

Experiences and challenges of restoration and use of peatlands in Estonia



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Estonian Fund for Nature

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Riga

Conservation and Restoration of Mire Habitats – LIFE Mires Estonia
LIFE14 NAT/EE/000126





Near future (2023) perspective

Done	4500 ha
State Forest Management Centre (RMK)	4000 ha
LIFE MIRES ESTONIA	7500 ha
Abandoned extraction fields	2000 ha
LIFE PEAT RESTORE	3000 ha

Total	ca 21 000 ha

2% of the drained peatland...but the best sites!

Challenges:
Little experience with fens or extracted sites
Public awareness (still) very weak, negative, NIMBY
Few contractors...very little time
Short monitoring time



Conservation and Restoration of Mire Habitats – LIFE Mires Estonia



Restoration area: app. 7500 ha

Funding: EU LIFE Program; Environmental Investment Centre. Total 2,8 mln EUR, EU share 74,61 %

Timeframe: Sept 2015 – Aug 2020 (Dec 2021)

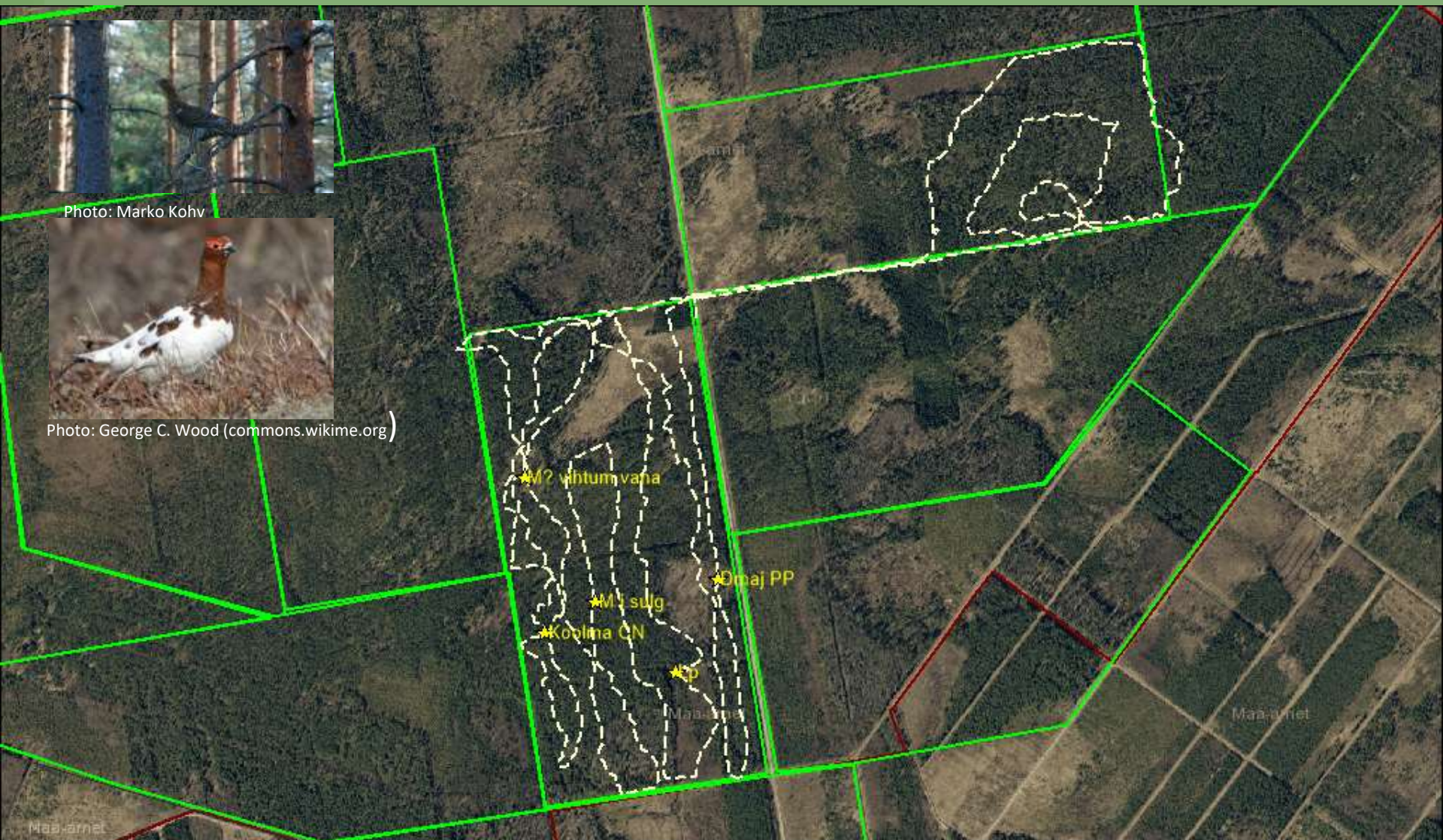
Partners: ELF, University of Tartu, MTÜ Arheovision



Photo: Marko Kohv



Photo: George C. Wood (commons.wikime.org)



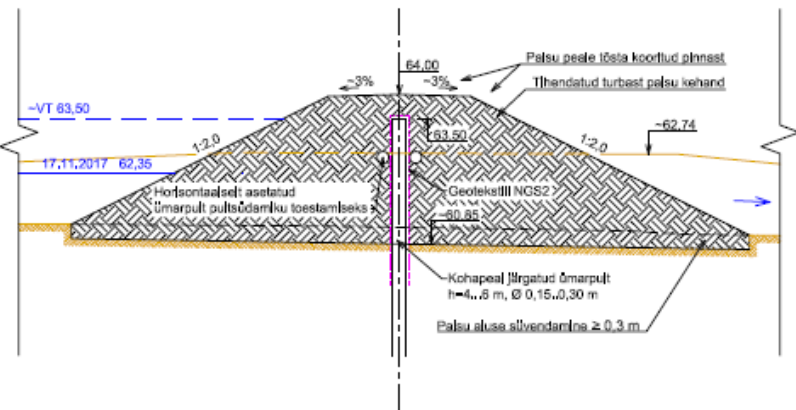
200 volunteers 4500 km 150 km²
300 specimen 50 nestlings







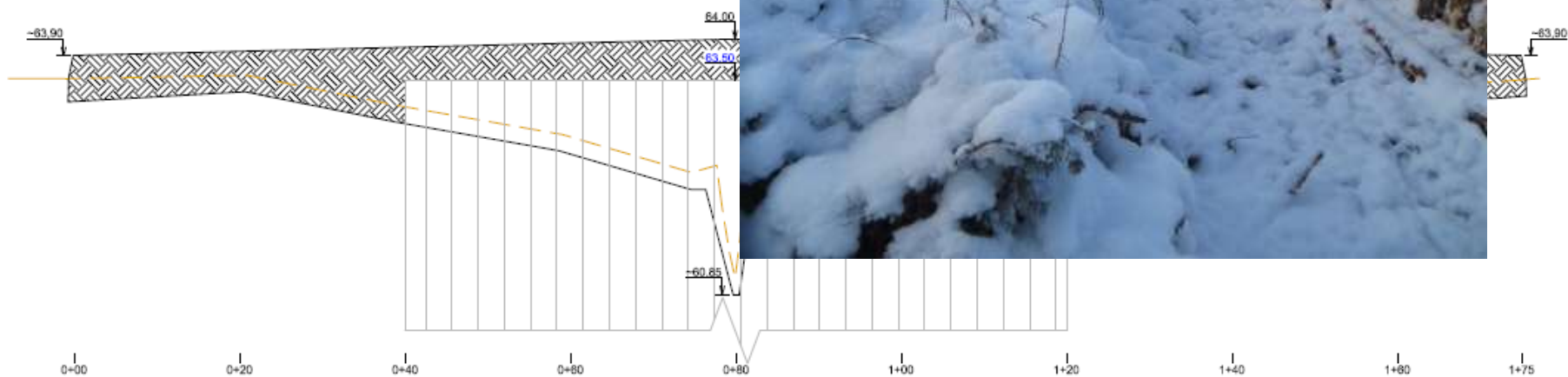
PAIS 1 LÕIGE A-A (M 1:50)



fluid pinnest
 õhu kehandid

mine ≥ 0.3 m

PAIS 2 LÕIGE C-C (Mh)



		Gidra-Loobuse Pind	
2017. a. 15. märtsi seisuga		Loobumise ja loobumise ajavahemik	
2017. a. 15. märtsi seisuga		Mõõdetud	
Koostaja	15.03.17	Kesk	1:1000
Kesk	15.03.17	15.03.17	15.03.17

Lõige B-B'



0.4-

ND

PROJEKT

Projekti koostajad: Eesti Keskkonnainstituut, MTÜ Eesti Loodus, Eesti Looduskeskused
 Projekti juht: Ervin K. Põltsalu
 Projekti koostajad: Kert Karkau, Ene Kõnd

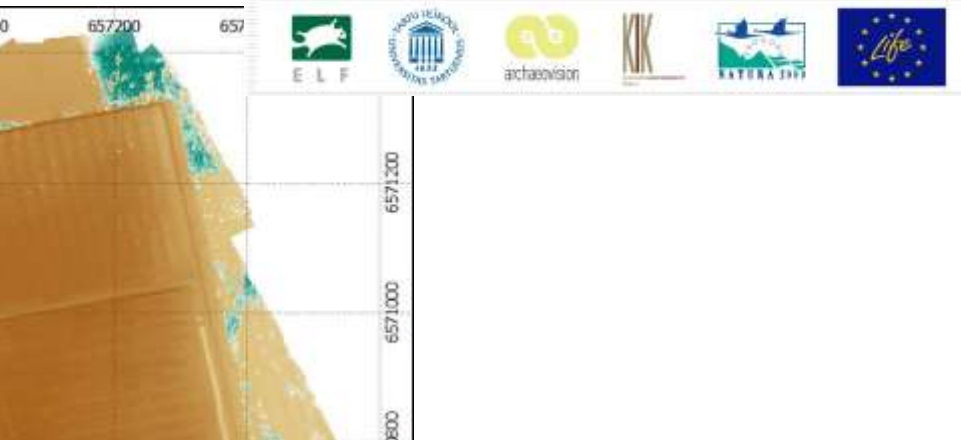
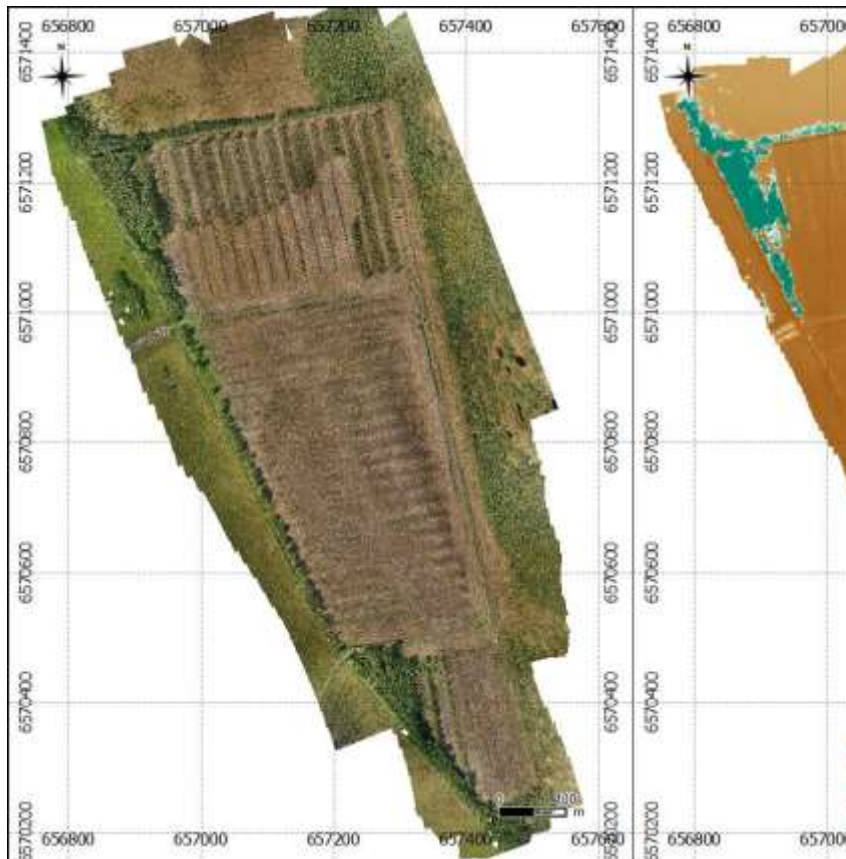
Projekt: Ene Kõnd		Jätku etapid:		PAISU EHTUSJÕONIS, TÕÜP 2	
Taotleja:	Jätku	Jätku	Jätku	MÕÕTKA:	TÄR:
12.2017	4	11		1:100	2017-251



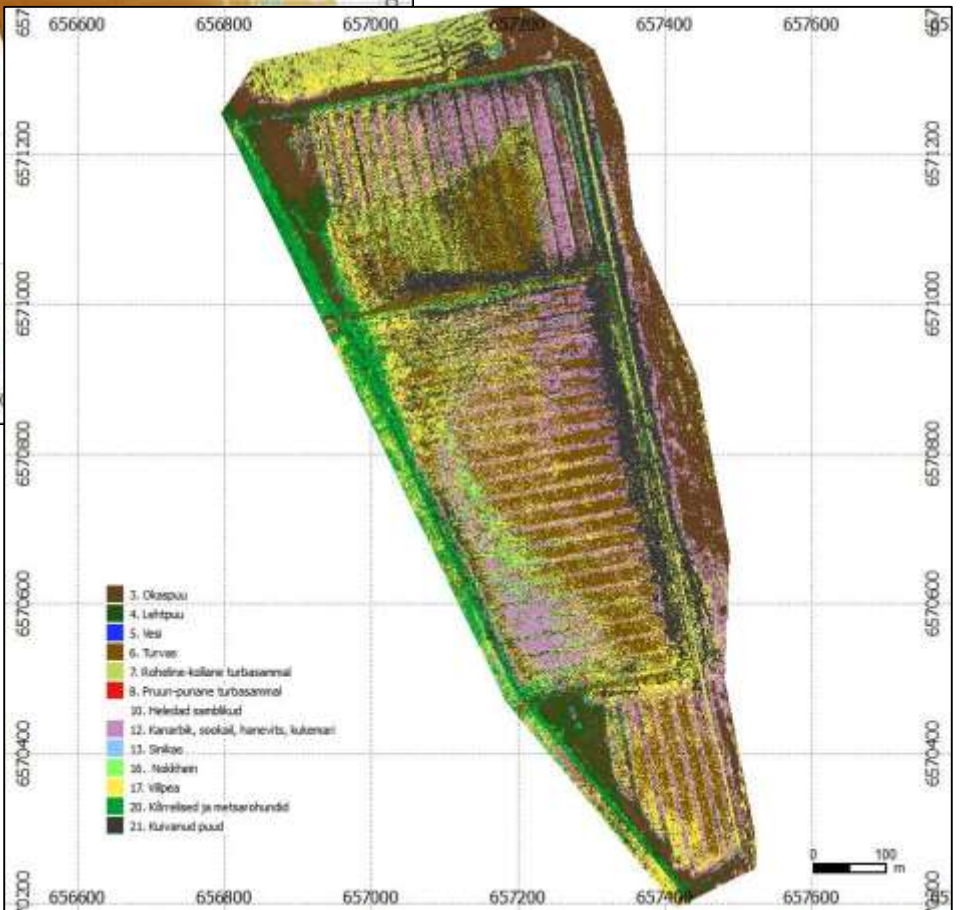


Palasi restoration area / abandoned peat mining area

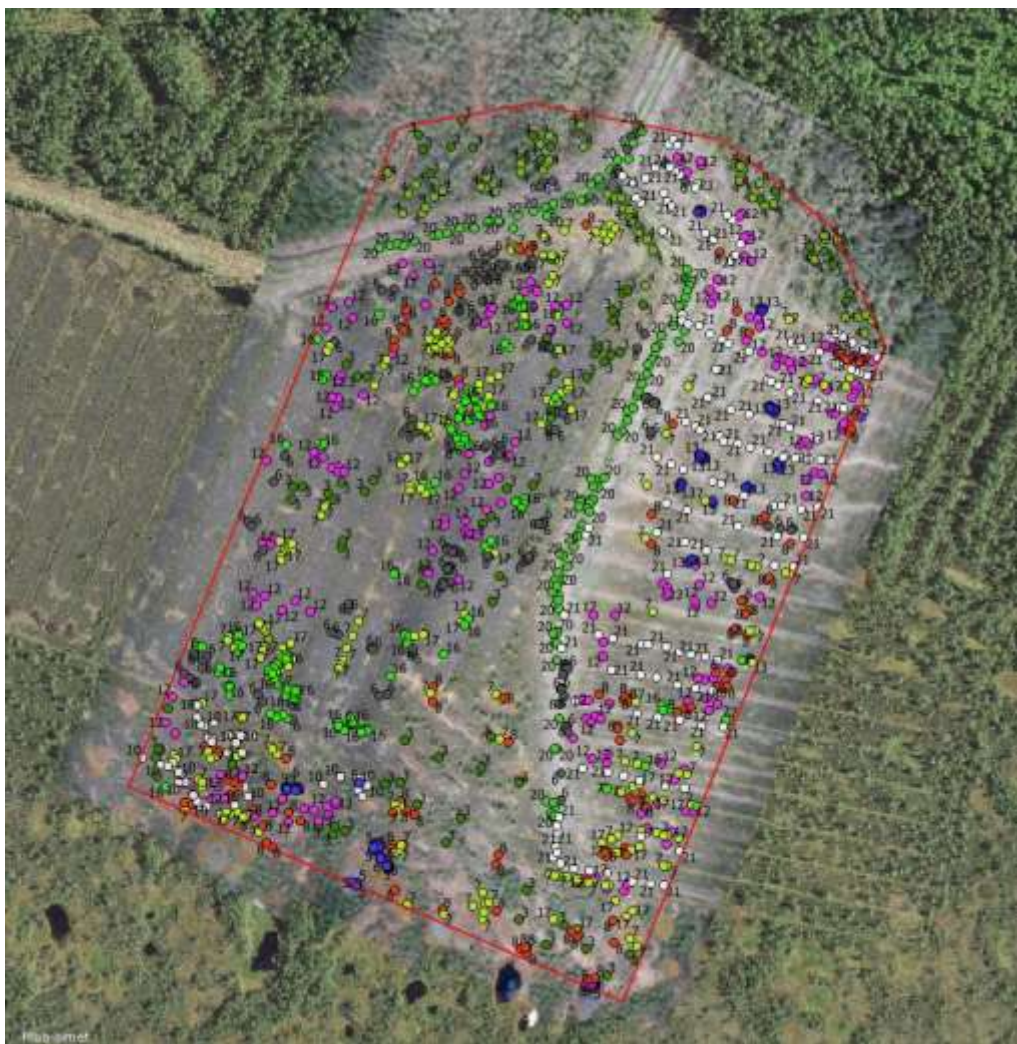




- Coniferous
- Deciduous
- Water
- Peat
- Green-yellow Sphagnum
- Brown-red Sphagnum
- Light lichen
- C. vulgaris*, *L. Palustre*, *C. Calyculata*, *E. nigrum*
- Vaccinum uliginosum*
- Rhynchospora alba* *Eriophorum*
- Grasses
- Dead trees



- 3. Okaspuu
- 4. Lehtpuu
- 5. Vesi
- 6. Turvas
- 7. Rikohdine-kullane turvasosmalla
- 8. Pruun-punane turvasosmalla
- 9. Helelad sambalad
- 10. Kõnartik, sookai, hanevits, kükasai
- 11. Sirkas
- 12. Heikihän
- 13. Vilpea
- 14. Kõnrelised ja metsarohud
- 15. Kõnrelised puud



Training area in Soosaare

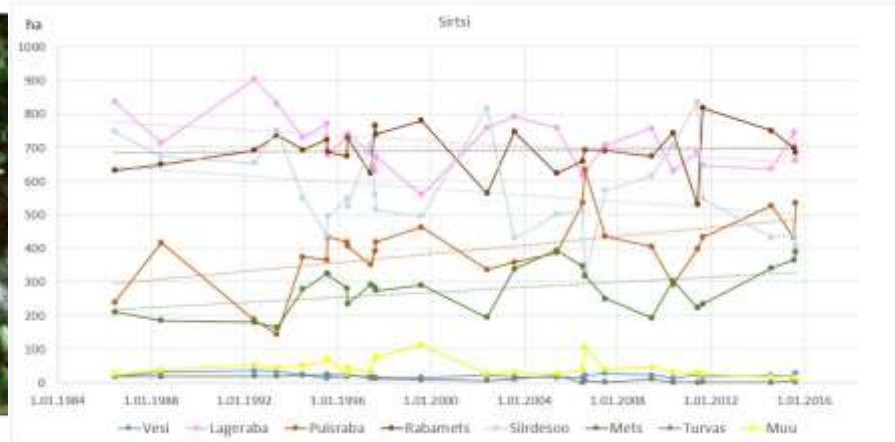
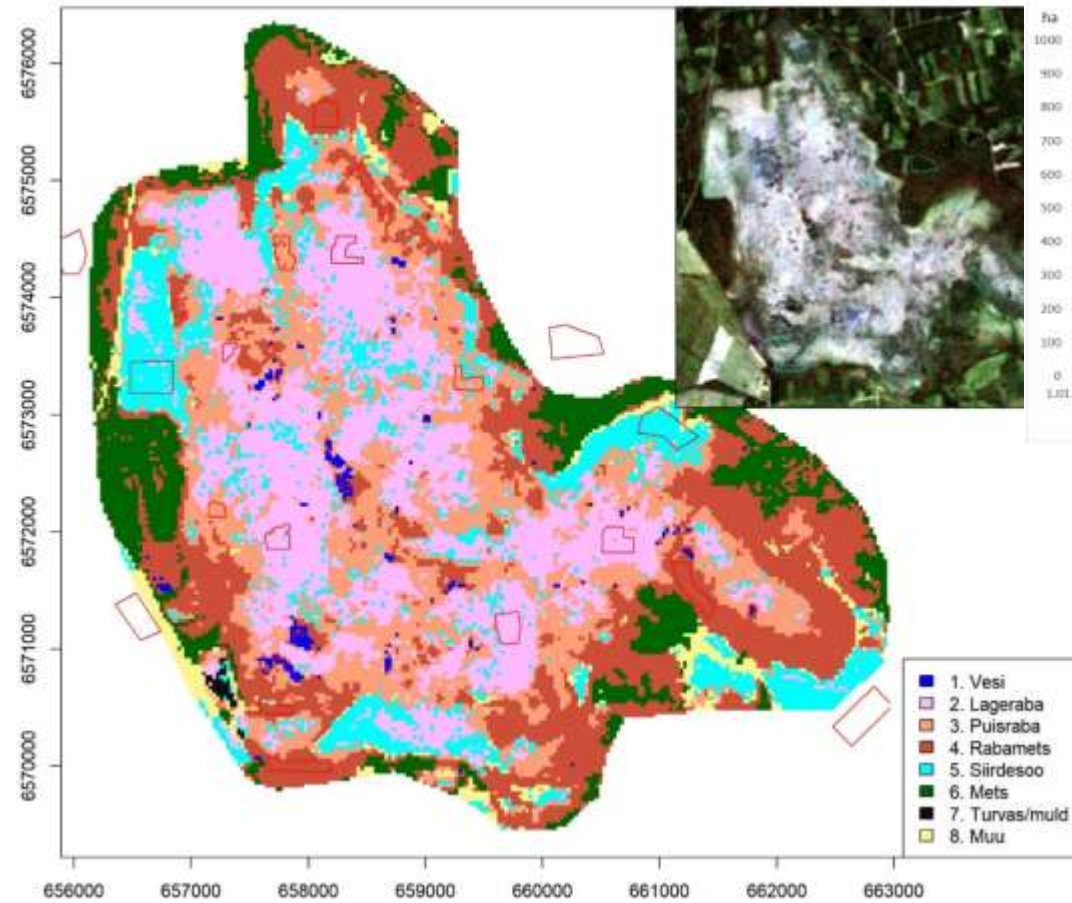


Vegetation monitoring plot, 10x10 1 m length.

A –RGB orthophoto,

B –multispectral camera orthophoto.

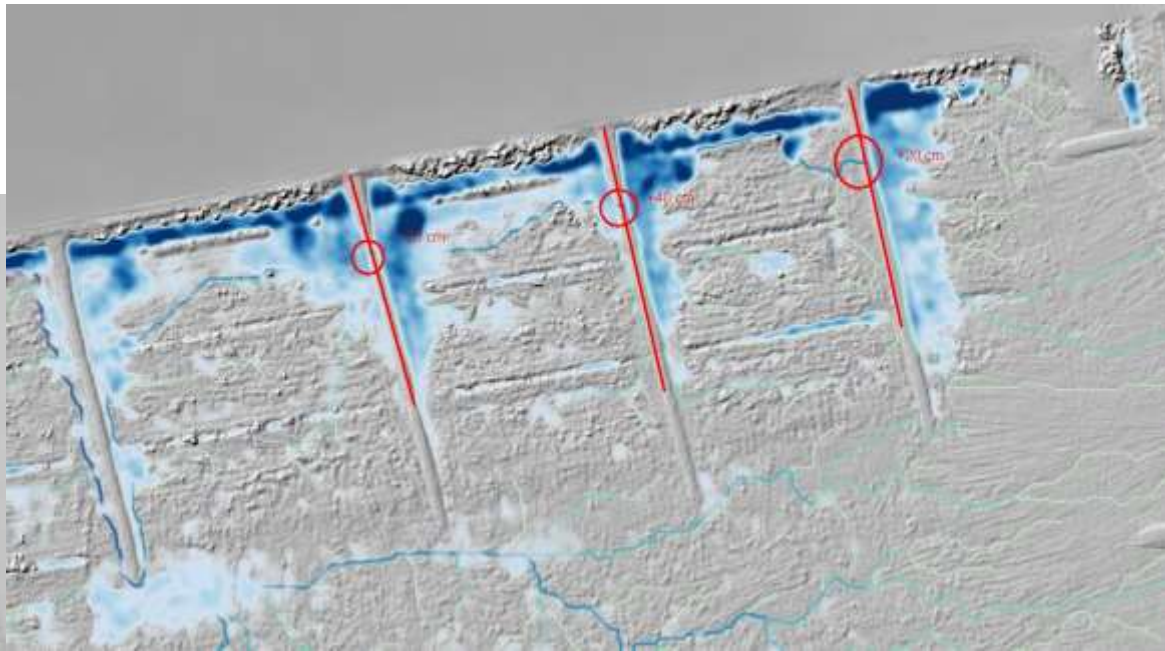
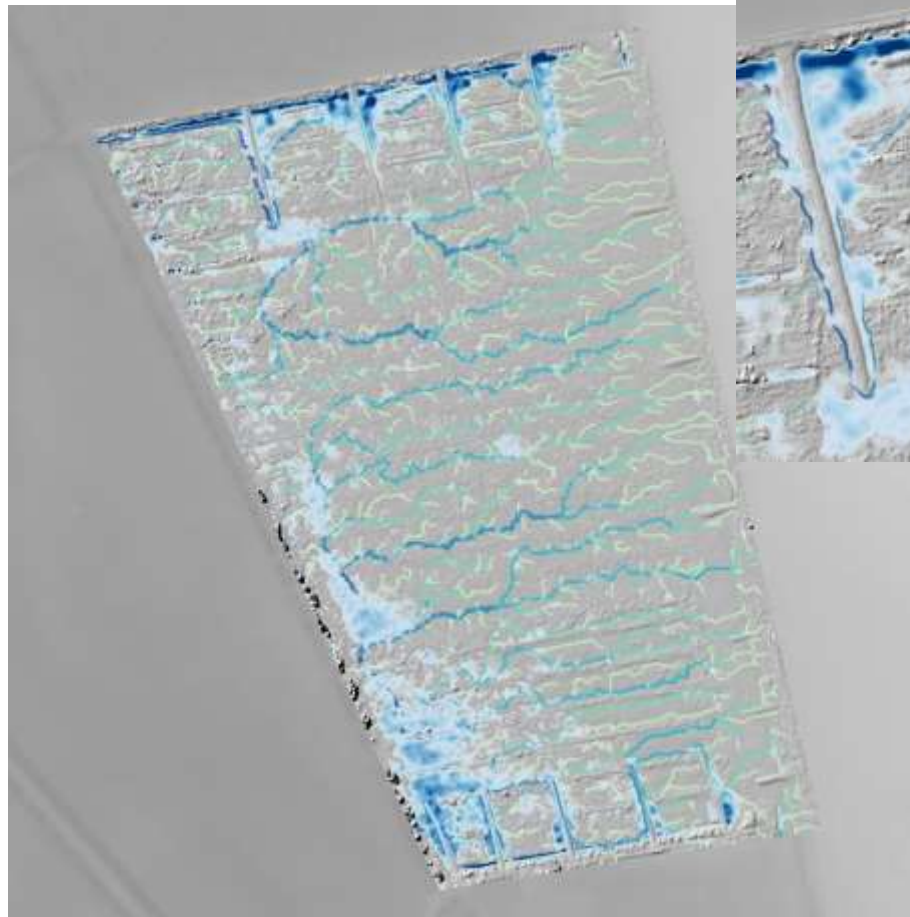
map_Sirts_i_20060806_L5_top5kl.tif

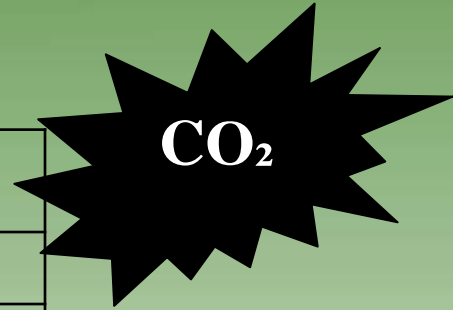


Trends of changes in landscape based on classified satellite photos

- Water
- Open bog
- Treed bog
- Bog forests
- Transitional mire
- Forest
- Peat/bare soil
- Other

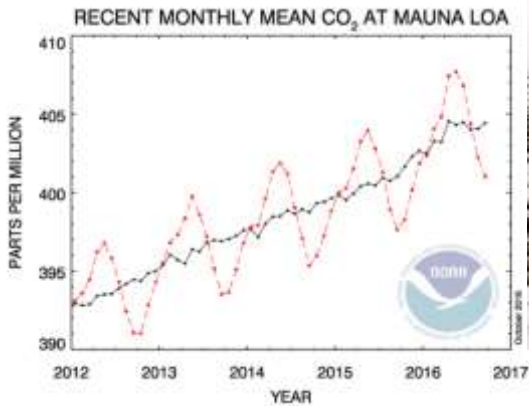
Example of 06.08.2006 Landsat 5 classified photo, Sirts NCA





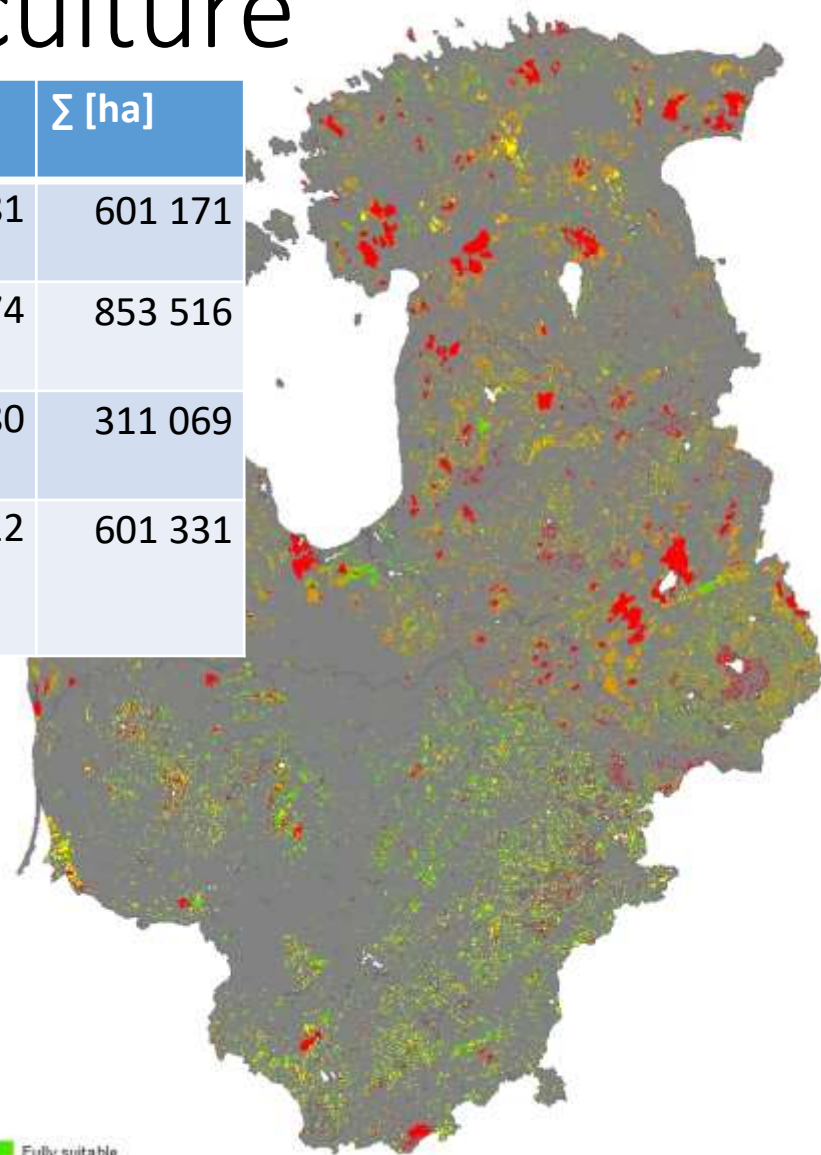
Fuel usage for travel (30.4.2019)								
A1	A2	A3	A4	C1	C3	D1	D2	F1
851,07	475,15	331,12	3123,63	612,38	526,82	621,53	80,63	2300,04
Total (I): 8922,37				Total C t: 6			Total CO2 t:	22

Area	Forest cutting	Dams constructions	Wood taken away m3	Wood left to site m3	Total fuel usage t C	Wood taken away t C	Total t C	Price per ha EUR
Soosaare 167 ha	5721		4165	676	1239	7	152	1135
Palasi 97 ha	6200		7435	1471	338	10	341	742



Potential for Paludiculture

	# Area	EE [ha]	LV [ha]	LT [ha]	Σ [ha]
Not usable	47 702	253 449	230 241	117 481	601 171
Major Restrictions	78 857	289 362	503 080	61 074	853 516
Minor Restrictions	40 831	214 763	45 126	51 180	311 069
Fully suitable	95 656	78 509	164 700	358 122	601 331



ELF



Succow
Stiftung



LITHUANIAN
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LIETUVIŲ PAJURIO ŽEMŲŲ CENTRAS





KASVUALUSTA

PERUSLANNOTTU JA KALKITTU
KASVIKUTUKASVUALUSTA

puutarhaan, kukille,
kasvihuoneeseen

VÄXTUNDERLAG

BRUNNÖÖSLAG OCH KALKAD VÄXTFÖREKÄNTUNDERLAG
för trädgården, blommar, växthuset



**Thank you and
enjoy the reception!**