



NEXTFOOD

Educating the next generation of professionals in the agrifood system

NEXTFOOD will contribute to a transition to more learner-centric, participatory, action-based and action-oriented education and learning in agrifood systems, which are becoming increasingly complex and require an increasing range of “hard” and “soft” skills. The objectives are to

- (O1) identify the skills needed for a transition to more sustainable farming and food systems,
- (O2) develop and test relevant curricula and training methods,
- (O3) assess existing policy instruments for the training and education sector,
- (O4) develop tools for evaluating quality of the training and education sector,
- (O5) develop a platform for knowledge sharing.

NEXTFOOD will employ case-based action research to

- (I) develop relevant and effective education and training programmes for a transition to more sustainable agrifood systems,
- (II) generate new knowledge needed for similar achievements beyond the specific case.

The *case development (I)* will rest on a cyclic, iterative, participatory process consisting of

- (1) observation and description of the current situation in each case,
- (2) visioning of a desired future state,
- (3) analysis to identify key issues, solutions, supporting and hindering forces etc.,
- (4) elaboration and discussion of action plans,
- (5) implementation of plans,
- (6) iteration of steps (1–5) in a cyclical manner throughout the course of the project.

Simultaneously, *research (II)* will be done on qualitative and quantitative data generated during the case development process and analysed to answer research questions that are relevant beyond the specific case. This will produce new knowledge needed to drive the transition to the learning strategies required to educate and train professionals that can meet the very complex future demands in the agrifood sector.

The main research questions of NEXTFOOD are:

1. How can participatory and action-oriented learning strategies focusing on competences required to foster more sustainable agrifood systems, be designed and implemented?
2. What are supporting and hindering forces for such alternatives to establish and develop successfully?

Case name and name of contact person/leader

Increased quality and number of micro-habitats for enhanced biodiversity
(Towards a profitable and sustainable forestry chain)

Contact person(s): Lotta Woxblom (1st)
Tomas Johannesson (assisting)

Brief description of the case

The forestry sector provides multifaceted values; these include the production of renewable raw-materials, sequestering carbon dioxide, as well as creating spaces for biodiversity, resilience and attractiveness as a place for recreation and as a landscape that humans appreciate. It is noteworthy that wood from sustainable forestry is a major renewable material and furthermore the biodiversity and social responsibility aspects, e.g. CSR, in relation to forest-based activities are attracting attention.

To increase the quality and number of micro-habitats for enhanced biodiversity, the case will aim toward higher understanding about logging techniques, strategies and methods.

The course is based on an ecological and biological theme, with focus on how to, not only prevent, but also to create high value habitats in different conditions, will be performed during practical logging operations.

The case design will cover some of the essential parts of the forest supply chain such as, planning, harvesting and forwarding of roundwood and logging residues.

Researchers/instructors (A) will participate with their academical/methodical knowledge, Machine Operators (B) with their practical experiences and Middle Management Officers (C) with their knowledge of communicating within the supply chain, as well as with private forest owners.

The courses will be designed as physical meetings, including theoretical discussions and field excursions, where “speaking time limit” is set to 1/3 for each group of participants (A, B, C).

The course design will ensure that all participants actively present their thoughts and ideas about practical development, with the goal to create a sustainable forest management.

Each course consists of 4 meetings (4 hrs each) running over a period of 4 months. Between physical meetings, the participants are expected to do their homework, e.g. bringing back thoughts, ideas, new experiences and evidence etc. to share during the next meeting. The meetings create an arena where key issues are discussed, and action plans are developed.

During the courses all participants (A, B, C) will have the opportunity to share their; “from my point of view... this can / this can’t be done...considering improved micro habitats”. The purpose is to enlighten other participants in the group. Before and after each meeting, all participants will do a self-evaluation, to map their current level of insight.

How will the case contribute to achievement of the NEXTFOOD objectives by action research as the main strategy?

Experience show that cooperation between individuals from different industries and with different skills, often gives opportunity to visualize different perspectives on the same issues and that this can lead to new ideas and development.

The concurrent work with course design, learning processes and research, with participants from different parts of the forest supply chain, will serve as a basis for the build-up of a coherent understanding of responsible use of forests and nature conservation.

Within the forest case, we have participants from different parts of the forestry chain that exchange experiences and together solve real problems from different perspectives. The methodology with meetings and border crossing contacts will be an arena for creation of a common understanding and collaboration-oriented dialogue that enables participants to identify, discuss, exchange experience and suggest new solutions, at the same time as the process is well documented and analysed by researchers.

During development and testing of curricula and training methodology in the case about sustainable forest management, all five competences; observation, reflection, participation, dialogue and visioning, identified as important in earlier research will be used. That is, the competences will be trained by all participants in a “learning-by-doing-and-reflection-on-the-experiences” mode. The simultaneous research activity will ensure that soft qualities, such as problem solving, how to create a good communication climate among different actors in the forest supply chain, organisation of the meetings, learning methods, management of various practical problems, ability to capture and further develop good experiences/examples among participants etc. will be documented and analysed in a systematic way.

The contribution of the forest case to NEXTFOOD will, among other things, be sharing of experiences that could be valuable input to research and further development of methods for sustainable use of our forests and sustainable agrifood systems.

How will the case study provide evidence to answer the NEXTFOOD research questions?

1. By involving practical operations and actors from different parts of the forest supply chain, and to ensure that all actors practical expertise is highly valued as input for extended research and exchange of knowledge, it is most certain that the result would be beneficial for all participants.

Economical, Ecological and Social sustainability is given good opportunities. By following, and illustrating, the supply chain in an educational model, it is possible to highlight critical parts for each single operation, as well identifying connections and interactions. Courses or education can be implemented by marketing “best practice of art & science”

2. The aim towards increased sustainability (E+E+S) is supporting to find new ways to transfer knowledge. Time, tradition and initial cost can be a hindering fact, whereas different kind of evidence is needed for a successful implementation.

When do you plan to run the first cycle (starting and ending dates) of the educational activities (courses, seminars etc.)?

March 2019 – July 2019

What is the planned (expected) number of learners (students, farmers, etc.)?

First step is to run one cycle of the course involving 12 – 15 participants each. Each course consists of 4 meetings (4 hrs each) running over a period of 4 months.

After evaluation the model could be repeated, based on other themes or topics.

Major categories involved in first step are researchers, machine operators and middle management forest officers.

A second step could also include students, i.e. future professionals. This would create prerequisites for a continuous learning and sustainable forest management.

What is the level of the course(s)? (BSc, MSc, other)

Vocational training for forest professionals, i.e. machine operators and middle management forest officers. Action learning and the core competencies will be part of their learning.

Who will be the teachers/learning facilitators?

Anders Mörk (field instructor)

Line Djupström (PhD)

Per Westerlund (PhD)

Lotta Woxblom (PhD)

Tomas Johannesson (project leader)

Machine operators (TBD)

Middle Management Forest Officers (TBD)

A description of the 'learning arenas':

Where will the activities take place, what will be the processes to enable co-learning between teachers, learners (students, farmers, etc.) and research persons in society (farmers and others)?

All activities will take place in different locations, close to daily forest operations in central Sweden.

In dialogues participants, using common dialogue models, will learn from each other. Each meeting will include theoretical information and a field excursion, where different habitats (results) will be evaluated. During the excursion, machine operators, forest officers and researchers can reflect together on the topics listed over operational time, costs and technical challenges etc., as well as ecological benefits.