. It is crucially important, however, that near the third tourists came from Saint-Petersburg (28%), many people came from towns and inhabited localities of south-west of Leningrad Region (21%) (fig.5). The reason of proximity to home mostly named people from Kingisepp and Ust-Luga Rural Settlement.

Other reasons of the peninsula's attendance are connected with solitude of the place, aesthetic appeal, existence of sandy beaches or the only sold lake (Lipovskoe) and etc. (fig.4). It is interesting that both remoteness and proximity of the peninsula in relation to home served as the reason to visit this place.
Fig. 4 Answers to the question 'Why did you choose this place?'

The main source of information about the place were friends or acquaintances (so-called 'word of mouth') (fig. 6). Surprisingly only 14% got the information from the Internet (specialized websites). Some responders told that they just had found this place on the map and decided to visit. Many responders did not remember about the source of knowledge about the place as they live nearby and know for a long time. However, about the third of responders (29%) have never visited this territory before. Most people (38%) were there but came to Kurgalsky Peninsula for a first time in the summer of 2016 (fig. 7). Tourists used private cars to achieve the Peninsula in 100% of cases.
61% of the responders did not know any point of the Provision and 86% violate the provision of the reserve (at least one point). Those one who had heard about provision (39%) often mentioned the prohibition of leaving of garbage, cutting of trees, making bonfires and hunting (fig.8). Few tourists knew about prohibition of driving outside of public roads, parking outside of special sites and in water protective zones and motorboat using. Motorboat using is actually debatable point as it is included by default in the restriction of driving outside of public roads in the opinion of Committee on Natural Resources of Leningrad Region. Nobody knew about prohibition of camping, visits to the islands of Kurgalsky Reef from 15.04 to 15.07 and amateur fishing from 15.04 to 15.07. Although someone was sure that amateur fishing is not allowed at all or allowed year-round but amount of caught fish must not exceed 5 kg. Generally 33% of responders mentioned unrealistic points. These were distorted variants of true points, points of regulations for fishermen from Federal Agency of Fishing or rules for visiting of Border Security Zone. Examples of such phantom points are 'prohibition of cutting of trees before 15.07', 'prohibition of careless making of bonfires',
'prohibition of animal feeding', 'prohibition of collecting mushrooms' etc. People often mentioned only those points of the provision (or their distorted variants) which they had not broken at the time of the survey.

Most violations from responders concerned parking outside of special sites and in water protective zones (75% of responders), camping (53% of responders) and bonfires (25% of responders) (fig.9, 12, 13). Percentage of people who drive outside of public roads actually relates with the site of data collection as roads to the beach near Tiskolovo and to Beloe Lake are not for public use, while most responders of this survey were from Lipovskoe Lake. The result does not mean that tourists leave no garbage or do not cut the trees (fig.10, 11). In the fall of 2016 volunteers of 'Clean Vuoksa' collected 3.8 tons of garbage only at the east coast of Lipovskoe Lake. Similarly, we saw a lot of stumps near the sites of the survey. It is clear that people did not do obviously forbidden activities during the survey. Regarding the motorboat using it must be assumed that more than 3% of recreants ignore this prohibition in the summer although this violation is sporadic.
Fig.10 Stumps near tourist site at the eastern coast of Lipovskoe Lake.

Fig.11 Garbage near tourist site at the eastern coast of Lipovskoe Lake.
Fig. 12 Camp, bonfire and car near Beloe Lake. The site is closed to the recreation and the driveways are blocked by gates (possible for illegal detour).

Fig. 13 Wheel tracks in water protected zone of sea coast near Tiskolovo.
69% of tourists answered that they agree to follow the points of the Provision of Kurgalsky Nature Reserve, 21% partly agree and 10% do not agree. It should be clarified that most of responders meant only those points which they had mentioned in their answer to the question 6. Most of responders thought that they were not doing any violation (see above), even after explaining the points by the questioner. 56% are not ready to refuse from visiting of the territory even if they find out that it is valuable for conservation of nature. 47% of responders are going to distribute the information about Kurgalsky Peninsula (or have already done it) and 41% will recommend this place for friends or relatives.

Discussion and recommendations.

The importance of ecological tourism is broadly discussed nowadays. Such kind of objects like charismatic animal species (e.g. birds and ungulate mammals), beautiful plants, primeval or unusual landscapes, historical buildings and traditional crafts attract people all over the world. It brings a significant financial income for the entrepreneurs. Kurgalsky Nature Reserve has high potential for the development of ecotourism since it is characterized by great diversity of biological species and undisturbed landscapes. Along with that so-called 'wild' tourism is taken place in the reserve. In the Northwest of Russian Federation a deep-seated tradition of outdoor recreation established. The typical picture of this recreation is traveling with family or friends by car to a coast of lake or sea, sometimes with tents for camping, organizing a picnic, frying a pork in brazier, swimming and fishing from coast or inflatable boat.

It is quite obvious that presence of 'wild' tourists decreases the potential for ecological tourism of Kurgalsky Reserve since the territory becomes less attractive. While the recreational potential of the territory is also high, its primary function not coincides with people recreation. The extension of seacoast of Russian Gulf of Finland is near 500 km, with lots of suitable places for beaches, restaurant and camping as well as hotels while the reserve occupies not more than 12% of the coast and its primary functions connects with ecosystem sustainability, conservation of rare species, renewal of natural resources and water storage. Kurgalsky Reserve is not intended to mass recreational activities due to their harassment impact, only limited groups may be presented here. So the main task of the authorities is how to decrease recreational impact in Kurgalsky Reserve and to provide conditions for the recreants in alternative locations (those tourists who are not interested in nature exploration and species observation). The second step is to develop ecological trails and infrastructure for those one who are interested in nature tours but only after the current problems will be resolved. Generally the points of the Provision are directed to prohibition of camping and related recreational activities. Mass scale of trivial recreation caused by low awareness of people about the reserve existence and by lack of understanding its conversational value. It is revealing that few or no tourists knew the points of the Provision related to camping, driving outside of public roads and parking on the shore and in fact these are the most popular violations.

This survey leads to several conclusions which are crucial for management purposes:

- Geographical coverage of recreants' origin is included not only region of Kurgalsky Peninsula but the whole territory to the south of the Gulf of Finland and Saint Petersburg. Only 13% of responders were residents of Ust-Luga Rural Settlement. It means that resolving of the problem lies in reallocation of tourists not within Kurgalsky Nature Reserve but within Leningrad Region (at least SW part and the Gulf of Finland area).

- Conversational importance of Kurgalsky Reserve is not an argument for people to refuse from its visiting. Every third visitor is not ready to follow the legislatively fixed rules of behavior in the reserve (the slogan is 'We have the right to relax here'). People mostly have marginal opinion on the prohibitions and the idea of protected areas' organization. Though environmental education is vital
it does not resolve hot challenges. There are only two ways to manage the situation. First one is connected with heavy fines and possibility for inspector to penalize in situ. This requires the changes in legislation what is beyond our competence. The second one is creation and advertising of distracting places for recreation outside of this and other reserves. It is important that significant percentage of visitors had no strong motivation to visit the certain area of Kurgalsky Peninsula: they chose it just because of curiosity (remoteness, unknown place on the map, illusion on privacy, accidental visiting).

- During the creation of the alternative recreational places it is necessary to take into account spatial and qualitative options. According to the respondents basic requirements for recreation include water basin for swimming and fishing, with sandy beach. Many respondents also explained that water basin is not necessarily to be a part of the Gulf of Finland. It is important that there are few lakes in Kingisepp District as well as in SW area of Leningrad Region as a whole and two of them are located in another protected area, Kotelsky Nature Reserve. As a result considerable part of responders choose Kurgalsky Peninsula because the closest to home (Kingisepp, Ust-Luga etc) water basins are located there or because of its seclusion and virginity in comparison with crowded beaches at sparse lakes of the region. Probably, fans of berries or mushrooms collecting are presented in greater number at the Peninsula than we could determine but since negative impact from them is not so strong we will not consider them further.

- Specialized websites do not have significant importance for distribution of information about Kurgalsky Peninsula. It is probably explained by low number of the sites devoted to traveling in Leningrad Region and lack of motivation in people to check the information about place. The exception is the case with Lipovskoe Lake which was proclaimed the only sold lake ('Small Sea') in the region. Not so long ago there were several online articles and posts in social networks devoted to this place (see as an example http://petersburglike.ru/2015-06-23/lipovskoe-solenoe-ozero/). No information about the reserve and the restrictions for tourists was presented. This resulted to growth of tourist impact on the lake and number of violations. Such occasional posts must be corrected by concerned agencies.

- About the third of responders visited the territory for a first time. 41% are going to distribute the information about this place so we suggest that they will return to it. This means the annual growth of tourist flow is at least 0,12. Great per cent of tourists which visit the peninsula for a first time means the necessity of remote distribution of the information about existence of the reserves and restrictions which are imposed with their visiting.

Recommendations for mitigation of tourist impact to Kurgalsky Nature Reserve:

1. Creating a system of artificial ponds in Kingisepp, Lomonosov and Volosovsky districts by flooding unused quarries. The pods should have sandy beaches and elements of infrastructure (garbage bins, toilets, tables under canopy, places for parking, equipped fireplaces, cafes). The example of flooded quarries which popular with tourists are Maluksa Quarry in Leningrad Region and Ruskeala Quarry in Republic of Karelia (fig.14, 15). The last quarry is one of the most popular touristic places in the region important for the local economy. The artificial ponds as diversionary tactic will particularly important for the surrounding of Kingisepp as there are plans to develop the city instead of Ust-Luga Rural Settlement. Some environmental projects of flooding the quarries have already taken place in Slantsevsky District adjacent to Kingisepp District. The projects were implemented with Quarry Life Award (http://www.quarrylifeaward.ru/).

2. Creating and distribution interactive maps for tourists. It should include both information of objects attractive for tourists outside the reserves (public sea beaches, cafes, tourist bases, fishing
and game bases, hotels, museums, car parks, petrol stations, bus stations, historical buildings, springs, hospitals, churches, places for birdwatching etc) and boarders of protected areas with indication of the restrictions. The map is needed separately for Kingisepp District and for the southern and northern coasts of the Gulf of Finland with adjacent area (vast territory must be covered on the map since a third of people comes from Saint-Petersburg). The example of such kind of map is presented at fig.18. The map should be distributed for free in tourists centres, supermarkets and petrol stations of Leningrad Region.

3. Integrating the information about PA's borders and regime for the protection to the maps of car navigators.

4. Creating more information boards with interactive and educational elements in Kurgalsky Nature Reserve. The current ones are illegible and contain only information on prohibitions (fig.17). Special boards with information on flora and fauna are needed and also with explaining the purposes of prohibitions. The examples of informational boards from a coastal reserve are presented at fig.18, 19. The reserve is situated in the urban part of Russian Gulf of Finland. Information about sites of vulnerable species' gathering like ringed seal haul-outs or marine bird colonies must not be presented in open access (especially relevant for species listed in Red Data Book).

5. Cooperation with adjacent agencies which endowed enforcement authority. Mobilization of policy and Main Directorate for Road Traffic Safety, carrying out joint actions, setting of road signs 'No entry' and cameras on prohibited roads.

Creating of equipped places within Kurgalsky Nature Reserve and Kurgalsky Peninsula is debatable as there are no legislative ways to control the tourist flow and violations there. In case of implementation they should be situated on the periphery of the reserve, have a limited number of seats and be chargeable. It is possible to develop the beach near estuary of Vibya River for free visiting (area adjacent to the reserve). Car park is allowed to place at the entrance of the reserve. Bike rental and local shuttle service are permissible for organizing. The ideal model of Kurgalsky Nature Reserved is closed territory with paid access, limited number of tours on nature watching and independent visitors, internal zoning and related infrastructure outside of the reserve (see as an example https://orokonui.nz/, http://www.craneland.ru/). It is highly desirable to raise the status of the reserve to federal level.
Fig. 14 Maluksa Quarry (credit: http://annet-annet.livejournal.com/84932.html)

Fig. 15 Ruskeala Quarry (credit: https://wanderings.online/ruskeala-mramornyje-kanony-v-karelii/)
Fig.16 Otago Peninsula, NZ: interactive map for tourists. Emerald area is Orokonui Ecosanctuary (credit: https://issuu.com/traveline/docs/dunedin_nz/37).

Fig.17 Informational board near Lipovskoe Lake.
Fig. 18 Informational board in the reserve 'Northern Coast of Neva Bay'.

Fig. 19 Informational board in the reserve 'Northern Coast of Neva Bay'.