



## Workshop 2.2: **Narratives of interdisciplinary studies of farm system sustainability** – Describing the research programmes

Convenors: **Lesley Hunt** and **John Fairweather**

### **Introducing ARGOS: Exploring marketable pathways to sustainable primary production in a de-regulated environment**

Henrik Moller and Jon Manhire

University of Otago, New Zealand

New Zealand, a country dependent on primary production, provides a case study of what happens when a government adopts a hard line neo-liberal approach to agriculture. Can a country successfully move towards more sustainable primary production down the commercial market-driven pathway in a de-regulated environment? This question is relevant for countries that are globally exporting primary producers, wondering what might happen if the safety net of subsidies and state intervention disappear. The Agricultural Research Group on Sustainability (ARGOS) is exploring this question by bringing together researchers from farm management, ecology, and social science, and stakeholders from primary production organisations.

### **The ARGOS research design: What we have ‘done’**

John Fairweather

Lincoln University, New Zealand

The main ARGOS research goal is to evaluate the relative economic, environmental and social performance of conventional and alternative production systems. The research design compares three main management systems (conventional, integrated and organic) and three sectors (kiwifruit, sheep/beef, and dairy). The Before After Control Intervention (BACI) design entailed assigning 12 farms to each management system as a panel, for a total of 36 farms in each sector with a null hypothesis that there is no measurable difference in changes over time in the measured variables in the control farms compared to the intervention farms.

### **In the ARGOS ‘field’: Managing researchers and engaging with farmers/orchardists**

Dave Lucock and Jayson Bengé

The Agribusiness Group, New Zealand

In this presentation the ARGOS field research managers describe their role of sustaining the engagement of farmers/orchardists and industry stakeholders supporting the ARGOS programme while the former are under the scrutiny of researchers. They contrast their differing experiences in the sheep/beef, high country, dairy and kiwifruit sectors and outline what they have learnt.

### **BioDIVA – Transformation knowledge for equitable and sustainable use of agrobiodiversity: Building inter- and transdisciplinarity**

Martina Padmanabhan,  
Melvin Lippe, Monish Jose,  
Isabelle Kunze, Hannah Arpke,  
and Lydia Betz

Leibniz University Hannover, Germany

The trans- and interdisciplinary research project BioDIVA aims to generate transformation knowledge towards a gender-equitable and sustainable use of agrobiodiversity. Approaching agrobiodiversity from the disciplinary perspectives of land use change, institutions, sociology, economics and ecology establishes a ground for analysing the boundary spanning complexities. For the case of rice-diversity in Kerala, South India, we outline the initial steps to establish a research design for a transdisciplinary understanding of the dynamics of agrobiodiversity loss. We present results of integrating natural and social sciences on a conceptual level and reflect on the process and tools to identify the specific perspectives and interdisciplinary intersections.



## Workshop 2.2: **Narratives of interdisciplinary studies of farm system sustainability – Experiencing transdisciplinarity**

Convenors: **Lesley Hunt** and **John Fairweather**

### **Swimming in the transdisciplinary melting pot: An ecologist's perspective**

Henrik Moller

University of Otago, New Zealand

Ecologists in ARGOS underestimated the practical challenges of applying their science to guide sustainable food production. Transdisciplinarity required them to courageously “camp out” in others’ disciplines, take risks, and forgo traditional ecological research processes. Enabling engagement was as important as accepting the validity of different traditions of problem definition and hypothesis generation, and dealing with uncertainty. Members of transdisciplinary research teams need to possess and nurture humility and confidence if they are to persist long enough to reap the excitement and reward from melding disciplinary structures. We remain convinced transdisciplinarity is essential for finding innovative solutions to wicked problems.

### **BioDIVA – Transformation knowledge for equitable and sustainable use of agrobiodiversity: Experiencing transdisciplinarity**

Melvin Lippe,

Martina Padmanabhan,  
Monish Jose, Isabelle Kunze,  
Hannah Arpke and Lydia Betz

Leibniz University Hannover, Germany

We present the BioDIVA research design after our encounters with the field. We set out a four-year exploration to create a development perspective for farming communities and other actors involved in the upland rice farming system of Kerala, South India. The explorative case study builds a thorough common ground at the very beginning of BioDIVA. We reflect on the predefined key terms, which guide our research, meet transdisciplinarity in the field, explore the knowledge domains of farmers, scientists and development practitioners and incorporate these different kinds of knowledge and interests into a common research design.

### **Positioning our experiences: A theoretical take on transdisciplinarity**

Lesley Hunt

Lincoln University, New Zealand

Through reading the literature about others’ experiences of transdisciplinarity and combining them with those of the ARGOS team it is apparent that the road to transdisciplinarity is not smooth. The issues that arise can be interpreted using Bourdieu’s Theory of Practice to understand that this is inevitable given that in transdisciplinary research researchers are expected to work together in a way not expected in other situations. Those who are working or about to work in similar programmes can take heart if they are having difficulties and disagreements - this is a ‘normal’ experience, to be expected and celebrated.

### **Discussion: Reflecting and learning from our experiences: Questions for the audience and questions from the audience**

All workshop participants

This workshop aims to provide a space for researchers to share their experiences of working in a transdisciplinary project and to see if we can come to some understanding of the necessity of the challenges presented by transdisciplinarity. Following the presentations, we will open the floor to a 30 minute discussion by asking the audience a question.