Wildlife monitoring in Finland – on-line information to game administration, hunters and wider public

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Long tradition of wildlife monitoring in Finland

Especially grouse, hunted tetraonid birds

Nation-wide monitoring started in 1964

The time series is also internationally unique
1989 WILDLIFE TRIANGLE SCHEME

Transect lines permanent, randomly located on forested land, total 1,700

Grouse, line transect counts as earlier

New: snow track counts of mammals on the same lines

About 1,000 lines studied annually (=12,000 km per each summer and winter count)

Voluntary hunters do the field work! About 7,000!
Individual transect, $4 + 4 + 4 = 12$ km
An equilateral triangle

Summer count: grouse, a three person chain

Winter track count: about 25 species covered, usually by skiing

Every observation is located on the map
Capercaillie
Wildlife triangles: playing with large numbers

- During 1988–2014, about 45 000 counts performed (24 000 in late-summer, 21 000 in winter)
- Total length covered more than 500 000 km
- 850 000 working hours done, roughly 420 person-years! It is voluntary work!
- About 330 000 grouse individuals observed
- Exact observation sites, extremely valuable data for studies of distribution, landscape and habitat selection with GIS tools
  - about 50 000 locations in every winter census
  - about 10 000 in late-summer census
Use of data:

For hunting administration – hunting regulations sustainability
For planning etc. (environmental impact assessments)

For research – data used
  - about 50 scientific articles
  - in 10 doctoral and 25 graduate theses
  - in about 150 popular articles

Weaknesses:

Mailing of maps and observations, input of data by hand in the institute, is time-consuming and expensive

August count results cannot be used in the planning of the coming hunting season (starts 10 September)
The solution...

LifeData (2011–2015) is a joint project between Finnish Forest Research Institute Metla (coord.), Finnish Environment Institute (SYKE) and Finnish Game and Fisheries Research Institute (RKTL). Agrifood Research (MTT) is participating as a project partner with independent funding.

LifeData is funded by EU Life+ instrument.
"LifeData develops knowledge based data services and improves the life cycle and accessibility of environmental data."

Action 3 Data architecture, data modelling and databases

The specific target with an internet service, riistakolmiot.fi, in game monitoring is to:

* To help the input of the count data into the database
* To follow on line the results during the field work period
* To ease collecting and storing that data and decreasing the amount of hand work in all phases of process
* To create reports on densities and dynamics of game animal species easily for decision making at national, regional and local level
* To provide information to everyone interested on game animal species, their distribution and numbers
Lumijälkilaskennassa onnistuttiin vaikeista olosuhteista huolimatta erinomaisesti - riistalajien runsauksissa ei merkittäviä muutoksia

Input of data – registrated, trained persons ID#, background information
Sijainti
Merkitse havaintopiste kartalle tuplaklikkaamalla

Korjaa kolmion sijahtia
Own census
Visible for everyone

Kesälaskenta: Metso, Teeri, Pyy, Riekko Lappi 1988-2014 (Tiheys (yks./km²))
Mountain hare winter 2015

Tracks /10 km / 24h

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’The timeliest grouse hunting regulation in the world’

Wildlife triangle counts  
25.7.–2.8.

Results compiled by Luke  
3.–4.8.

Evaluations of results by 
Wildlife Agency, 
ministry (MMM) and Luke  
5.–7.8.

Recommendations of hunting times  
10.8. 
by Wildlife Agency to the ministry

Concept of allowable hunting times  
13.8. 
by the ministry to be commented

Hunting regulation laid by ministry  
27.8.

Hunting season begins  
10.9.
To conclude:

The monitoring instrument works nicely

Everybody is happy:   game administration
                       hunters
                       outdoor people
                       ordinary citizen

The biggest challenge is how to keep the voluntary people motivated.
Well-working site riistakolmiot.fi with interactive elements is of utmost importance!

Thank you for your interest!

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