AGROASIS..... a NOVA Network

Annual Report, 2005

Submitted to NOVA

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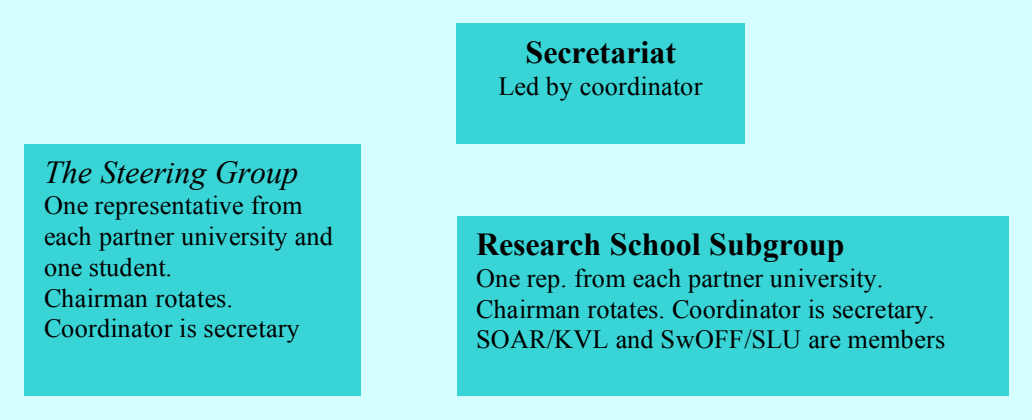
AGROASIS 2005: People



The representatives of the steering group and the secretariat in 2005 were:

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20 persons participated actively in the network in 2005

Other active participants in 2005 were:

Institution	Participant
KVL	Associate Professor Vibeke Langer SOAR Academic Assistant, Sofie Kobayashi Professor Henning H Jensen
HU	Study Planner, Anu Heikkilä Study Planner, Aija Taskinen Research director Jyrki Aakkula Senior planning officer Jukka Rajala Specialist in Network-based Education Harri Hakala Study planner Ritva Myntinen
UMB	Professor Tor Arvid Breland ICT Specialist Mike Moulton
SLU	Dr. Ulrika Geber Lic. Karin Svanäng

The members of the AGROASIS network, have in 2005:

- Worked on improving the integration of the MSc offers at the different NOVA universities by:
  - Defining an ideal Nordic structure
  - Defining a structure possible with today's limitations
- Entered 17 courses into the NOVA course database
- Taught master level agroecology courses to 129 students, totalling **1606 ECTS**
- Supervised / are supervising 21 masters thesis projects in the field of agroecology, totalling **666 ECTS**
- Taught PhD level courses to 39 students, totalling **143 ECTS**
- Supervised / are supervising 16 PhD thesis projects in the field of agroecology
- Made improvements to PAE301, a 100% internet-based master level course
  - Ran PAE301 for the second time as a collaborative effort with involvement from KVL, UMB, SLU, HU and University of Lincoln Nebraska.
  - 12 students from 8 countries took the internet course
  - An article based on the course was published in the European Journal of Open and Distance Learning
- Re-designed the Agroasis website, www.agroasis.org
- Evaluated the extent of overlapping of the 17 courses in the NOVA course database

List of meetings in 2005

Helsinki, Finland, February 18-19th
The main goals of this meeting were to make the final preparations for the internet course PAE301, complete the 2004 annual report for NOVA and more fully develop the plan of action for 2005. Present: Wendy Waalen, Geir Lieblein, Lennart Salomonsson, Karin Svanäng, Nadarajah Sriskandarajah, Sofie Kobayashi, Juha Helenius, Jyrki Aakkula, Anu Helikkilä and Jukka Rajalai

Mikkeli, Finland, June 20-22nd
The focus of this meeting was on the main goal of 2005: MSc development and integration. We worked on the NOVA course database, identified possibilities for a feasible MSc structure and discussed our ideal MSc structure. E-learning was also on the agenda, with a review of the feedback from students and a discussion on PAE301 in 2006. We also took some time to reflect on our experiences with PAE302 and PAE303 at UMB, and ideas for improvement. A new course at HU, "Organic crop production", is being developed, and we took the opportunity to explore the content and methodology of the course. MSc NOVA Cross approvals, the new AGROASIS internet site and Baltic cooperation were also discussed. Present: Vibeke Langer, Nadarajah Sriskandarajah, Wendy Waalen, Geir Lieblein, Lennart Salomonsson, Anu Heikkilä, Jyrki Aakkula, Aija Taskinen, Ritva Mynttinen, Jukka Rajala, Harri Hakala, Juha Helenius, Teemu Nyrhi (student from HU/Ruralis Institut)

Stange, Norway, August 14-16th
At our third meeting of 2005 we focused our efforts on the development of an integrated Nordic MSc programme. Plans for the internet course in 2006 were also made. In addition the group discussed cross approvals, research priorities and our plans for 2006. Present: Nadarajah Sriskandarajah, Wendy Waalen, Geir Lieblein, Lennart Salomonsson, Aija Taskinen, Charles Francis, Suzanne Morse (guest from College of the Atlantic).

Meetings partly funded by other sources

Uppsala, Sweden, May 25
In coordination with a PhD defence, several members of the Agroasis group took the opportunity to meet with leadership at SLU. The meeting focused on the situation at SLU and the possibility to integrate SLU in the master system. The deputy dean (Ingrid Örborn), who has the responsibility for undergraduate education and Knut Wålstedt from the NOVA secretariat participated. Members of the Agroasis network included: Charles Francis, Geir Lieblein and Lennart Salomonsson.

Results to date:

General student recruitment results:

Table 1: Student enrolment in MSc level courses held in English in 2005

Institution	Course	Total number of students	Number of Nordic students	Number of total study credits (total students*ECTS)
UMB	Agroecology and farming systems	21	4	21*15=315
	Agroecology and food systems	20	4	20*15=300
KVL	Ecological Agriculture I	20	3	23*24=552
	Global Seminar	11	5	11*9=99
SLU	Adaptive management – theory course	4	4	4*15=60
HU	Sustainability in agri-food systems	16	16	16*10=160
HU: Mikkeli	Organic quality	3	1	3*8=24
	Introduction to organic cultivation	18	2	18*2=36
Joint	Internet course: Ecology of farming and food systems	12	2	12*5=60
Total		**129**	**45**	**1606 ECTS**

Table 2: Students enrolment in the Agroecology master programme in 2005

Institution	First year	Second year
UMB	11	12
HU*	27 total	

*MSc Plant production, specialisation in agroecology

Table 3: Master student thesis titles & credits in 2005 (completed and in progress)

Institution	Thesis title	ECTS
KVL	1. Planning communication about farm nature plans - interventions and reflections	48
	2. Til- og fravalg af økologisk drift i Danmark – resultater fra casestudier	48
UMB/SLU	3. Emergy Evaluation of Grazing Cattle for Meat Production: Argentina Pampas Region as Case Study	30
UMB	4. Developing Estonian Organic Sector: A case study on producer – adviser – inspector information flow	30
	5. Small scale organic production and trade in the south west and littoral provinces of Cameroon	30
	6. Future of organic farming in Tanzania	30
	7. Cooperatives as an aid for rural development: Studies in Santa Catarina, Brazil and Nebraska, USA	30
	8. Effects of crop type on the diversity of ground beetles	30
	9. Effects of agricultural intensification on soil quality and nutrient flows in a mountainous watershed of Nepal	30
	10. Growing Future Farmers: Developing a Certificate Program linking Guelph University and the Ontario CRAFT Apprenticeship Programme	30
	11. Analysis of ecological agriculture for food security in Sri Lanka	30
	12. Organic agriculture in Norway: Factors for success	30
HU	13. Species diversity of vascular plant communities in agricultural field margins and buffer zones	30
	14. From mandarin to blueberry: a study on using local wild berries in school catering	30
	15. Stand density and water use efficiency of pearl millet in Sahel.	30
	16. Nitrogen input from legume leys in organic production	30
	17. Bioenergy from manure and green manuring biomass: production and environmental impact	30
	18. Enhancing grey partridge in plant production	30
	19. Applicability of subsidy for environmentally sensitive areas to Finnish Nature 2000-agricultural regions	30
	20. Diversity of agri-environment around cities and its importance to the residents	30
	21. Applicability of regional crop rotations to management of brassica pests.	30
Total		**666 ECTS**

Table 4: PhD project titles (completed and in progress) in 2005

University	Title
SLU	1. "The Swedish Foodprint. An Agroecological Study of Food Consumption". Doctoral Thesis No. 2005:56. Faculty of Natural Resources and Agricultural Sciences
	2. "Organic Broilers in Floorless Pens on Pasture" Doctoral Thesis No. 2005:67. Faculty of Veterynary Medicine and Animal Science
	3. "Environmental systems analyses of arable, meat and milk production" Doctoral Thesis No. 2005:12. Faculty of Natural Resources and Agricultural Sciences.
	4. "Nutrient and trace element flows and balances at the Öjebyn dairy farm. Aspects of temporal and special variation and management practices" Doctoral Thesis No. 2005:2. Faculty of Natural Resources and Agric. Sciences.
	5. "Gödsel är bara koskit'. Storstadsbarns föreställningar om jordbruk" Licentiatavhandling. Institutionen för landsbygdsutveckling och agroekologi. Sveriges Lantbruksuniversitet. 2005.
	6. Organic or mineral fertilization effects on tomato plant growth and fruit quality
UMB	7. A systemic analysis for development of cereal growing in organic farming
HU	8. Floral species diversity in agricultural field boundaries: determinants from site to landscape level.
	9. Interactions among actors in the demand-supply chain of organic market
	10. Landscape level effects of agricultural intensification on farmland bird diversity in the Baltic states
	11. Plant species diversity in agricultural buffer zones
	12. Modeling of invasion risk of potato beetle
	13. Organic leys and green manuring in organic crop rotations
	14. Lost field margins : a study of landscape change in four case areas in Finland between 1954 and 1998
	15. Monitoring of cultural landscape by photography
	16. Formation of values and attitudes among actors in organic food system
KVL	17. The use of natural amino acids as a nitrogen source in organic farming
	18. Optimisation of nitrogen use efficiency in organic vegetable production
	19. Modelling of processes at the farm level, - with special emphasis on nitrogen and carbon flow and turnover
	20. Organic meat processing - non-nitrit alternatives to conventional meat curing
	21. Consumer demands on organic food products
	22. Landscape changes under ecological farming
	23. Dual purpose varieties of grain legumes, impacts of their adoption on soil nitrogen cycling and forage protein availability within the farming systems of the west African moist savanna
	24. Management and alternative forages as a means to reduce parasitism in organic swine production systems
	25. Below ground C and N transformation processes in perennial grass-clover mixtures with impact on the farming system and the environment
	26. The importance of nutritional factors and the physiological background for the development of liver abscesses in veal calves and young bulls - perspectives for organic beef production

27. Strategies for increased foraging in organic layers
28. Control systems in organic egg production, focusing on animal welfare and food security
29. Cultural barriers and potentials for recycling of human town-waste
30. Environmental assessment of selected Danish or imported organic agricultural products
31. Content and stability of vitamin E in organic milled wheat and spelt
32. Empowerment of organic enterprises - values, identity and learning in food processing
33. Consequences of growing genetically modified crops in co-existence with organic crops
34. Control of soil-borne diseases by the bio-fumigation effect of *Brassicas*
35. Investigation on mortality and interactions of selected diseases in free-range chickens
36. Future supply and marketing strategies in the Danish organic food sector
37. Crop - weed interactions determinated by sensor techniques
38. Soil ecological studies of decomposition of urban fertilisers
39. Production of high quality organic milk considering the future demands for use of organically produced feed and natural vitamins.
40. Bacterial infection risk associated with outdoor organic pig production with special reference to *Salmonella* and *Campylobacter* infection
41. Organic food networks and sustainable development
42. Application of alternative medicine in organic dairy herds
- with special emphasis on the effect of veterinary homeopathy on udder health
43. Modelling development of disease complexes on barley cultivar mixtures under organic farming practice
44. Technology for reduction of environmental impact and loss of nitrogen from livestock manure
45. Competition and complementarity between intercropped barley, rape and field pea in ecological cropping systems – the role of plant available nitrogen and sulphur as well as cropping design.
46. Production of N_2O in grass-clover pastures

MSc education

Based on the external evaluation of the agroecology programme at UMB, from comments on the evaluation by NOVA, and from our own perspective, we see the importance of developing a more integrated agroecology offer.

Goal 1: Develop a feasible Nordic structure

Achievement: With the collection of all our courses in the NOVA course database, it was possible for us to develop programme options with different specialisations at each of the universities. Please see appendix A for details.

Follow-up actions: Collect feedback from each of the universities regarding the feasibility of each of these structures and make adjustments accordingly.

Goal 2: Create a report with acting forces at each member institution, for and against this structure

Achievement: We have started collecting information for this report.

Follow-up actions: To be continued in 2006.

Goal 3: List all courses in the NOVA course database
Achievement: completed
Follow-up actions: Update as necessary

Goal 4: Mobility: total of 10 students crossing Nordic borders
Achievement: 5. A session with the 21 agroecology students at UMB was held in September to highlight the NOVA mobility options

Follow-up actions: Arrange meetings at all institutions in 2006 to inform about Nordic options.

Goal 5: Information: One published paper and one conference presentation
Achievement:
Salomonsson, L., C.,A. Francis, G. Lieblein, and B. Furugren. 2005. Just in time education. NACTA Journal, Vol. 49, No. 4, 5-13.

Francis, C., Lieblein, G., Steinsholt, H., Breland, TA., Heleniua, J., Sriskandarajah, N. and Salomonsson, L. 2005. Food systems and environment: building positive rural-urban linkages. Human Ecology Review. Vol 12, No 1, 58-69.

Lieblein, G., Østergaard, E. and Frances, C. 2005. Becoming and Agroecologist through action education. International Journal of Agricultural Sustainability. Vol 2, No 3, 1-7.

In addition N. Sriskandarajah presented our internet course at the ERFITA/WCCA conference in Portugal in July.

Follow-up actions: Goal completed and exceeded.

MSc NOVA Cross approval

Cross approval of courses is important in facilitating the mobility of Nordic students, and to ensure that students receive recognition for the courses they take at NOVA member institutions. Our network sees the importance of student exchanges, and aims to facilitate this.

Goal: To have the remaining work done to have all the courses offered by our group approved as NOVA courses
Achievement: All courses have been entered into the NOVA course database.

Follow-up actions: Goal completed.

E-learning: PAE301: Ecology of farming and food systems

Internet learning gives us the opportunity to reach a large market of students. It also allows us to cooperate without leaving our home institutions, therefore reducing the costs of collaboration. It is important for us that this course gives students a good impression of the field of agroecology, and motivates them to study further in the area.

Goal 1: 20 students in the course
Achievement: 12 Students from Norway, Brazil, USA, Canada, Colombia, Serbia and Montenegro, Hungary and Ecuador. Four of these students will participate in the MSc agroecology programme at UMB. We started the course with 20 students, but due to mainly technical difficulties, we lost 8 students. There were especially problems for those from developing countries where internet access is slow and unstable.

Follow-up actions: Start marketing the course at an earlier date, with more details about the computer requirements needed.

Goal 2: Have four member institutions actively participating in the course
Achievement: Five institutions involved in the course, with contributions from: Geir Lieblein and Wendy Waalen from UMB, Nadarajah Sriskandarajah, John Porter and Vibeke Langer from KVL, Lennart Salomonsson from SLU, Juha Helenius from HU and Charles Francis from the University of Lincoln Nebraska.

Follow-up actions: Goal achieved

Goal 3: Train another person to coordinate the course
Achievement: Karin Svanäng from CUL at SLU was trained in course coordination, and shared these responsibilities with Wendy Waalen.

Follow-up actions: In 2005 UMB was the main coordinating institution. To make this a course with truly shared responsibilities, SLU will take the coordination role of this course in 2006.

Goal 4: Have a scientific paper on the course accepted in a refereed international journal
Achievement: An article about our experiences running an internet-based course was published:
Lieblein G, Moulton M, Sriskandarajah N, Christensen D, Waalen W, Breland T A, Francis C, Salomonsson L and Langer V (2005), A Nordic Net-based Course in Agroecology - Integrating student learning and teacher collaboration, European Journal of Open and Distance Learning, Vol 2
Available at: http://www.eurodl.org/materials/contrib/2005/Lieblein.htm

Follow-up actions: Goal achieved

PhD education

A coordinated effort will result in a more integrated PhD course offer, fitting the demands of PhD students in the Nordic countries better. This will also support networking among PhD students in the Nordic countries and beyond (e.g. Baltic, Russian, European).

Table 5: Enrolment in PhD level courses in 2005

Institution	Course	Total number of students	Number of Nordic students	Number of Baltic and Russian students	Number of total study credits (number of total students * ECTS)
SwOFF	Översiktskursen I ekologisk produktion	13	13	0	13*3=39
SOAR	Globalisation: Threat or opportunity to organic farming?	21	11	9	21*4=84
Total		**34**	**24**	**9**	**123 ECTS**

Goal 1: Run one course
Achievement: The course "Globalisation: Threat or opportunity to organic farming?" was run 3-7 October 2005.

Follow-up actions: Goal completed

Goal 2: 20 students participating
Achievement: 21 students were participating in the course

Follow-up actions: Goal completed

Goal 3: 5-6 students should be Nordic
Achievement: 12 of the registered students were Nordic students

Follow-up actions: Goal completed

Improving international linkages in education and research

Networking is important in the field of agroecology, as key people in the field are widely dispersed. Joining these people is essential for the further development of the field of agroecology. We aim to share our experiences in education and research with new contacts in the Baltic countries. We also hope to learn from their experiences, and aim to work together in the future on educational and research projects. UMB, HU and SLU are part of a Nordic – Baltic – Russian Academic Network in Agroecology (BNAEN). The network met for the first time on October 8th, 2004 in Kaunas, Lithuania. In December, Geir Lieblein met with the network coordinator in Kaunas.

Goal 1: At least 3 people from AGROASIS should participate in the Nordic-Baltic-Russian Academic Network in Agroecology symposium
Achievement: Geir Lieblein and Wendy Waalen participated in the symposium, April 28-30th. The symposium included participants from Latvia, Estonia, Lithuania, Russia, Finland, Norway and France. The main goal of the meeting was to develop a plan of action for the establishment of a Baltic degree in agroecology.

Follow-up actions: Maintain contact with our Baltic partners.

Goal 2: At least one member should be involved in a teacher exchange to the Baltic countries
Achievement: The offer has been made but the Baltic network has not yet requested our teaching assistance.

Follow-up actions: Continue our communication with the Baltic network, and be open to teach exchange possibilities

Information/communication

Students have many choices regarding courses, and it is therefore important to market our course offers, and to be visible. We feel this work is important in enhancing the mobility of Nordic students.

Goal 1: Total of 10 Nordic students crossing borders
Achievement: 5
Presentations were made at SLU, HU, KVL and UMB regarding NOVA options in January and February.

Follow-up actions: We plan to have a session with the 21 agroecology students at UMB this autumn to highlight the NOVA mobility options.

Goal 2: Re-design www.agroasis.org
Achievement: Completed in July

Follow-up actions: Updating as necessary