

The Faculty of Natural Resources and Agricultural Sciences (NJ)

At the NJ Faculty, we conduct a wide range of research, teaching and environmental monitoring and assessment in the fields of agriculture and environment. Examples are sustainable food production, bioenergy and industrial raw materials. Our work is about the sustainable use of land, water and biological natural resources. The focus is on the natural sciences, but we are also active in the social science and the humanities.

The NJ Faculty at a glance:

- · 15 departments and 7 collaborative centres
- · 18 degree programmes
- · 1,200 members of staff, of which 92 are professors
- · 1.700 students and 200 doctoral students
- · Turnover of SEK 1.2 billion

Third-stream activities

Exchanging knowledge with the surrounding community is an important part of SLU's activities, and a necessary contribution to the sustainable use of natural resources. At the Faculty of Natural Resources and Agricultural Sciences, we have staff assigned the particular responsibility of leading and developing third-stream activities with authorities, industry and NGOs in their respective subject field.

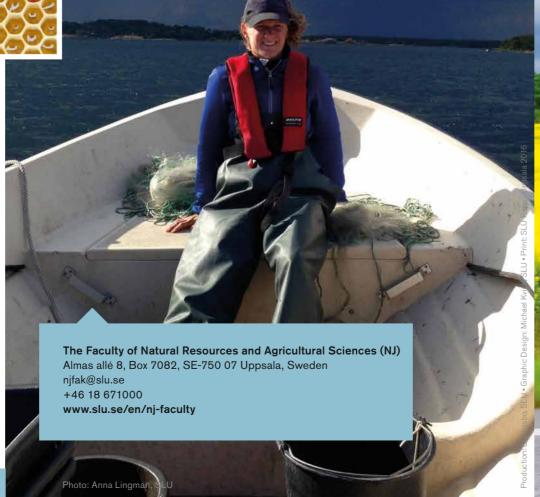
Subjects for which the NJ Faculty has staff with third-stream tasks: aquatic ecology, beekeeping, bioenergy, biotechnology, rural development, soil physics, food quality, precision farming, plant nutrient management, plant pathology, crop production, plant protection.

Third-stream work and collaboration play a central role at several of the NJ

Faculty's units: Swedish Species Information Centre, Swedish Biodiversity
Centre, Centre for Organic Food and
Farming, Swedish Centre for Nature
Interpretation, Centre for Biological
Control, Centre for Chemical Pesticides
and the Uppsala Centre for Sustainable
Development.

Collaboration with the surrounding community also takes place during placements and degree projects as part of our degree programmes, and in other activities. Our mission to share our knowledge is a central one.

Every year, the NJ Faculty appoints the 'Collaborator of the Year'. In 2015, the award went to Alfred Sandström from the Department of Aquatic Resources, whose research is on fisheries management.







Research

At the Faculty of Natural Resources and Agricultural Sciences (NJ), we conduct research on agriculture and humankind's use of natural resources.

Our research spans a wide range of topics, from issues on cultivation and how to prevent water pollution to managing the fishery resources in our seas. Research at the faculty also covers social science and the humanities, research that is needed to understand rural development, how to communicate environmental issues or what economic forces control agriculture.

Much of our research is basic science, such as plant biology or molecular structures, but all our research has a clear link to agriculture or other uses of biological natural resources.

Our research findings are often used by different public authorities in their regulatory frameworks. One example is the knowledge of how different substances move in the ground, something which determines which pesticides that are allowed in Sweden. Another example is the knowledge about the complex ecology of the seas, which determines how much cod can be landed in different parts of the Baltic Sea.

Research can also result in new products. Basic research on bacteria has for example led to new methods for treating seeds in order to reduce fungal attacks on plants. Our research on honey bees has made it possible to detect different bee diseases, something that is of great importance to bee-keepers and ultimately to the pollination of financially important crops.

Study programmes and courses

The Faculty of Natural Resources and Agricultural Sciences (NJ) offers several degree programmes. Many of them are unique and combine theory and practice in a way that opens up great opportunities for finding work after graduating.

We train future agronomists, biologists, environmental scientists, economists and civil engineers. Our teaching is close to science, and we impart new knowledge with a focus on the future and sustainable use of natural resources.

Our programmes lead to exciting job opportunities with for example large

food processing companies and small rural companies, Swedish authorities or the EU, international organisations such as Sida and the WWF, energy companies and the plant breeding or pharmaceutical industry.

We collaborate with other universities, nationally as well as internationally. Every year, around 130 SLU students spend a semester or an academic year abroad. Our students have plenty of opportunity to broaden their perspectives and are well-equipped to enter a changing world during their careers as professionals or researchers.

Environmental monitoring and assessment (EMA)

EMA is one of SLU's branches of activity, in addition to research and education. It is a unique government mission, and SLU is the only Swedish university tasked with this work.
EMA is organised in 10 programmes, each linked to different national environmental targets and international cooperation projects. Six of the programmes are located at the NJ Faculty.

EMA concerns monitoring Sweden's forests, agricultural land, waters and species in order to analyse and assess environmental developments. The findings provide decision support for authorities, industry and international bodies in the work towards sustainable development.

We are Sweden's largest actor in environmental monitoring and assessment. Our labs handle a great number of samples – for example, every year over 150,000 accredited and quality-assured samples are analysed a the geochemical laboratory at the Department of Aquatic Sciences and Assessment.

We run a number of platforms for volunteer work – citizen science. The Swedish Species Observation System has been known to register over 20,000 observations in a single day.

The EMA programmes at the NJ Faculty are Agricultural Landscapes, Lakes and Watercourses, Coastal Areas and Seas, Biodiversity, Eutrophication and Acidification.

www.slu.se/en/nj-research www.slu.se/en/nj-education www.slu.se/en/nj-en