

25.1.2016

Report of Raccoon Dog management in Finland for 2015

The Goal for 2015 in Finland was to continue the Actions of MIRDINEC project to prevent further invasion of Raccoon Dogs to Sweden and Norway, and to develop the work to be more cost effective while exploring the solutions for long-term financing.

There was another person in Central Lapland for autumn season to coordinate the project actions and to carry out the necessary field work. The need for additional recourses to Central Lapland was to prevent the invasion to Norway

In Finland the following Actions was carried out following the project working plan with practical adaptations where seen reasonable.

- Continue the use of monitoring cameras/early warning system EWS and develop the method to allow for rapid response from local voluntary hunters
- Continue the use of Judas animals and develop the method to be more cost effective
- Continued co-operative management and information activities with volunteer hunters
- Information about IAS and dissemination of project results
- Efforts to renew the current legal context of the raccoon dog and its status as an invasive species, in alignment with the Finnish management plan of the raccoon dog, produced during the LIFE project.
- Legal permissions

General overview and Raccoon Dog (RD) harvest

During 2015 the project achieved the set objectives and succeeded to keep the RD population down in the Finnish Lapland.

Project had two persons. Juha Mäkimartti worked for the project whole year with focus in South-Western Lapland. Jussi Juntti worked as a seasonal worker from August 1st until end of the year with focus in Central Lapland.

The raised awareness among public and hunters has resulted new observations and contacts from new areas improving our overall image of the RD situation in the project area, especially Central Lapland. The public support for the project has been on a good level and media has treated the subject well.

Active co-operation with local voluntary hunters has continued and expanded well. The purchased trap materials, trap alarms, wildlife cameras and gift cards has played an important role as project has been able to provide new tools for RD hunting. In 2015 a significant number of hunters has participated education events and meaningful amount of live traps are set throughout Lapland by trained hunters.

The renewal of legal context of RD and the solutions for long-term financing has proven to be tough challenges. With current economic situation it is becoming increasingly difficult to have project funding in Finland and even more difficult to create new permanent funding channels from state budget. The RD harvest by project staff and involved voluntary hunters was 100 animals in 2015. In addition project staff has received information of additional 32 RD killed by other hunters and of 2 traffic kills. Total of 134 Raccoon Dogs has known to be killed in 2015 in the project area.

The project harvest numbers in 2015 are among lowest in the period of 2011-2015, and a half of the 2011 harvest but at the same level as in 2014. Please refer to table 1 below. As a simple analysis of the harvest numbers from 2011 to 2015, we can see a decline of the RD numbers.

- 2011 was first year of MIRDINEC Life+ and project staff was still finding the best ways of working: 122 Raccoon Dogs killed
- 2012 the number of RD killed by project raised to 193 due to increased know-how and hunting pressure. Since that the harvest has decreased to 97 in 2014 and 100 in 2015 while the know-how, resources and working areas has increased. Please note that out of the 100 animals of 2015, 24 were young cubs killed from Judas animals in summer period.
- The number of reported RD kills outside of project staff and involved hunters has decreased from 128 in 2011 to 32 in 2015.
- Known and confirmed traffic killed RD has decreased from 19 in 2011 to 2 in 2015.
- The number of other small predators caught in the live traps can be used as a simple 'fox' index of the hunting pressure and the relative abundance of Raccoon Dog. The fact that the number of other predators in traps has increased while the number RD has decreased reflects that the hunting pressure has increased while RD harvest has declined. This indicates declining RD population.

Table 1. Raccoon Dog harvest

Raccoon Dog Harvest, MIRDINEC After Life	2011	2012	2013	2014	2015
<i>January</i>	0	0	0	3	2
<i>February</i>	6	4	0	10	4
<i>March</i>	27	40	10	9	2
<i>April</i>	2	22	23	4	9
<i>May</i>	1	9	14	3	4
<i>June</i>	8	15	0	3	7
<i>July</i>	4	7	15	1	17
<i>August</i>	17	8	9	5	10
<i>September</i>	22	27	17	14	16
<i>October</i>	24	33	28	27	19
<i>November</i>	5	26	30	15	7
<i>December</i>	6	2	3	3	3
Total project/Mäkimartti	122	193	149	97	100
Other harvest known by Mäkimartti (actual harvests higher, this is and indicative figure)	128	40	39	32	32
Traffic kills (known by Mäkimartti)	19	12	9	4	2
Total killed Raccoon Dogs	269	245	197	133	134

Other small predators in projects live KaNu Traps ' the fox index'	9	13	12	18	30
red fox	3	5	6	12	14
badger	5	6	4	3	10
mink		2	1		2
pine marten	1		1	3	4

Project Actions

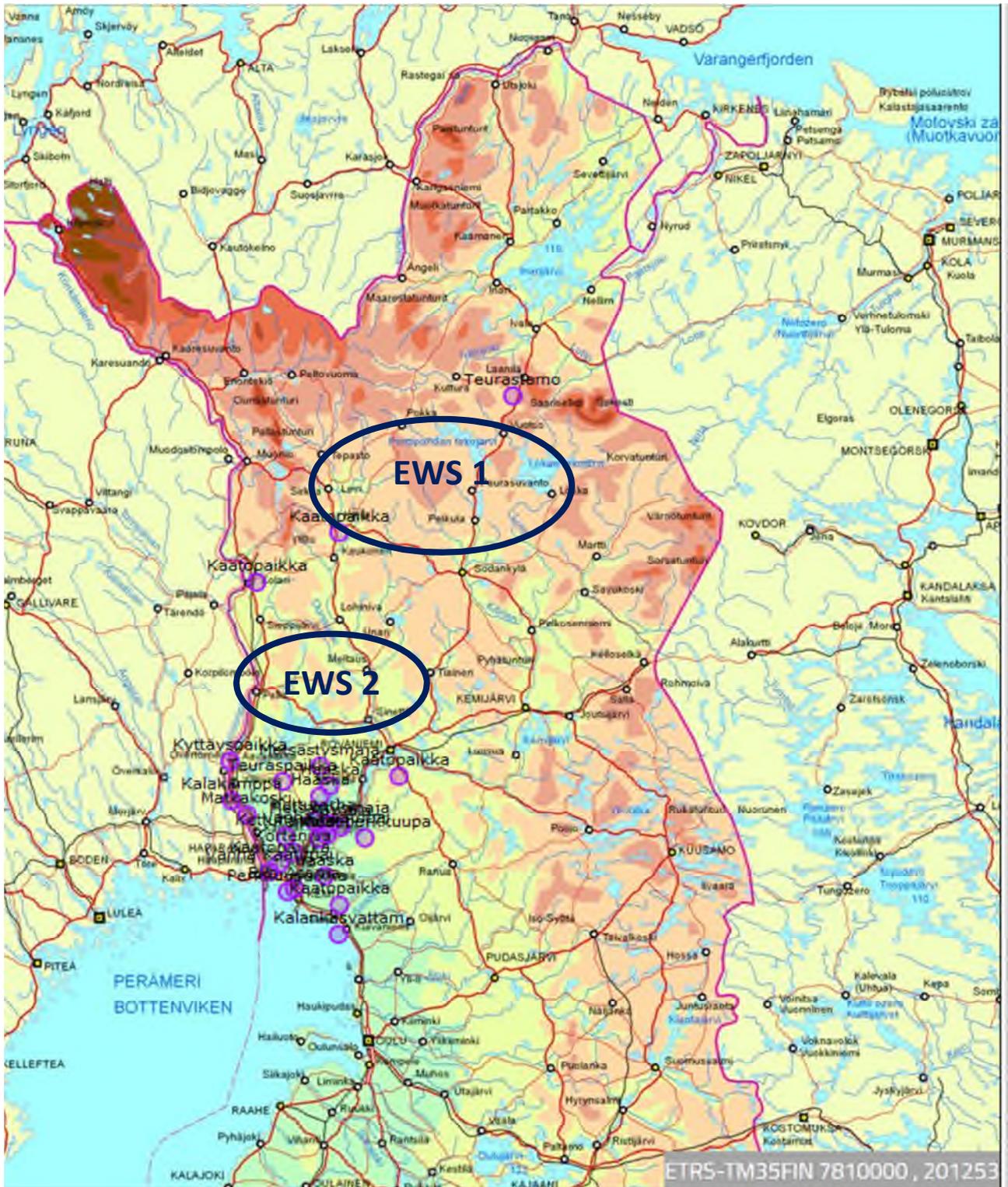
Continued use of monitoring cameras/early warning system EWS and developing the method to allow rapid response from local voluntary hunters

An EWS line 1 of 15 cameras was established in Central Lapland during August. There was 4 000 pictures taken. In one poor quality picture there might be a Raccoon Dog, but in practice there was no observations.



An EWS line 2 of 10 cameras was established in October. No pictures of Raccoon Dogs.





SAT: ? **ULTRAPoint**

Map: Location of EWS lines established by the project and some of the known landfills, reindeer butcheries etc in the projects database.

34 New SMS cameras were purchased with external batteries.

- 20 Uovision UM565
- 14 Burrel S10



Swedish Judas animal trapped by voluntary hunter in an island of the Tornio River.

Most of the cameras are used by voluntary hunters.

Continued the use of Judas animals and develop the method to be more cost effective

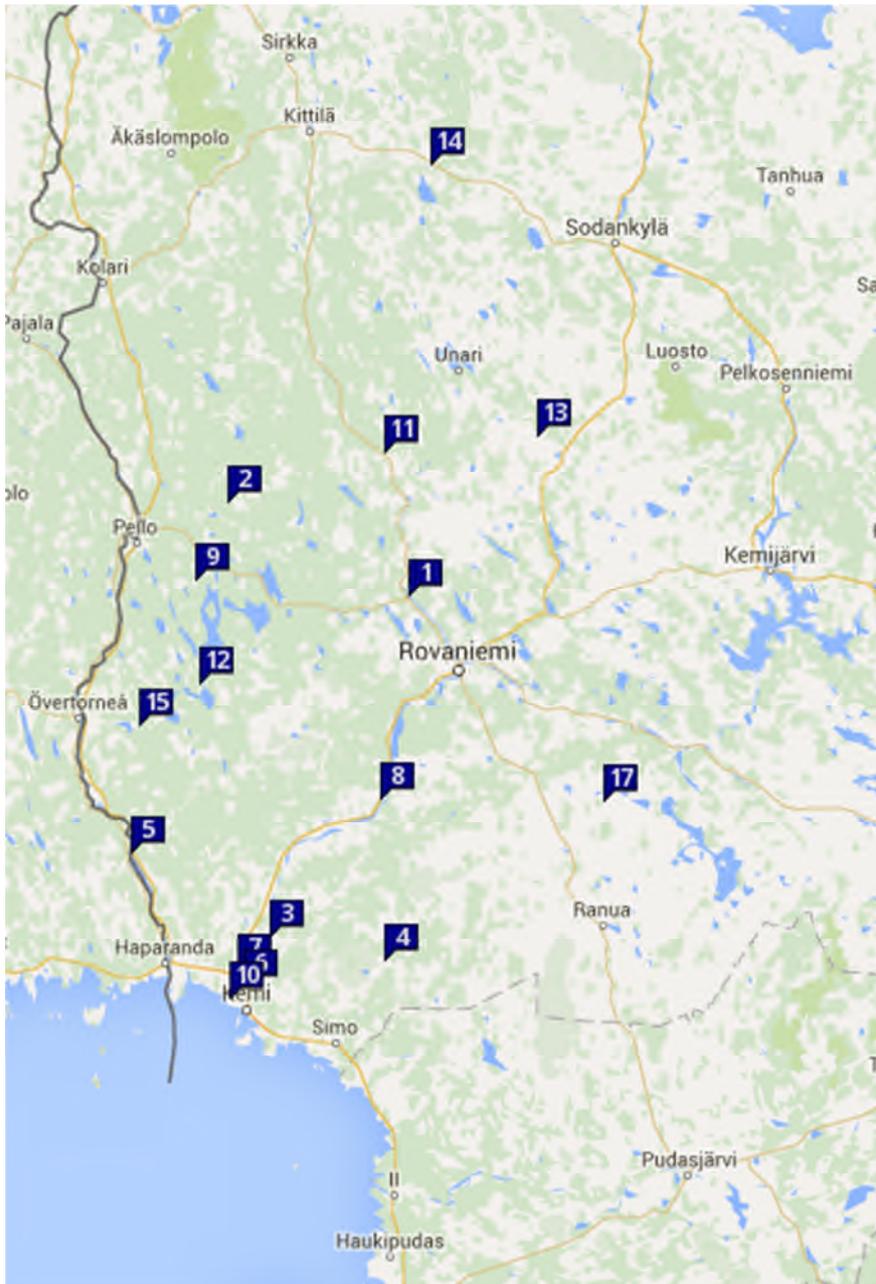
Total of 16 Raccoon Dogs are currently used as Judas animals. The focus of Judas-animals has been extended to Western parts of Central Lapland.

Judas animals were recaptured 51 times by the project and either killed, re-collared or just checked for partners. Three of the Judas's had cubs of 8, 7 and 9 cubs per litter. In addition killed or collared partners numbered 10, which adds up to 36 Judas-assisted eradications.

Judas animals were captured by voluntary hunters 17 times. 8 were trapped and 9 were caught with dogs while hunting.

One collar was found in old mail box in Övertorneo. It was killed by hunters, but not reported to project. Collar was still working.

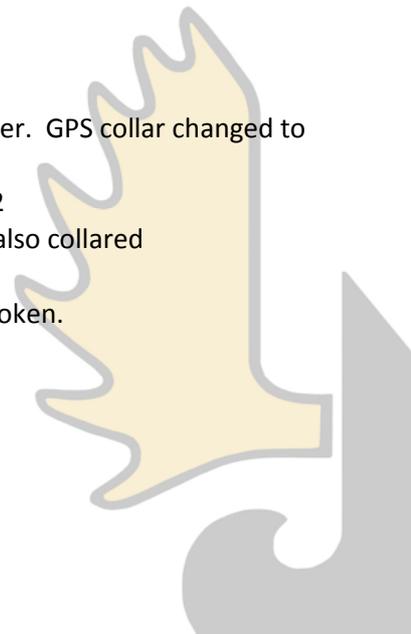




Location of Judas animals in October

Example of Juda animal movements

- 07.01.2014 Raccoon dog arrived from Swedish to Finland
- 21.01.2014 it taken captured by Juha first time. It was alone, no partner. GPS collar changed to 3454
- 27.08.2014 captured again. It was alone again. Changed collar to 3462
- 10.06.2015 captured again, now there was also partner. Partner was also collared
- 24.06.2015 No signal from raccoon dog
- 24.10.2015 A local hunter killed this animal in Simo. GPS collar was broken.



Continued co-operative management and information activities with volunteer hunters

Project continued active working with voluntary hunters. The local people are the key resource for effective Raccoon Dog management in Lapland. The hunters have participated the project actions well and interest towards educational events and reporting RD observations have been good. However, due to declining population it is becoming harder to keep up the RD hunting motivation. It is hard to motivate to hunt for something that almost does not exist.

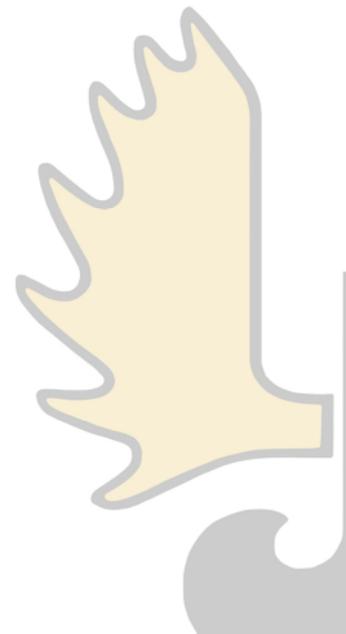
During 2015 total of 43 different events was organized or participated by the project with total of 19618 participants. Project visibility was high especially in the exhibitions attracting high numbers of visitors.

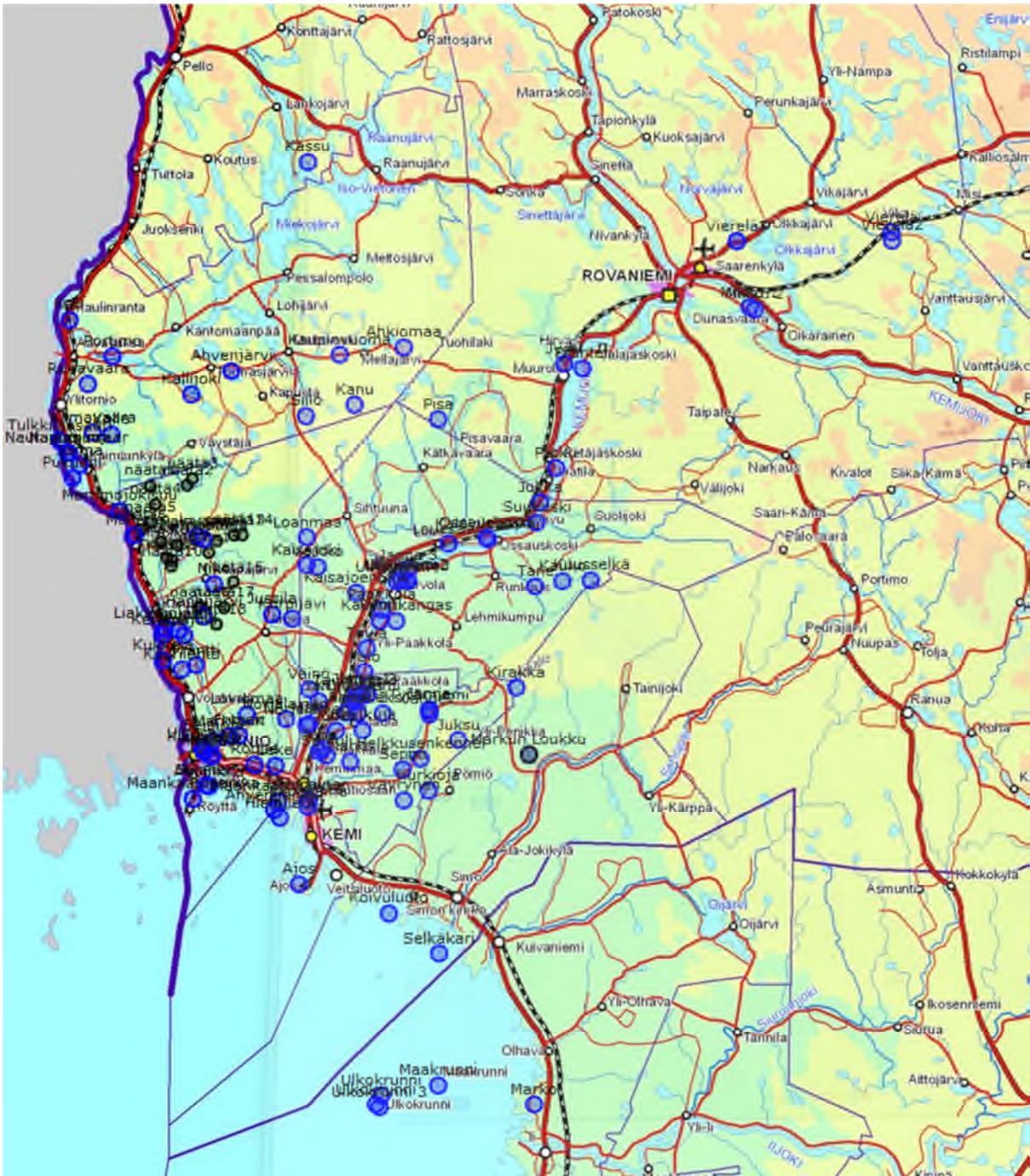
Wildlife cameras, KaNu traps and trap building material and trap alarms were provided for interested hunters in the project area. In some places the traps set during MIRDINEC project were moved to better places to increase the effectiveness. The model traps were built in the educational events and material for more traps was given to local hunting associations for further use.

The project purchased 34 cameras, material for total of 180 KaNu –traps, 40 Uovision trap alarms. So far 80 KaNu traps has been built in educational events and materials for 3-9 traps are given to hunters that has participated the events, totaling materials for 70 traps. Project staff has materials to build another 30 traps in 2016. In addition Metsähallitus, Kemijoki Oy and Game Management Associations have sponsored some trap materials for the RD eradication work.

Table 2. Events and participants during 2015.

Type of event	number of events	number of participants
Hunter education/information	27	386
Schools and Young hunters	6	762
Exhibitions/general public	10	18470
TOTAL	43	19618





Map of trap locations know and partly operated by the project staff. Most traps are set and used by voluntary hunters and the exact locations are unknown by project staff.



Information about IAS and dissemination of project results

Project staff has done active media work during 2015. Examples of media efforts:

- Article of Swedish Raccoon Dog project in Koiramme-magazine (Finnish Kennel Club's magazine)
- Articles in Metsästäjä/Jägaren magazine
- Radio interview to Radio Perämeri (South-West Lapland's local radio station)
- Article in Lapin Kansa and Pohjolan Sanomat (greatest newspaper in Lapland)
- Instagram account @supihanke reached 100 followers, without aggressive promoting
- Closed Facebook group for Mid-Lapland volunteers is now active. Members share their catches and sightings
- 200 flyers made for field introduction and contact information

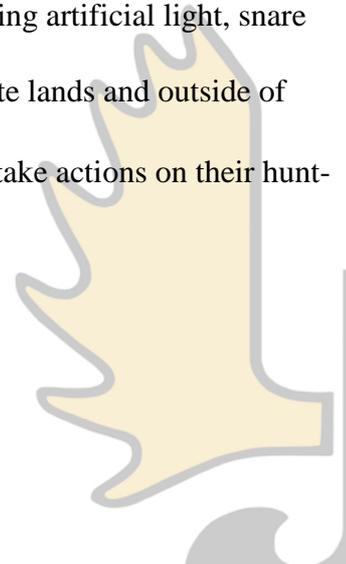
There is clear response after each article from general public and hunters in forms of Raccoon Dog observations. Especially articles in hunters magazine has provided feedback. This indicates that the issue is still important for people and many people still find the work as a new deal in Lapland.

Efforts to renew the current legal context of the raccoon dog and its status as an invasive species, in alignment with the Finnish management plan of the raccoon dog, produced during the LIFE project.

The Hunting Act was revised during 2014 but it did not provide major improvements for Raccoon Dog eradication. New revision is coming in 2016 including the implementation of the AIHTS (Agreement on Humane Trapping Standards). A separate project is run by Finnish Wildlife Agency in co-operation with Swedish authorities to test and approve live traps for Raccoon Dog.

Legal permissions

- The project was issued a derogation of Hunting Act for effective working though summer and to use forbidden hunting methods (shooting close to vehicle, using artificial light, snare etc.)
- Metsähallitus has issues permit to use ATV and Snowmobile on state lands and outside of designated trails.
- Virtually all key hunting associations have permitted the project to take actions on their hunting areas.



(11)

Costs of Actions and realized funding

The total costs of project Actions in 2015 was 163 820,38 euros

The project ended up with a negative budget balance, compared to last year. This was partly compensated by the last years savings of 3 647, 66 euro, which was forwarded for the costs of project actions in 2015.

The key main items for extra costs were travelling costs which were underestimated in terms of having two persons working and additional focus in Central Lapland. Also the Gift Cards for hunters live-catching Judas-animals were not included in the budget. In addition some material for live traps were purchased late in 2015 and will be partly used during 2016.

Cost item 2015	Planned	Realized
1. Salary costs: 1 full time person 35 000 and a seasonal worker 18 000. Overheads not included in calculations as last year, that is the reason for 'decreased' costs	53000	54 235,17
2. Service, maintenance and necessary update/repair of satellite/GSM-GPS collars for Judas animals (~ 20 collars)	35000	35 000,00
3. Materials and triggers for KaNu -live traps	12000	14 443,16
4. Remote trap alarm + GSM service	12000	3 390,00
5. MMS wildlife camera+ GSM service	5000	9 237,38
7. Motivating voluntary hunters. Gifts, Thanks giving dinners etc,	3000	4 528,30
Batteries, timber, screws etc small items	3000	6 987,34
8. Travel costs	30000	35 999,03
Total	153000	163 820,38

Funding	Planned	Realized
<u>Finland</u>		
Finnish Wildlife Agency: 1	35 000	45 820,38
Metsähallitus: 8	10 000	10 000
<u>Sweden: 2</u>	35 000	35 000
<u>Norway: 1, 3, 4, 5, 6, 7, 8</u>	73 000	73 000
TOTAL	153 000	163 820,38

(11)

Conclusions

- The Raccoon Dog population of the project area in South-Western Lapland has stayed at low level compared to 2012. The relatively high number of Judas animals, 17, captured by voluntary hunters is a good sign. Also, if the 24 cubs taken from Judas animals during summer are excluded from harvest bag, the harvest is the lowest of the project period.
- Raccoon Dogs are present throughout Lapland. North of Arctic Circle population is small and mostly situated around Ounasjoki River. Frequent observations are received around the landfill of Rovaniemi.
- Project actions have been cost-effective and well accepted thanks to hands-on working model that is easy to contact and participate for the local hunters.
- Additional seasonal staff focusing in Central Lapland was important for awareness raising in that region and strengthened the project actions there. Seasonal manpower is foreseen to be needed north of Arctic Circle for cost-effective working.
- All available means of Raccoon Dog management are needed and together different working tools (active hunting, Judas animals, cameras, trapping) create a frame to control the population

Recommendations for 2016

- The project Actions need to be continued at least on the current level. The relative importance of project staff will increase as the motivation of the voluntary hunters decline following the decrease of the Raccoon Dog population.
- The 'Gift Card' motivation scheme will be continued. It has proven to be effective mean to increase the hunting pressure and to retrieve 'lost' Judas animals which collars are disfunctioning.
- There is continued need for seasonal resources in Central and Eastern Lapland for collecting information and reducing the number of Raccoon Dogs. Without actions in these areas there is a risk for an establishment of a new breeding population producing individuals potentially dispersing to Norway and Sweden.

January 14th 2016.
Mikko Alhainen
Finnish Wildlife Agency

