



HUNTING AREAS DEVELOPMENT PLANS

- OVERVIEW AND PRACTICAL APPROACH TO SUSTAINABLE HUNTING TOURISM DEVELOPMENT
- CASES – HUNTING MANSION, FINLAND (2014), WHITETALE DEER HUNTING (2014)
- DEVELOPMENT MODEL FOR CREATING SUSTAINABLE HUNTING BUSINESS IN TARGET AREA
- Building a hunting product for designated target area (actions for 1st year)



DRAFT VERSION

14.3.2014

1. OVERVIEW AND PRACTICAL APPROACH TO SUSTAINABLE HUNTING TOURISM DEVELOPMENT

This document has been made for the ENPI IntellGreenBelt – project, to give examples of sustainable hunting tourism models development that have been done in Scandinavia. This document also gives a concrete development model for creating sustainable hunting business in chosen target area. In addition, we will make suggestions and give new ideas for sustainable hunting business development directions in ENPI IntellGreenBelt – project target areas in Russian Karelia.

The target cases in this document have been chosen from Eastern Finland, so that the areas are comparable from nature perspective.

SUSTAINABILITY in GAME MANAGEMENT

Ecological aspect

- Only the extra growth of the population is under hunting, so the population will stay sustainable, also at the same time taking care that the game reserve stays healthy.
- The growth of the population has to be such that the bucks are allowed to grow bigger. This means, that the most wanted individual animals of the game population are present for the hunters.

Economical aspect

- From the hunting business point of view, it is crucial that also over-populated game reserves are present in the target areas.

Example: Hungary has a popular hunting location, where a fence has been built in the border of the area. Calves and Female Elks are not able to cross the fence. This setup attracts bucks to the area in the heat time. The fence is between Hungary and Croatia border, where the Croatia side is not hunted and has extensive Elk population. This creates a density of Elk bucks inside the fenced area.

Social aspect

- Hunting tourism has to be arranged also in a socially sustainable way. This means that local people accept hunting and feel that they gain benefit from the organized hunting activity.
 - Local people as one interest group can benefit from hunting tourism by creating working possibilities in
 - Accommodation services
 - Transportation services
 - Souvenir selling
 - Restaurant and catering services
 - Game keeping

- Etc.
- If local people do not approve hunting tourism, it may lead to problems such as;
 - Poaching
 - Difficulty of arranging the services above
 - Etc.

2. CASE – HUNTING MANSION, FINLAND

2.1. Background

This example is from Eastern Finland, South-Savo region. There are two mansions with own forests, 360Ha. The surrounding 2000 ha area hunting rights belong to local hunting association.

The starting point was, that only small amount of small-game hunting has been practiced and average only 4 elks were shot annually. There is also a very small Roe Deer population that is not in a sustainable level for hunting.

The new owner came up with idea to create sustainable hunting tourism in addition to traditional forestry, as mansion income source. Mansions have had a new owner for the past 2 years now, and it is currently under renovation. Mansions will have accommodation for 20 people and also premises for small celebrations/ meetings.

Mansions are located in cape that is 12 km long and 4-5km wide, and is located next to natural reserve. (see map below). Terrain is rather flat and contains mostly forests and some fields. The region has approximately 10 active farms and some leisure time housing. Mansions with surrounding nature, creates a unique cultural tourism location in close connection to Saimaa lake district.



Project started, when a common interest was found between local hunting association and the new owner of the mansion. A common decision was to create an area that

1. is a **commercial hunting area** and
2. **create a new strong population of Fallow Deer** to the target area.

Target company plans to establish a high-quality game management, fishing and nature services resort in Rantasalmi, Eastern Finland. The centre for the operations will be the culture-historical manors and milieus and the unique Lake Saimaa environment. The manors are privately owned. The lands consist of approximately 360 hectares and will form the centre of the planned game management and hunting tourism business. Cooperation with the local hunting clubs will substantially improve the prerequisites. The offered services will comply with

the goals of the national natural resources strategy. The project will also be used in developing new business and tourist services in the Rantasalmi area as well as enhancing local cooperation and vitality of the interest groups.

2.2. Location

Game management business can be established in the manors and lands of the local hunting clubs as agreed with the interested parties. The manors and milieus will offer accommodation services and create a unique, culturally rich environment together with Lake Saimaa. The manors offer accommodation facilities for up to 20 guests or alternatively for several smaller groups at the same time. This will ensure continuous accommodation services for 30–40 guests staying at different sites during year 2014. The company's own accommodation capacity enables the company to offer high-quality services to hunting groups.

In addition, the manors can be used for conferences and functions. Accommodation facilities and catering services for bigger groups will be available by the company's partners. For game management business, the company has approximately 360 hectares land which combined to lands of the neighbouring hunting club form an area of approximately 2,500 hectares. Once the project is initiated, negotiations and networking with other hunting clubs and landowners will be organised to join in the project.

2.3 Business areas

2.3.1 Hunting

The company has prerequisites to offer the following hunting services for its customers.

- Pheasant hunt for bigger groups
- Pheasant hunt with pointing dogs for small groups
- Partridge hunt with pointing dogs for small groups
- Waterfowl hunt, morning and evening flight
- Pigeon hunt, morning and evening flight
- Woodcock hunt with pointing dogs
- Grouse hunt with pointing dogs and barking dogs
- Hare hunt with driving dogs
- Stand and driven hunting of fox
- Hunting of elk in cooperation with hunting clubs
- Beaver hunting
- Stand and driven hunting of roe deer
- Stand and driven hunting of farmed fallow deer.

With the above mentioned options, hunting season can last up to nine months. Careful estimations on the possible hunting groups would be 50–70 according to the present game management and business development project. Hunting tourism can be developed further in cooperation with local hunting clubs.

2.3.2. Additional services

Game management and construction of game habitats such as wetlands, fields and feeding grounds creates various possibilities for services related to nature observing, watching and photographing. Demand for this kind of services is constantly growing around the world, also in Finland. Game management and additional services entail significant growth potential. However, combining nature tourism services to the desired hunting image of the estate requires careful planning, product development and marketing. Additional services may form a considerable part of the operations in the future.

2.3.3. Game products

In international hunting tourism it is a common practice to charge trophy fees according to the shot animals. In big game hunting, charges usually include hide, head and hooves which are given to the shooter. Meat is usually given to hunt organiser for processing, in this case to the company or the hunting club, depending on the hunting method. In the case of small game, practices may vary but usually a share of the meat goes to hunt organiser.

Examples of trophy charges:

Birds; pheasant, partridge, duck	20–30€
Roe Deer	100–400€
Fallow Deer	100–1000€ (depending on the size of antlers)
Moose	400–2000€ (depending on the size of antlers)

Production of game meat is central to the business. Demand for game meat in Finland is constantly higher than the supply. Price for farmed game meat is relatively high, approximately 8,00–15,00€/kg. Price for game bird meat is also relatively good. For hunted game, waste percentage may be quite high. Consequently, some farmed animals may be harvested on an agreed time with low waste percentage.

The costs for game animals are relatively low. Construction costs for good, sufficiently large enclosures are understandably high but necessary to the business. In the meat processing, facilities of local hunting clubs can be used.

Game meat can be sold to restaurants in the surrounding area, bringing additional value to the restaurants' selection. The best margin arises when game meat is served to the company's own customer groups: profiling the company as game and "wild food" producer is essential to the company brand.

It is possible to create tourism products such as training and course activities which focus on game meat and game dishes. These may be organised in cooperation with the local expertise and educational institutions or "celebrity chefs".

Other parts of the game such as hides, antlers and hooves may also be commercially utilised. Demand for game hides is today higher than the supply. Preparation of hunting trophies is likewise a potential business activity. Trophy charges do not usually cover the preparation of trophies; if the hunt organiser prepares trophies for customers, these are separately charged.

2.4. WETLANDS AND FALLOW DEER FARM PLAN – Example

Wetlands plans.

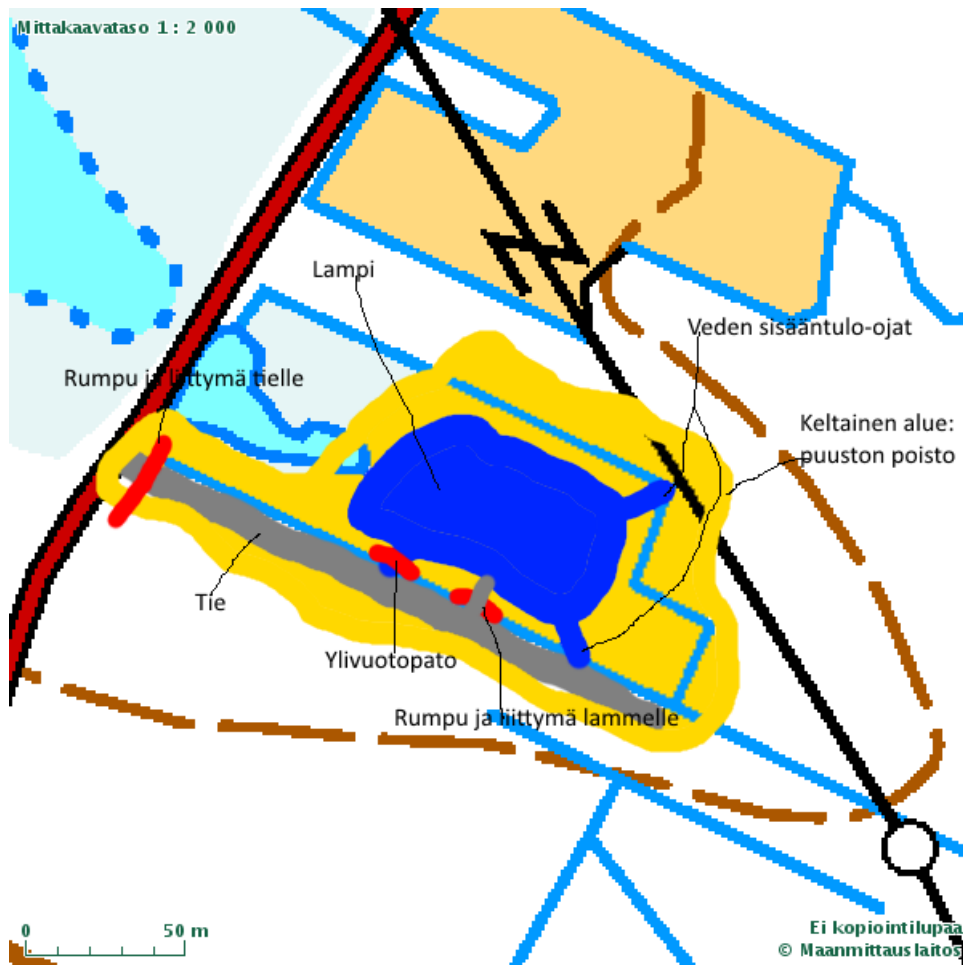
First wetland is constructed to Rouhianlahti on the eastern side of the road which bypasses the bay. No changes are made for the first 150 metres off the road. From this on trees which are mainly birches growing poorly in wet area are removed. Artificial stream running through the area east-west is used to direct water to the pond by constructing an interstice stream between the original stream and the pond. A similar interstice is constructed to north-eastern part of the pond from closest stream.

Water level in the pond is regulated by dam built between east-west running stream and the pond. When water level rises enough it surpasses the dam. The dam is constructed as long bottom dam rock bank that withstands large water mass and is easily heightened by adding rock and lowered by removing them.

The actual pond is built in a circular-shaped clearing. Depth of the pond varies but the pond should have water during drier seasons. The banks are sloping 20–30 degrees and the water depth by the banks is less than 50 cm.

Dug-up soil can be used for road foundations and culverts; however, most of the soil has to be spread in the proximity of the pond. The purpose is to avoid crater-like steep hole which appears unsafe to birds above but create a gradually sloping safe place with a good visibility.

The length of the pond is approximately 60 metres and width 30 metres. The pond will have a maintenance road constructed west–east on the southern side. The actual road is reinforced with a culvert and a junction so it will be drivable by machines.



Wetlands management

Second wetland is constructed approximately 900 metres west from first adjacent to the stream flowing into the lake. It will also work as sedimentation pool improving water quality in the lake. The second pond is smaller than the first one: 50–70 metres long and 12 metres wide.

Bonds are kept open by clearing willows and other trees at appropriate intervals. Spruce is planted to planned shooting spots. Spruces are made bushy by cutting and the height kept appropriate for hiding and shooting. If the ponds begin to silt up in time or grow reedmace, they are cleared by machines.

Hunting and game management plan in the wetlands

Feeding of birds

Feeding is arranged at the ponds but no other sites. If possible, hunting must be completely avoided in the surrounding area. A daily feeding area as large as possible must be secured for birds. Feeding attracts wild ducks from surrounding areas tens of kilometres away and ensuring a wide calm area is prerequisite for succeeded hunting in wetlands.

Feeding is begun in mid-July and continued as long as the ponds remain unfrozen or is considered necessary. For feeding, wheat, barley or oat can be used in this preference order. The feed is distributed in shallow water by the banks. Suitable depth is 0–50 cm.

The ponds are preferable visited daily during forenoon for adding feed and driving ducks away. In this way, feeding is available for birds every evening but runs out by morning. If this is not possible, enough of the feed is distributed for not to run out. However, too much grain should not be spread in the pond or it will start fermenting. If feed cannot be distributed daily and bigger amounts of grain must be spread for several days, ducks should however be driven away at forenoon. This will ensure a good evening flight: birds will develop a clear rhythm of coming to the pond but not staying there permanently. Despite disturbance on hunting days birds will arrive to the ponds in the evening.

An advantage of feeding is that hunting is targeted to most common dabblers that endure well stress caused by hunting. Birds coming to feed include for example mallard which feeds on grain. Feeding also increases the number of young birds. During early hunting season, older hen birds are often still moulting and hunting them in the reeds and other moulting places should be avoided. Feeding at artificial ponds attracts birds which are fledged and able to reproduce and local hen birds are spared.

Hunting

The two ponds are likely to have different birds; consequently, shooting at other pond should not impact the other pond. In certain circumstances, for example during a strong wind, shooting at the other pond may scare away birds which are coming to the other pond or are on the nearby bay. This is more likely to occur towards the end of the hunting season.

Shooting will be organised during evening flight. Flight routes of birds can be altered by cutting down tree stand and planting trees; however, shooting spots should be built only when bird movements have been observed. Wind conditions and their effect on the flying routes must also be taken into account. Normally birds land and take flight with upwind. Shooting at water will be prohibited for safety reasons; good practice is to shoot at birds flying in 45 degrees or higher. In shooting spot placement, shooting sector and other safety-related aspects must be observed.

Shooting should not be done repetitively for example during an evening flight and the following morning. A break of 9 days minimum between hunts is always required. In this manner birds stay in the area producing enough game for the whole autumn. Shooting can be organised for birds coming to ponds or by setting shooters on leaving routes of birds. Birds are allowed to land on the pond. On an agreed sign such as whistle the shooters prepare for overflight which happens when beater flushes birds off the pond. This usually allows shooters to make use of all chances; shooters can also be placed in hiding far enough from ponds so that birds will not avoid landing because of them.

Fallow deer farm, overview

Based on the field investigation, the area near old agriculture centre and main building was chosen as farm site. The site is approximately 12 hectares consisting of old pastureland and reforested field. Traces of cattle raising are still clearly visible in the environment.

The site has a rich growing medium with deciduous trees producing plenty of nourishment to fallow deer. The future pasture has a stream with water also during drier seasons. The ground is relatively flat making the enclosure construction easier. The site is extremely well suited for fallow deer farm.

The enclosure is made by using game fence. Minimum fence height is 2 metres with denser wire in the lower part preventing unwelcome visitors to the area. Post height is 3 metres minimum. Saturated wood is used in the posts. Gates have iron structures.

Thinning and clearing of the enclosure site is carried out and trees which may fall on the fence are removed. The purpose of foresting is to create suitable habitat for deer, namely open field which offers sufficient feeding and covering thickets. NOTE. CONIFEROUS TREES ARE PRESERVED.

Fence structure

Corner posts are round saturated timber 100 mm x 3,000 mm in diameter. Saturated utility poles can also be used as corner posts.

For actual fence posts and corner supports, 80 mm x 3,000 mm round saturated timber is used. Posts are driven approximately 700 mm in the soil at 4–5 metres intervals.

Post adjacent to corner post is erected 2 metres away which allows building of support structure (see picture). A similar support structure is used in the gateposts.

Wire netting is attached to corner posts from each horizontal wire and to interstice posts by 6–8 u-shaped nails.

Steel upper wire is attached approximately 100 mm above the fence by u-shaped nails.

Gates

Steel structure gates are 4.5 m wide and 2.5 m tall. Lower part of gates are hinged. Gates must be strong and easy-to-use and the gate parts must be firmly attached to each other below the road surface, which reduces bending caused by frost and traffic.

Cost estimate

Costs are calculated per kilometre for the fence and per hectare for clearing of trees.

Work costs include the following items:

- Fence alignment and culvert installation
- Post erecting; excavator work
- Installation of gates for two pieces; excavator work
- Excavator work in total
- Installation of posts
- Wire netting assembly, tightening and attachment - Gate installation
- Work costs in total

Material costs

- Wire netting

- Posts from different suppliers
- Upper wire
- Nails, clamps, other equipment
- Gates, 2
- Metal work
- Culvert tubes
- Material costs in total

Cost estimate/km in total

Clearing costs are not included

Fallow deer keeping

Fallow deer is easy to farm. Large number of animals can be raised in small enclosures. However, high density causes problems such as pastureland erosion and the animals will produce fewer fawns.

Suitable number of animals during winter is 10–20. The herd should have minimum of two 3–7 year-old bucks and 8 adult females; rest of the animals can be fawns or yearlings.

If additional feeding has to be supplied during the pasture seasons, the number of animals is too large.

Winter feeding

Winter feeding has been successfully carried out by giving the animals continuous supply of hay. In addition, animals are given root crops and grain. During long periods of extremely cold temperatures, molassed feed and grain, preferable flattened oats, can be given. Feeding season last 7–8 months.

The above-mentioned number of animals consume the following amounts of feed: 15,000 kg hay, 10,000 kg root crops and 5,000 kg oat.

Amount of consumed feed varies significantly according to the weather conditions and the nourishment offered by pastureland so amounts are indicative.

Lick blocks must always be available to animals; also pasture minerals can be offered.

Feed-assisting constructions can be built, however, these should be simple and easily maintained. Bale can be provided in shelter; for grain a feeder is not required, auto-cleansing mangers are sufficient. Manger can be prepared by splitting 2-metre 300 mm wide plastic culvert tube.

Feed has to be offered in several mangers so that all animals can feed at the same time. Capital bucks tend to take the best feeding places and feeding should preferable be provided at open place where their observation is possible. Sufficient supply of clean water for the animals must be secured.

In rainy and windy weather the animals seek shelter from spruce thickets and individual spruces. During the summer, animals are often pestered by insects and seek open places with more wind; consequently the enclosure should have an open field, such as young birch grove.

Predatory animals, mainly lynx, can at times cause problems. Electric fence and a good licence policy can be used as precautionary measures. Appropriate wire netting on the enclosure keeps loose dogs outside.

In principle, fallow deer is easy to farm.

Enclosure layout



Gate



Fence



CASE – WHITETALE DEER HUNTING

The whitetale deer population was brought to Finland 1934, now the population is now approximately 60 000 animals. The current harvest is approximately 23 000. It is a good example of a “tulokaslaji” population that is successful in Finnish nature. The good calf production is being sustained with additional organized winter feed, with over double calf production in those areas.

Local hunting groups for example in Vesilahti region, have built infrastructure for hunting tourism. They have built feeding places and heated shooting structures for successful and comfortable hunt. Hunting tourists are being accommodated in hunting cabins. The hunting group organizes the hunt and process the shot animals. Vesilahti hunting group has approximately 100-200 licenses for whitetale deer for hunting ground of 6 000 ha. This is a good example of over dense population that makes heavy harvesting and hunting tourism possible.

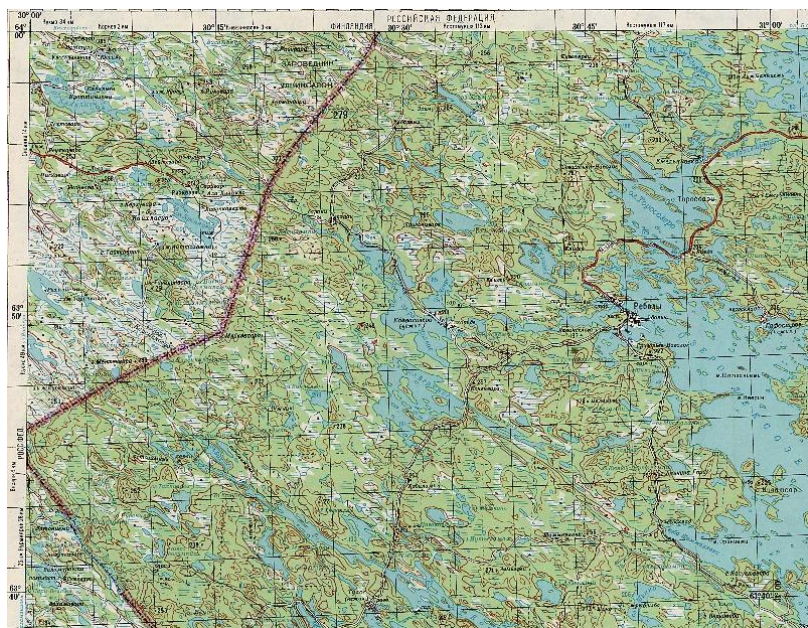
CASE EXAMPLE – CAPERCAILLIE FARMING

Capercaillie farming has been practiced in Norway and Sweden. The birds have been grown for the meat production as well as for hunting purposes. Growth speed in farmed environment the bird grows over three kilograms in one summer period. However, there is not enough evidence of the survival of the birds in natural environment after farming.

3. DEVELOPMENT MODEL FOR CREATING SUSTAINABLE HUNTING BUSINESS IN TARGET AREA

Pilot target: Repola hunting site development

Location: Mujejärvi



3.1. Estimating the current game population based on given data

We have received information from Karelian Research Institute about the game population, density, licenses and harvested animals from years 2010 – 2013 from Kalevalskii, Kostamus and Muezerskii regions.

	Districts	Km	Squirrel	Wolf	Stoat	Alpine hare	Pine marten	Fox	Moose	Wolverine	Reindeer	Lynx	Capercaillie	Black grouse	Hazel grouse	Willow grouse
2013	Kalevalskii	846,0	1,15	0,00	0,12	4,34	2,30	0,84	3,45	0,38	1,03	0,00	0,54	3,53	1,02	0,54
	Kostomus	384,6	2,81	0,00	0,03	5,43	2,34	0,94	3,93	0,10	0,49	0,00	0,64	2,60	1,47	0,29
	Muezerskii	839,7	1,39	0,11	0,13	4,13	1,08	0,63	4,03	0,12	0,40	0,07	0,87	10,38	3,07	1,31
2012	Kalevalskii	928,3	0,73	0,01	0,25	4,58	1,55	0,64	3,25	0,08	1,22	0,00	0,33	3,50	0,90	0,55
	Kostomus	412,9	0,50	0,00	0,37	2,51	0,69	0,87	2,46	0,10	0,00	0,03	0,11	5,94	0,37	0,10
	Muezerskii	1077,9	0,99	0,29	0,18	2,38	1,18	0,56	2,09	0,09	0,20	0,06	0,37	4,32	1,10	0,36
2011	Kalevalskii	1016,30	0,70	0,03	0,17	3,83	1,44	0,69	4,02	0,37	0,96	0,02	0,31	3,27	0,94	0,39
	Kostomus	375,50	0,61	0,03	0,35	2,72	1,09	0,69	2,02	0,21	0,44	0,00	0,22	1,45	0,93	0,37
	Muezerskii	807,10	1,32	0,24	0,16	3,09	1,01	0,66	2,46	0,10	0,11	0,11	0,44	4,81	1,23	0,59
2011-13	Kalevalskii	930,2	0,86	0,01	0,18	4,25	1,76	0,72	3,58	0,28	1,07	0,01	0,39	3,43	0,96	0,50
	Kostomus	391,0	1,31	0,01	0,25	3,55	1,37	0,83	2,80	0,14	0,31	0,01	0,32	3,33	0,92	0,25
	Muezerskii	908,2	1,24	0,21	0,15	3,20	1,09	0,61	2,86	0,10	0,24	0,08	0,56	6,50	1,80	0,75

Population density in target areas 2011 – 2013.

Hunting season	The number of issued licenses		The number of harvested animals		Region
	Moose	Brown bear	Moose	Brown bear	
01.08.2010-01.08.2011	100	24	71	4	Muezerskii
01.08.2011-01.08.2012	79	24	61	1	
01.08.2012-01.08.2013	83	24	65	10	
01.08.2010-01.08.2011	18	3	8	1	Kostamus
01.08.2011-01.08.2012	22	4	12	4	
01.08.2012-01.08.2013	39	4	26	3	
01.08.2010-01.08.2011	99	23	62	14	Kalevalskii
01.08.2011-01.08.2012	96	22	66	7	
01.08.2012-01.08.2013	98	20	69	20	

Permissions of Moose and Brown bear in target regions during 2010 – 2013

Building Repola Pilot case for hunting tourism

In the light of the received information, the game populations and densities in target areas are in a level that requires strict permissions policy and control of the hunting. At this stage, the possible target species for hunting tourism are Capercaillie, Black Grouse and Brown Bear.

Below is a list of activities needed for building a hunting product. The Field research has to be more extensive for Capercaillie and Black Grouse. Brown bear hunt requires more concrete efforts. Hunting could be arranged both in the autumn and spring seasons.

Building a hunting product for designated target area (actions for 1st year)

- 04/2014** Licences and guns import formalities
- 04/2014 – 07/2015** Mapping the hunting geography and locations
- 06/2014 – 07/2014** Road network mapping
- 04/2014** Accommodation arrangements
- i. **Hotel accommodation (preferred)**
 - ii. Camping accommodation / **Building a tent camp (preferred)**
 - iii. Cottage accommodation
- 05/2014 – 07/2014** Financial negotiations; Partner search from Europe
- 06/2014** Guide services, setting up vocational training (customer service, safety)
Building bear hunting locations (If international partners are found)
- 05/2014 →** Starting the feeding, carcasses (legality; contracts with fish farming facilities and meat production facilities) and cornfields (**must be started even with own risk beforehand, so that successful hunting product is ready in the second year**)
- 06-07/2014** Building hunting stands and shelters (before season starts)
- 07-08/2014** Safety and quality assurance arrangements for Bear hunting (Shooting places, shooting sectors, written and oral operating procedures for customers, going through the hunting process with organising people so that all guides ALWAYS operate in standard way → Lightweight quality system for practicing Bear hunting.
- 06-07/2014** Facilities for skinning, cooling and freezing the game
- 05-09/2014** Cost calculations and product pricing (including external services like accommodation, transportation, food and catering etc.)
- 08-12/2014** Producing sales material and starting marketing activities
- 08/2014 – 10/2014** Test groups for Autumn season hunt (European tour operators and media)
- 05/2015** Test groups for Spring season hunt (European tour operators and media)
- 06/2015** Finalising the product based on feedback from Test groups.
- 08/2015** First commercial hunting groups

Of this list, each section can be described more in details. More concrete information and direction from local interest groups is needed to deepen each of the activities listed.