

Report for Summer School “ANIMAL BREEDING MEETS SOCIAL SCIENCES”

Summary

The ESF-funded Summer School “Animal breeding meets Social Sciences” was hosted by BOKU-University of Natural Resources and Life Sciences, Vienna, Austria and took place from September 26 – 29, 2011.

A total number of 25 participants from 19 different countries attended the Summer School. The education level was heterogeneous. Masters students, PhD students, but also (senior) researchers from universities and national research organisations and one staff member from Ministry of Agriculture participated.

The 4-days program was a mixture of different topics in the field of social sciences. On the first day the opening presentation was given by Prof. Sölkner (BOKU-University) to give an input from an animal breeder’s perspective on needed interdisciplinary research and joint activities with social scientist.

The first two days were held by Dr. Ranjitha Puskur (ILRI). On day two she was supported by MSc Frederik Oberthür. These sessions were dedicated to the theories and concepts on innovation systems and how this approach can be applied in the field of livestock improvement. All participants were asked to actively bring in their expertise from their own work and lively discussions were held.

The third day was held by Dr. Adam Drucker (Bioversity). He gave an overview on economic approaches how livestock genetic resources can be evaluated. He presented new, unconventional ways of involving farmers in developing countries to participate in in-situ conservation strategies.

The fourth day was facilitated by Dr. Frank Hartwich (UNIDO) and he gave an introduction to Social Network theory. After a theoretical introduction into the topic, participants got the chance to get a first insight in the software package VisuaLizer and test their new knowledge with a dataset. Actors in the network of animal breeding were identified and possible links and interactions were identified.

The course was combining different didactic concepts such as presentations, group work, reflections, plenary discussions and exercises on the computer.

Description of the scientific content of and discussion at the event

Dr. Ranjitha Puskur of the International Livestock Research Institute, Addis Abeba, Ethiopia, was chairing the first two days of the summer school. Her first session was entitled: Perspectives on Knowledge, Technology and Development – Insights from Science, Technology and Society Studies and Theories of Knowledge. The starting point was the creation of knowledge. The production of knowledge was discussed. In group discussion changes in knowledge production have been assessed. These changes ranged from new, faster ways of communication roots in the development of internet and new media to the paradigm shifts the research process has undergone in the last decades. The sheer amount of information researchers have to deal with and the resulting large differences in knowledge quality were explained. The context specificity of knowledge was elaborated. Furthermore the participants were introduced to the concepts of tacit and explicit knowledge; knowledge as intellectual property; mode-1 and mode-2 knowledge; differences between cross-, trans-, multi- and interdisciplinary knowledge-flow and how theory and practise of knowledge creation are interconnected. From this first introduction the course moved to Knowledge and Innovation. After the introduction of the importance of innovation the terminology was defined, triggers of innovation were discussed; actors and innovation capacity were debated. Dr. Puskur introduced the Integrated Agricultural Research for Development (IAR4D) approach to the participants. Frameworks and limitations of this currently evolving approach were discussed and this session closed with the major challenges encountered in practise.

The second session dealt with “Innovation Systems”. The term was defined, key elements and actors shown and the possibility to answer research questions using an innovation systems approach was discussed. The next unit on “Value chains in the livestock sector” introduced the participants to an alternative way of seeing one field of research in a broader context. Again a definition of terms was followed by a description of important actors. In examples market chain actors and links, enabling environment and value chain mapping was illustrated. Gender was introduced as an aspect not to be ignored for the use of value chains to answer research questions.

In group work participants developed case studied which were used for group exercises during the rest of Dr. Puskur’s sessions. The exercises were helpful in applying newly acquired knowledge to examples from the participants’ experiences. In plenary discussions results of all groups were presented. The following interesting discussions sparked, in many cases, more informal discussions during the whole week.

The next session entitled “Analyzing Innovation Systems” supplied the participants with information on tools and approaches to analyze their research projects following an innovation systems approach. The 4 element approach (actors and their roles; attitudes and practices, patterns of interaction, enabling environment) developed by the World Bank was discussed. Positive Deviance was introduced as a useful tool. Institutions and policies were

also one of the topics as were frameworks for analysis and mediation. Definitions and processes were discussed for: Institutional Analysis and Development (IAD) framework, RAPID framework, Policy Systems Analysis and Mediation (PSAM) and communication for policy influence. An emphasis was put on the importance of communication for a thorough analysis.

On the second summer school day Participants were invited to brainstorm on how they would do things differently if their research used an innovation systems perspective in combination with a value chain framework? The application of Innovation Systems Perspective in the design of agricultural research for development was also covered. The session dealt with social change, institutional learning and change, impact pathways analysis and logframe and outcome mapping. As far as useful tools are concerned information was given on action research, appreciative enquiry and Participatory Impact Pathway Analysis (PIPA)

Complementary to Dr. Puskur's sessions was the session held by Frederik Oberthür, PhD student at the University of Vienna, on this second summer school day. During his session: "Ways of knowing" he acquainted the participants with "Actor-network-theory" (ANT). He gave an introduction on theory in general and on social theory more specifically and additionally on theories of technology. The concept of ANT was introduced, and its historical background and components explained. Among these components were: agency of „non-humans, tracing the social and black boxing. In group exercises the new knowledge was applied by small groups to examples from their own experience.

On the third summer school day Dr. Adam Drucker of Bioversity International gave a session on "Economics and policy of Animal Genetic Resources Conservation and Sustainable use". After a quick introduction of his organisation's mission and objectives the participants were introduced to economics. Basic concepts were explained. The Total Economic Value with its components was discussed. The importance of the development of methods and decision support tools for the analysis of Animal Genetic Resources (AnGR) was raised. Constraints to an economic analysis of AnGR were explained (methodology, data availability, non-market values, required use of rural appraisal techniques). A number of case studies were given and to illustrate methods, tools, problems and findings. The Payment for Agrobiodiversity Conservation Services (PACS) and necessary steps were discussed. It was elaborated in which different ways agro-biodiversity conservation could be achieved. In group works the participants developed projects for the conservation of an endangered breed chosen by each working group. 4 projects were presented which tried to take all necessary components for a sustainable conservation program into account. The session closed with a group discussion of the challenges ahead.

The closing day of the summer school was chaired by Frank Hartwich from UNIDO. He conducted an introductory course on Social Network Analysis (SNA). Starting with the roots and historical background the lecture moved to the explanation of different networks and

their components and the possible application of SNA. Different types of interaction, network effects, the importance of networks for learning and innovation processes, and the applications for the livestock sector were discussed. In exercises the data format and analysis methods were presented. Furthermore the participants were introduced to analysis itself: different measures were presented (e.g. centrality, degree, distance...). After the theoretical introduction a SNA software (Visualyzer) was presented and tested in exercises.

Assessment of the results and impact of the event on the future direction of the field

The course offered students and researchers in the area of animal breeding the opportunity to get an insight in a completely different discipline. Courses of Social sciences are usually not, or only to a minimum included in the curricula of Animal Sciences.

Participants learned that livestock production is embedded in a larger production system and therefore other aspects have to be taken into consideration when interventions to improve livestock production have to be taken into account.

One immediate result is that participants got familiar with new concepts and theories. As the course not only presented theories, but also gave everybody the chance to directly use and “translate” the information for their own situation, the participants could relate to their current work. These exercises stimulated the self-reflection process for each person. Current concepts and approaches were critically analysed and possible deficits were identified.

In the long run, researchers are sensitized that the successful implementation of livestock improvement programs can only be achieved by involving many disciplines, but also various stakeholders from different sectors. This can lead to new designs of research and/or development projects.

Another positive effect of the course is that new networks and contacts were established and this might lead to new research projects in the future. One participant already used the opportunity to link up with BOKU-University and to get accepted as a PhD student. Different informal discussions were held how further collaboration could be ensured.



WELCOME

TO THE SUMMER SCHOOL

„ANIMAL BREEDING MEETS SOCIAL SCIENCES“

September 26 – 29, 2011

BOKU-University of Natural Resources and Life Sciences, Vienna, Austria

WELCOME

In the design and implementation of breeding programs animal breeders very often concentrate on technical issues ignoring the social component of such interventions. Therefore it is important to form interdisciplinary teams including social scientists. This summer school will provide theoretical concepts such as the innovation systems approach, social network analysis and the economic approach of valuating Animal Genetic Resources. Participants will learn methods and tools used by social sciences. This event aims at contributing to a better understanding for other research disciplines.

The first two days of the course will be dealing with the concept of innovation systems studies. Participants will get familiar with the innovation systems approach, which helps to understand how livestock keeping is embedded in the farming system.

On the third day of the course the focus will be on the importance of conservation strategies of Animal Genetic Resources (AnGR) and how economic approaches can be used. This lecture will provide an overview of the concepts and practice underlying the economics and policy of AnGR conservation and sustainable use.

The fourth day of the summer school will give an insight to social network analysis. This tool illustrates clearly who are actors in the livestock system, how are these actors linked and what power (decisions, money, and assets) each one has in relation to the other stakeholders in the network.

TEACHERS

Dr. Ranjitha Puskur, ILRI-International Livestock Research Institute, Addis Ababa, Ethiopia
Dr. Frank Hartwich, UNIDO-United Nations Industrial Development Organization, Vienna, Austria
Dr. Adam Drucker, BIOVERSITY INTERNATIONAL, Rome, Italy
MSc Frederik Oberthür, BOKU-University of Natural Resources and Life Sciences, Vienna, Austria
Prof. Dr. Johann Sölkner, BOKU-University of Natural Resources and Life Sciences, Vienna, Austria

PROGRAMME

Monday, September 26, 2011

Lecturer: Dr. Ranjitha Puskur, ILRI and Univ. Prof. Johann Sölkner, BOKU

- 08.00 - 09.00 Registration of participants
- 09.00 - 09.30 Introduction of participants
- 09.30 - 10.00 Overview of the summer school
- 10.00 - 10.30 Challenges of development - From a Breeder's perspective (Prof. Johann Sölkner)
- 10.30 - 10.45 coffee/tea break
- 10.45 - 11.30 Perspectives on Knowledge, Technology and Development – Insights from Science, Technology and Society Studies and Theories of Knowledge
- 11.30- 12.30 Innovation systems and gendered value chain frameworks
- 12.30 – 14.00 lunch break
- 14.00-15.30 Analyzing Innovation systems
- 15.30 – 15.45 coffee/tea break
- 15.45 – 16.30 Institutional Analysis and Development (IAD) Framework
- 16.30-17.30 Policy Systems Analysis and Mediation (PSAM)

Tuesday, September 27

Lecturer: Dr. Ranjitha Puskur, ILRI and MSc Frederik Oberthür (BOKU-University)

- 09.00 - 10.30 Ways of knowing
- 10.30 - 10.45 coffee/tea break
- 10.45 – 12.30 Application of Innovation Systems Perspective in the design of Ag R4D
- 12.30 – 14.00 lunch break
- 14.00-15.30 Social and Institutional Learning and Change theories (MSc Frederik Oberthür)
- 15.30 – 15.45 coffee/tea break
- 15.45 – 17.30 Monitoring and Evaluation in R4D projects

Wednesday, September 28

Lecturer: Dr. Adam Drucker, Bioversity International

- 09.00 – 10.30 Concept: Background to the Economics of Agrobiodiversity Conservation and Use
- 10.30 - 10.45 coffee/tea break
- 10.45– 12.30 Values Attributable to Agrobiodiverse Genetic Resources
- 12.30 – 14.00 lunch break
- 14.00 – 15.30 Overview of AnGR Valuation Methodologies, Knowledge Gaps and Limitations
- 15.30 – 15.45 coffee/tea break
- 15.45 – 17.30 Animal Genetic Resource Valuation Case Study Examples

- 19.00 - Social event

Thursday, September 29

Lecturer: Dr. Frank Hartwich, UNIDO

9.00 – 10.30 Introduction to social network theories

10.30 – 10.45 coffee/tea break

10.45 – 12.30 Demonstration of software “Visualizer”

12.30 – 14.00 lunch break

14.00 – 15.30 Group work: working on data sets

15.30 – 15.45 coffee/tea break

15.45 – 17.30 Presentation of group work

17.30 – 18.00 Final discussion and feedback