



## BACKGROUND

- In recent decades the populations of wolves (*Canis lupus*), bears (*Ursus arctos*) and other large carnivores have increased in Finland and in Estonia and expanded towards more inhabited areas



## CONFLICT

- The amount of damage to pasturing livestock and hunting dogs is increasing as well as negative attitudes towards predators
- Large carnivores are often perceived as a threat for human safety
- Large carnivores are protected by several international agreements and EU regulations



### Domestic animals killed by wolves in Estonia 2004-2008 (P. Männil, M. Kübarsepp 2008)

Year	Dogs	Sheep	Cattle
2004	59	106	3
2005	16	90	3
2006	8	53	1
2007	13	90	1
2008	5	280	4

### COMPENSATIONS

- The compensation systems differ between countries
- Payments species-based or damage-based
- In Finland 4,25 million € estimated for compensations in 2009
- In Estonia 76 700 € applied in 2009
- What causes the 55 times difference?
- The compensation programs by themselves are not a solution to human-large carnivore conflict and they should be used with big caution to avoid creating addiction instead of motivation



## NON-LETHAL PREVENTIVE MEASURES

- Shepherds
- Wolf-phone service
- Anti-predator fences
- Protection vests
- Electrical devices
- Livestock Guarding Dogs



## WHAT IS A LIVESTOCK GUARDING DOG?

- LGD, Livestock Guarding Dog, Livestock Protection Dog
- Has been used in Asia and Europe for thousands of years



## WHAT IS A LIVESTOCK GUARDING DOG?

- Protects domestic animals independently without human command even if often together with shepherds



## WHAT IS A LIVESTOCK GUARDING DOG?

- LGD is not a herding dog, differs significantly in behaviour



## WHAT IS A LIVESTOCK GUARDING DOG?

- In countries of origin usually work in dog packs



## WHAT IS A LIVESTOCK GUARDING DOG?

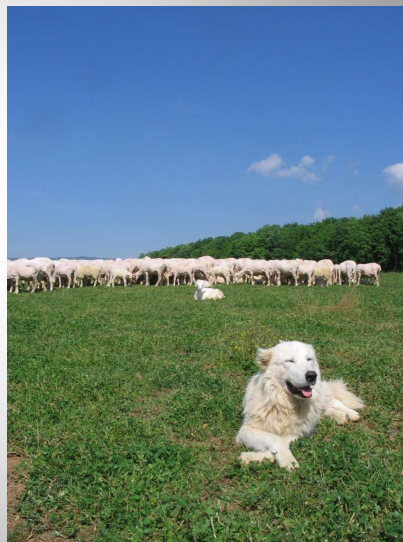
- Protects independently the domestic animals to whom has been **bonded** in a very early age





## WHAT IS A LIVESTOCK GUARDING DOG?

- Nowadays also used in Argentina, Australia, Canada, Namibia, USA...



## FOUR QUALITIES EXPECTED FROM A LGD

- Attentive
- Trustworthy
- Protective
- Human tolerant



## PROBLEM

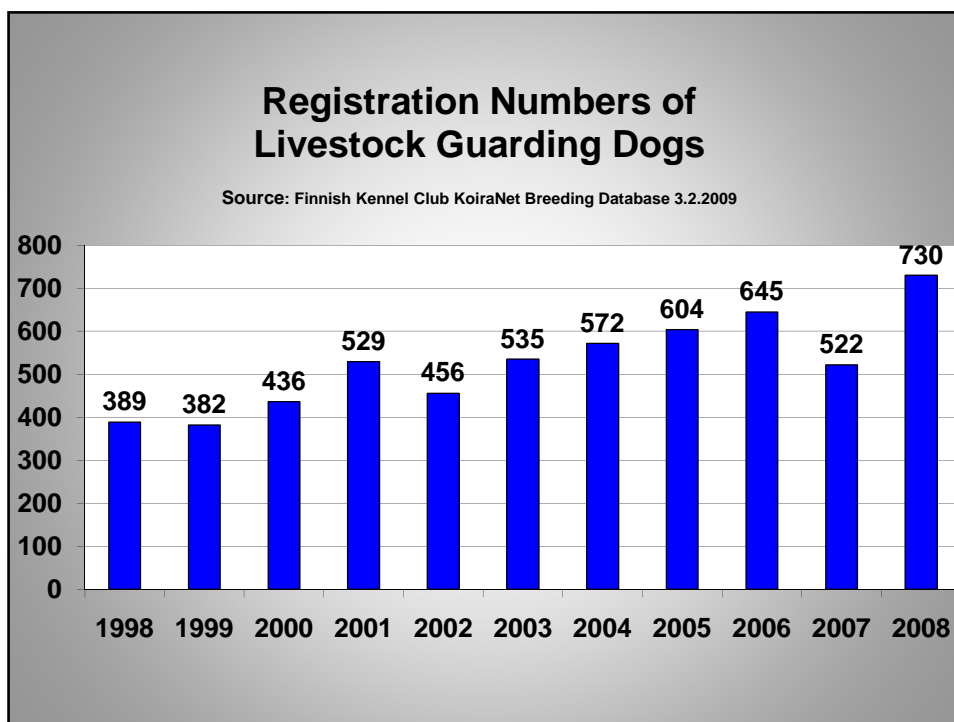
- There is no LGD tradition in Nordic and Baltic countries
- Farmers have started to acquire Livestock Guarding Dogs on their own initiative
- In Finland information about fifty and in Estonia about two farms using LGDs



	Yhteensä											
Rotu	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	kpl
Pyreneittenmastiffi	76	44	62	62	42	51	105	94	96	91	152	875
Tiibetinmastiffi	59	70	77	71	49	94	89	64	96	65	118	852
Pyreneittenkoira	19	39	50	78	42	105	94	101	104	60	112	804
Kaukasianpaimenkoira	53	58	79	53	99	78	73	119	103	63	91	869
Estrelanvuoristokoirat	44	58	39	62	72	30	70	42	74	37	86	614
Owczarek podhalanski	21	16	1	25	35	39	44	56	55	45	48	385
Slovakiancuvac	17	11	12	12	15	20	17	19	21	13	34	191
Keskiaasianpaimenkoira	28	25	33	68	31	45	16	39	38	27	22	372
Maremmano-abruzzese	5	3	8	20	19	22	3	18	17	30	20	165
Kuvasz	24	22	7	19	8	21	26	26	1	32	12	198
Espanjanmastiffi	28	14	51	13	25	13	11	2	19	23	12	211
Komondor	6	5	7	12	0	4	0	6	0	5	10	55
Sarplaninac	9	9	8	16	7	1	10	0	4	5	9	78
Etelävenäjänpaimenkoira	0	8	2	18	11	12	14	18	16	26	4	129
Anatolianpaimenkoira	0	0	0	0	1	0	0	0	1	0	0	2
<b>Yhteensä kpl</b>	<b>389</b>	<b>382</b>	<b>436</b>	<b>529</b>	<b>456</b>	<b>535</b>	<b>572</b>	<b>604</b>	<b>645</b>	<b>522</b>	<b>730</b>	<b>5800</b>

Lähde: Kennelliiton KoiraNet Jalostustietojärjestelmä 3.2.2009





## RESULTS

- 50 farms
- 12 different LGD breeds



## RESULTS

- No damages during LGDs used
- Various kinds of domestic animals were guarded by LGDs



## RESULTS

- Successful bonding with the stock, the LGD is going to protect, is needed for successful guarding
- LGD pups bonded properly in an early age had less disadvantages



## OTHER BENEFITS

- Termination of elk (*Alces alces*) damages to pasture fences
- Termination of white-tailed deer (*Odocoileus virginianus*) damages to horticultural plants
- Worth to use against wild boar (*Sus scrofa*) predation on crops in Estonia



## OTHER BENEFITS

- Increasing personal feelings of security
- Children could be permitted to be outdoors





## OTHER BENEFITS

- Hunting and pet dogs were safe at farmyards
- Cost-efficient, all costs can be reduced in taxation



## OTHER BENEFITS

- The need for additional fencing to keep the LGDs filling their purpose seemed not to be essential if LGDs had been **bonded properly**



## OTHER BENEFITS

- LGDs were interlinked with improved quality of life in rural areas and development of rural tourism
- Does the guarding job improve the health and welfare of LGDs?



## PROBLEMS

- How to raise the knowledge about using livestock guarding dogs for work among dog-breeders and farmers?
- There is a need for educational and advising projects based on research to fulfill the lack of knowledge



## DISADVANTAGES

- Minor difficulties in inter-animal relationships: playing, chasing and wandering of LGDs outside pasture areas



## CONCLUSION

- LGDs have been successful this far in Finland and Estonia:  
0 CASUALTIES
- Nordic-Baltic cooperation needed in research to develop preventive measures
- Compensation sums could be reduced by supporting effective preventive measures

