

# Forest



**FOCUS** The Forest Programme further develops SLU's role as a centre of excellence for Swedish and international environmental analysis in the forest sector. Nationally speaking, the main purpose is to supply background information for monitoring and assessment of current forest, environment and energy policy. There is an international demand for our expertise on developing forest monitoring, both in the EU and globally. The work done under the programme provides important support for development of the new approach to wildlife management.



*"Data illustrating the factors to be considered when weighing up timber production against other forest ecosystem services are in great demand. New sectors of society desire forest information, which makes greater demands of the way in which we present our findings. The programme has breadth as well as focal points; we supply everything from epidemic nephropathy (a vole-borne haemorrhagic fever) forecasts to data forming the basis for Sweden's international climate reporting."*

**Anna-Lena Axelsson** coordinator of the Forest Programme

## Priorities

**National forest data** SLU has long monitored developments in Sweden's forests, and is responsible for some of Sweden's official statistics in this field. The largest project – the Swedish National Forest Inventory – has high priority, and further development takes place continuously in consultation with users.

**International collaboration** Data from the National Forest Inventory and the Swedish Forest Soil Inventory are being increasingly used in international contexts. SLU plays an active part in several joint projects involving the gathering of forest data in Europe, concerning harmonisation, methods development and reporting.

**New initiatives in demand** Forward-looking forecasts illustrating factors to be considered when weighing up timber production against other forest ecosystem services are very much in demand, and are being performed using the new Heureka forest management planning software. Gaps in the existing forest inventory are identified and provide a basis for developing a new coherent inventory concept. Monitoring of zoonoses, such as fox-borne *Echinococcus multilocularis* (a serious tapeworm infection) is important, and very much in the news. SLU is also working with the Swedish Forest Agency on developing the new moose management scheme. A key element of the REDD+ climate programme is how carbon stocks in the countries concerned are to be measured, reported and verified. This is closely related to the expertise available under the programme.

## Departments and units at SLU

Department of...

- Ecology
- Soil and Environment
- Forest Resource Management
- Aquatic Sciences and Assessment
- Wildlife, Fish and Environmental Studies

Unit for Field-based Forest Research

## Forest and wildlife monitoring at SLU

- Swedish National Forest Inventory
- Swedish Forest Soil Inventory
- Integrated Monitoring (IM)
- Forest damages (ICP Forest)
- Monitoring of forest damage outbreaks
- Establishment of wildlife monitoring areas
- National and regional monitoring of wildlife
- Man, hunting and wildlife
- Expanding and alien species' development in Sweden

## Related research

- Future Forests
- Heureka
- FutMon
- LifeWatch
- Adaptive management of fish and game
- Theme research programme: Wildlife and Forestry
- Center for Fish and Wildlife research

## Contact

Anna-Lena Axelsson (Coordinator)  
 Department of Forest Resource Management  
 Phone: +46 (0)90 786 85 91  
 E-mail: [anna-lena.axelsson@slu.se](mailto:anna-lena.axelsson@slu.se)  
[www.slu.se/srh-en](http://www.slu.se/srh-en)

Lars Edenius (Deputy Coordinator)  
 Department of Wildlife, Fish and Environmental Studies  
 Phone: +46 (0)90 786 83 41  
 E-mail: [lars.edenius@slu.se](mailto:lars.edenius@slu.se)  
[www.slu.se/wildlifefishenvironment](http://www.slu.se/wildlifefishenvironment)

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[www.slu.se/environ/forest](http://www.slu.se/environ/forest)

# Forest



Photo: Beautiful Sweden



Photo: Viktor Wrangé, SLU



Photo: Andreas Bernhold

## Wildlife inventories important for wildlife management

Wildlife inventories have been conducted at the SLU Wildlife Research Station at Grimsö, and the surrounding forest area of 13,000 ha, since the 1970s. The inventories create a knowledge bank about animal populations over time, and aid Sweden's wildlife management. The droppings inventory, which includes moose and roe deer, gives an indication of population density. Data is also gathered on food availability and use.

"Our approach to producing data on the number of moose and what they eat is highly relevant and is central to the new moose management scheme. Grimsö can also serve as a model for the creation of other monitoring sites in the country," says Lars Edenius, deputy coordinator, with responsibility for wildlife issues under the Forest Programme.

## Analyses for sustainable forest

With the help of the RegWise analysis tool, SLU makes regional and national forest sustainability analyses. The analyses integrate a number of factors, such as production, recreation, biodiversity and carbon storage for multipurpose forestry.

"Sustainability analyses provide a basis for decisions taken by public authorities and the forestry sector, and, for example, form part of Sweden's reporting on greenhouse gases under the Climate Convention and the Kyoto Protocol. At present, the analyses are based on data from National Forest Inventory sample plots. The aim for the future is to use satellite information to make more detailed and spatially more comprehensive analyses," explains Anders Lundström, who is leading the Regional Forest Sustainability Analyses project.

## SLU – monitoring forest damage

SLU has overall responsibility for monitoring forest damage in Sweden. Target inventories of regional damage outbreaks, together with the annual National Forest Inventory, provide information on forest health. SLU recently carried out a needs analysis of existing monitoring of forest damage. "The National Forest Inventory covers twenty of the main forest pests, and targeted forest damage monitoring is an effective tool for surveying major damage outbreaks. SLU's monitoring of the European spruce bark beetle (*Ips typographus*) and the large pine weevil (*Hylobius abietis*), and the online SkogsSkada (forest damage) service form part of the Swedish Forest Agency signal and preparedness plan. A good complement to this would be a monitoring programme to detect damage early, and a system for reporting arrivals of new insect and fungus pests in our forests," says Åke Lindelöv, leader of the needs analysis project.