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Swedish University of Agricultural Sciences

**Faculty of Natural Resources and
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Faculty Board

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The NJ Faculty's Strategy 2017–2020

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1. Strategy aims and content

The purpose of this document is to clarify the NJ Faculty's direction within research, education, environmental monitoring and assessment (EMA) and collaboration for the period 2017–2020. The strategy is intended to serve as a guide for the Faculty Board and the faculty management, as well as for the faculty's departments and thematic clusters.

The strategy clarifies and concretises the priorities in SLU's overall strategy and strategic direction documents from the faculty's perspective. Further, it complements SLU's strategy with descriptions of priorities at the faculty level.

2. The NJ Faculty in the world

2.1 Mission and values

The faculty conducts research, education and EMA primarily related to agriculture and the sustainable use and management of biological resources, and the effects of these activities on the environment and climate. The faculty is a leader in issues related to natural resources, the environment and agriculture, thereby contributing to SLU's vision of being a world-class university in the fields of life and environmental sciences.

Activities include basic as well as application-oriented research in the natural sciences, social sciences and the humanities. The faculty develops science-based knowledge, develops new applications for new or existing knowledge, and conducts science-based education at first-cycle and second-cycle level. This also includes the development of knowledge in cooperation with the surrounding community, and communicating research findings and decision support to government agencies and other actors in society.

The faculty safeguards SLU's core values as regards scientific approach, creativity, openness and responsibility. Furthermore, the faculty safeguards academic integrity and academic freedom. The faculty is committed to a level playing field in terms of employee working conditions, salaries, participation and career opportunities.

2.2 Faculty profile and role

The faculty contributes knowledge and expertise toward solving national and global societal challenges related to agriculture, fisheries, environment, rural development, urbanisation and nature conservation. The faculty's strengths include excellence in basic and application-oriented research, and a wide scientific scope. Research ranges from the molecular level to the ecosystem and community level, enabling a systems perspective and an interdisciplinary approach. That research conducted at the faculty includes the natural sciences, the humanities and social sciences is crucial in issues of sustainable use of natural resources. The infrastructure for research and EMA, as well as comprehensive cultivation and field research facilities, enables cutting edge research over a wide scope.

Education at the faculty is characterised by research-based and theoretical learning combined with skills training in a way that prepares students well for societal challenges and life-long learning.

SLU's role as the largest national player in EMA is of great importance for the faculty. For example, the faculty holds unique series of data which describe the state of the Swedish environment and which are used in national and international decision-making.

2.3 External conditions

According to UN projections, the world's population will increase to about 10 billion by 2060, and living and working will to an ever increasing extent be concentrated in urban environments. This will have major implications for food production and use of natural resources, and for the burden on nature and climate. In order to achieve sustainable production and consumption and the equitable distribution of resources, the UN has adopted 17 global sustainable development goals ([Agenda 2030](#)). Most of these are strongly linked to the faculty's operations. Commitment to sustainability issues existing in society, especially among young people, is likely to contribute to an increased focus on the faculty's activities.

The faculty's operations are affected directly and indirectly by the EU. A great deal of research resources are channelled through various EU financial instruments. For example, EU directives concerning water and renewable energy set the framework for Swedish authorities and businesses, which also impacts research and EMA activities at the faculty.

On a national level, there are currently several government investigations and strategies relevant for faculty consideration, and where preparedness is required to make possible action in the fields of agriculture, food, environment and climate, and circular and bio-based economies. The faculty is strongly positioned to contribute knowledge and innovation in these fields.

Several Swedish universities and institutes compete with SLU and the faculty in fields such as agriculture, consumption and energy. At the same time, this leads to new opportunities for collaboration.

It is part of the faculty's mission to contribute to sustainable production and consumption, which is consistent with political goals such as the national environmental quality objectives.

3. Operations during 2017–2020

3.1 Research

During the strategy period, the faculty shall achieve the following:

- an increase in the exchange between natural sciences, humanities and social sciences research leading to the evolution of interdisciplinary research;
- basic research in the fields of ecology, plant biology, soil science and molecular sciences continues to exert a strong international impact;
- heightened visibility and development of application-oriented agricultural research and research on rural development, the scientific impact has increased, and findings and knowledge are increasingly sought after in practice and throughout society;
- research on sustainable food systems has evolved and is in greater demand;
- environmental research is central to operations, and its impact on science and society has increased;
- research leads increasingly to innovation.

To conduct research of the high international quality that the faculty strives for requires the best balance between stability and flexibility: stability in the form of reasonably large and stable funding of subject areas; flexibility to have resources to develop research into new subjects. To achieve this and the objectives for 2017–2020, the faculty prioritises as follows with regard to the form and focus of research activities:

- strengthen the faculty's subject areas without reducing the share of resources used for strategic investments. The faculty continuously re-examines subject areas' focus and resources;
- retain the possibility for both basic and application-oriented research;
- strengthen the link between basic and application-oriented research while implementing a multidisciplinary approach to realise the faculty's potential;
- strengthen application-oriented agricultural research to best meet the need for new knowledge in agriculture;
- strengthen research in the soil and plant subject areas with relevance for future production systems for biological raw materials;
- mobilise within fields relating to water for increased impact both scientifically and socially;
- strengthen expertise in the technology field to meet requirements in the land-based and maritime sectors;
- better coordinate the research infrastructure and increase its use;
- offer clear and attractive career paths to attract and retain skilled research leaders;
- encourage participation and leadership in major, externally funded projects within the faculty's subject areas, and encourage research that includes different actors to contribute to innovation through, for example, planning grants.

Additionally, the faculty shall retain some scope to prioritise any needs identified later during the strategy period.

3.1.1 SLU's prioritised research domains

During 2017–2020, SLU intends to invest in a number of areas of common interest university-wide, and the faculty will contribute to this development in the following areas:

Bio-based materials

In collaboration with other faculties, research into the development and application of bio-based materials will be strengthened.

Sustainable and secure food supply

Faculty research into crop production and fisheries shall be both basic and application-oriented, and designed to deal with the challenges facing Swedish and Northern European agricultural and fisheries industries.

The faculty will host the *Future Food* platform, which will be an opportunity to mobilise SLU's field activities in close collaboration with industry.

Economics

The faculty strives to strengthen the subjects economics and business administration terms of research topics, while at the same time utilising their long-term synergies with the faculty's other subject areas and SLU as a whole. The role that these subjects play in faculty research into sustainable agriculture and food systems, the environment and climate, and circular and bio-based economies, are made visible and developed.

3.2 Education

The NJ Programme Board shall contribute to the educational goals established by the SLU Board, and shall support the priorities outlined in the strategic direction document on education. The faculty's main responsibility is to ensure the long-term provision of strategic skills.

During the strategy period, the faculty shall achieve the following:

- provide training that helps meet the global sustainability goals and address the interest in sustainability that many young people have;
- our degree programmes are an obvious choice for students who want to learn about agriculture, food supply and environmental issues, at both first-cycle and second-cycle level;
- offer degree programmes that equip students with the skills demanded by current and future employers.

3.3 Doctoral level (third-cycle) education

During the strategy period, the faculty shall achieve the following:

- reverse the downward trend in the number of admissions to and successful completion of doctoral programmes;
- ensure depth and breadth in our course offering.

This shall be achieved by:

- more doctoral students are hired through increased grant funding;
- new research schools could be established using new work models, as well as an increase in collaboration between different research schools.

3.4 Environmental monitoring and assessment (EMA)

The faculty will contribute to the overall EMA objectives established by the SLU Board, as well as support the prioritised actions identified for each of the four sub-goals outlined in the strategic direction document for EMA.

During the strategy period, the faculty shall also achieve the following:

- EMA is increasingly integrated with research and teaching.

This shall be achieved by:

- increasing the awareness and availability of environmental data for teachers and researchers;
- investigating opportunities for increased collaboration between faculty researchers and environmental assessment analysts.

3.5 Collaboration

The faculty shall contribute to the objectives for collaboration established by the SLU Board, and support the prioritised actions identified in the strategic direction document on collaboration.

During the strategy period, the faculty shall also achieve the following:

- increase the extent and quality of collaboration;
- the faculty and its stakeholders have a mutual understanding of each other's circumstances;
- increased mobility between academia and the surrounding community.

This shall be achieved by:

- creating conditions so more employees see collaboration as a natural method for enhancing the quality of research, education and EMA;
- strengthening the dialogue between the faculty and its stakeholders;
- identifying obstacles to and opportunities for greater mobility;
- strengthening credibility as a collaborator further by highlighting good examples of cooperation.

3.6 Operational support

The faculty creates conditions for good, cost-effective administrative and technical support to the departments. This includes mitigating the consequences of double faculty affiliation for certain departments, as well as facilitating shared use of administrative resources.

To increase visibility, the faculty intends to strengthen its capacity to communicate with regard to its activities and research. This will take place in close dialogue with the Division of Communication.

4. Focus areas in SLU's strategy for 2017–2020

The faculty intends to actively contribute to the implementation of the measures outlined in SLU's strategy for the focus areas *Employees, Students and education*,

Research infrastructure, External collaboration, and Our shared SLU. This shall be accomplished in accordance with the mandate given in SLU's allocation of funds and according to specific instructions from the university's vice-chancellor.