



# Swiss Inter- and Transdisciplinarity Day

How to develop a successful inter- and transdisciplinary proposal  
Bringing together researchers' and funders' perspectives

Lucerne, 7 November 2016  
University of Lucerne

## **Table of Contents**

Introduction	1
Programme	2
Presentations	4
Poster abstracts	17

## **Location**

University of Lucerne, Frohburgstrasse 3, 6002 Luzern  
Room 7

---

## **Save the date**

### **International Transdisciplinarity Conference 2017**

Transdisciplinary Research and Teaching – Intercultural Endavours

Lüneburg, Germany, September 11 - 15, 2017

Co-organised by td-net and Leuphana University Lüneburg

# Swiss Inter- and Transdisciplinarity Day 2016

## **How to develop a successful inter- and transdisciplinary proposal Bringing together researchers' and funders' perspectives**

### **Welcome to the Swiss Inter- and Transdisciplinarity Day 2016 in Lucerne!**

The Swiss Inter- and Transdisciplinarity Day 2016 addresses the framing phase of inter- and transdisciplinary projects. This very important phase includes elaborating the life-world and scientific goals, analysing context and actors in the field of the project, involving representatives from the disciplines and stakeholders in the respective field, defining the scientific work plan and stakeholder engagement concept, finding potential funding bodies and writing a proposal.

The framing phase poses several challenges that will be discussed today, including:

- The design of the process, finding suitable methods to deliberatively frame a project with representatives from different disciplines and stakeholders.
- Finding resources to conduct the funding phase and finding suitable research funders to submit the proposal.

We want to share experiences of inter- and transdisciplinary project framing phases and proposal elaboration. Furthermore we will discuss ideas about funding of framing phases as well as ways to submit and fund the elaborated projects.

Examples of inter- and transdisciplinary project framing and proposal development will be presented from projects funded by the „Sustainable Development at Universities Programme“ and from an open call.

## Programme

### Monday, November 7, morning

08:40 Coffee and registration

09:15 **Welcome note**

by academic director Wolfgang Schatz, University of Lucerne and td-net president Jakob Zinsstag, University of Basel

09:30 **Framing inter- and transdisciplinary research projects: Importance and challenges**

Christian Pohl (ETH Zurich)

09:55 **The potential of funding the framing phase of inter- and transdisciplinary research projects: Examples and experiences from the “Sustainable Development at Universities Programme”**

- Klaus Mathis (University of Lucerne):  
Right to water and sustainable water management
- Flurina Schneider (University of Bern):  
Increasing the effectiveness of transdisciplinary research for sustainable development
- Basil Bornemann, Marius Chirsten (University of Basel):  
Sustainable governance in Swiss cantons – making sense of principles and practices
- Gabriela Wuelser (td-net):  
Reflecting on the benefits of extra funding for preparing research proposals

11:30 Short coffee break

11:45 **Research funders' approaches to foster inter- and transdisciplinary research**

- Sylvia Jeney (Swiss National Science Foundation):  
Inter- and transdisciplinary research at the Swiss National Science Foundation
- Christoph Bossart (Mercator Foundation Switzerland):  
Fostering Inter- and Transdisciplinary Research – Mercator Foundation Switzerland

12:30 Lunch

## Monday, November 7, afternoon

13:30 **Poster Session**

14:00 **The international context of research funding for inter- and transdisciplinary projects**

Roderick Lawrence (University of Geneva)

14:30 **Approaches to framing inter- and transdisciplinary research from different backgrounds**

- Anouk N'Guyen, Philipp E. Hirsch, Irene Adrian-Kalchhauser, Patricia Burkhardt-Holm, (University of Basel, University of Edmonton, Canada):  
Improving invasive species management by integrating priorities and contributions of scientists and decision makers
- Silvia Tobias (Swiss Federal Research Institute WSL):  
What nobody talks about... Framing case study research on landscape development in periurban regions
- Karin Grasenig, Magdalena Kleinberger-Pierer, Renate Handler (convelop, Graz, Austria):  
Within or beyond boundaries? Insights and experiences with project framing
- Ayuko Sedooka, Theres Paulsen, Frédéric Darbellay (University of Geneva and td-net):  
Voices of Swiss researchers and practitioners in the field of inter- and transdisciplinarity

15:45 Short coffee break

16:00 **Plenary workshop: What kind of support is needed to successfully develop inter- and transdisciplinary research proposals?**

17:00 Aperó

## **Framing inter- and transdisciplinary research projects: Why is it important, and what are the challenges?**

Author: **Christian Pohl**

USYSTdLab, ETH Zürich,

Programme leader of the Sustainable Development at Universities Programme

Problem framing is a name for the first stage of an inter- or transdisciplinary research project. The stage is required for two reasons: If different disciplines collaborate, there is no shared state and frontier of knowledge and no shared set of approved theories and methods to be applied; If the goal is to address a societal issue and to involve actors of civil society, the private and the public sector, there is no shared view on the state of the problem and about what should be done. Problem framing serves to learn about and acknowledge the richness and diversity of expertise and viewpoints, and to come up a view on the problem, a way to address it and a team to do so.

There are many challenges in problem framing, as amongst others: (a) To frame a problem in a way that analyzing it is interesting for the disciplines and will provide insights relevant for the societal actors; (b) To organize the group process such as people feel taken seriously and ‘at the right place’; (c) To be able to change the composition of the team depending on how the project evolves, since particular expertise might no longer be relevant or the interest of specific participants might no longer be given; (d) To protect the process from being taken over by individual disciplines or stakeholders.

In the frame of the Sustainable Development at Universities Programme (2013 - 2016) we had the opportunity to fund 10 projects for the stage of problem framing. They were funded (including 50% matching funds of the home university) with CHF 40'000 up to 200'000. The idea of the funding was, that the projects would have time to adequately address some of the above challenges.

## **Right to Water and Sustainable Water Management**

Author: **Klaus Mathis**

University of Lucerne

This interdisciplinary research project aims to analyse the philosophical, legal and economic aspects regarding the manner in which the scarce resource water is used and managed. The project is institutionally anchored within the Center for Law and Sustainability (CLS) at the University of Lucerne.

The project has been accompanied by regular exchange with other project partners and stakeholders from society. In order to establish the entire range of issues associated, the project partners and representatives of various interest groups were invited to an initial workshop. The aim of this workshop was to discuss the current problems in practice and scholarship and to reassess potential conflicts of interest. The thereby gained insights helped to further enhance the research questions. Over time the following three subprojects became apparent:

- Subproject A analyses the content and scope of the human right to water by comparing the legal obligations of states with the moral requirements for a minimal water supply. In doing so the legal-philosophical basis for the right to water will be established.
- Subproject B examines the so-called “land and water grabbing” from a legal and socioeconomic perspective. Legal conflicts between foreign investors and local population will be analysed by studying case groups thereby allowing proposals for the further development of legal procedures to be submitted.
- Subproject C conducts an economic analysis of new regulations regarding water supply, which were developed during the post-privatisation era. The insights will be applied to a functional legal comparison from a law and economics perspective.

Research proposals have been submitted to the SNSF and private foundations, whose replies are still pending at this time. Subprojects A and B will be conducted regardless of the outcome – if necessary with university funds. With regards to subproject C, two applicants from Brazil and Columbia recently submitted their applications for the Swiss Government Excellence Scholarship.

## **Increasing the effectiveness of transdisciplinary research for sustainable development**

Author: **Flurina Schneider**

Centre for Development and Environment (CDE), University of Bern

In the face of increasingly severe problems of global change, science is requested to produce knowledge that can help to advance sustainable development. Accordingly, scholars have developed and applied transdisciplinary research approaches to enable sound collaboration between researchers and practitioners. Nonetheless, transdisciplinary research has remained a challenging endeavour.

Against this background, the overall goal of our project was to increase the effectiveness of transdisciplinary research for sustainable development by jointly developing a new research proposal which addresses key obstacles related to transdisciplinary research. For this purpose, we created a learning platform of participants from six transdisciplinary research projects, four funding schemes (NRP, r4d, SDC, Future Earth) and other experts of transdisciplinary research and development (td-net, KFPE) to jointly reflect on what needs to be investigated and changed to increase the effectiveness of transdisciplinary research for sustainable development. Moreover, we conducted a pre-study to nurture the joint learning process.

While the process of joint problem and goal framing was very fruitful, finding a funding body to support the new transdisciplinary research proposal was not easy. We finally succeeded, but with a considerably smaller project than planned.



## **Sustainable governance in Swiss cantons – making sense of principles and practices**

Authors: **Basil Bornemann, Marius Christen**

University of Basel

Our project started from the observation of largely disconnected academic and practical discussions regarding sustainability governance in government and public administration. The aims of our study were (1) to establish a dialogue between scholars and practitioners (2) in order to identify challenges of sustainability governance, which are both scientifically and practically relevant, and (3) can form the agenda of a follow-up research project. Accordingly, the project was concerned with transdisciplinary problem-framing.

The process was structured by five main steps. First, we analysed documents and conducted interviews with cantonal sustainability officers to reveal practical understandings and challenges of sustainability governance. Second, in a collaborative workshop, we juxtaposed practical understandings with academic conceptions of sustainability governance to generate a universe of meanings. Third, based on the interview material, we identified practically relevant challenges of sustainability governance and interpreted these challenges in light of the academic discussion. Fourth, in a second collaborative workshop, we discussed these interpretations of challenges and delineated a common frame, which relates the diversity of practical challenges to the academic discussion. Finally, within this frame, we specified a number of research questions that are supposed to address the multiple challenges in view of the universe of meanings.

In retrospective, we deem a number of design choices to be supportive for a collaborative problem-framing process that led to a research proposal that is regarded attractive from both scholars' and practitioners' points of view. First, the approach of collaborative meaning making turned out to be a fruitful first step of transdisciplinary problem-framing. Here, "sustainability governance" became a useful boundary concept, which helped to clarify and relate different (conflictual) interpretations. Second, during the whole process, we deliberately distinguished between scientific perspectives on the one hand and practical perspectives on the other. This helped to keep different forms of knowledge as well as the different interests in mind. Third, we tried to generate shared views not by identifying the lowest common denominator, but by elaborating overall standpoints and questions. This reflexive approach of opening up (instead of closing down) allowed for a process of integration that keeps alive differences under a common frame rather than diluting them.

## Reflecting on the benefits of extra funding for preparing research proposals

Author: **Gabriela Wuelser**

Network for Transdisciplinary Research (td-net), Swiss Academies of Arts and Sciences,  
Programme manager of the Sustainable Development at Universities Programme

Involving colleagues from other disciplines and non-academic actors in the process of identifying new, societally relevant and scientifically meaningful research questions is not only challenging but also particularly time-consuming. How can these processes be better supported? In the past few years, we explored whether the provision of extra funding for the early stage of preparing interdisciplinary and transdisciplinary research proposals is helpful. Within the SUC Programme “Sustainable Development at Universities” (2013-2016), we funded ten such proposal development projects, amongst others. They identified and framed research questions through exploring innovative forms of interdisciplinary collaboration or stakeholder involvement in order to address a fundamental sustainability challenge in a new and comprehensive way. In early October this year, we convened a workshop to share key experiences made by these projects. It brought together project representatives, members of the programme’s board and of the td-net board – including a funding agency representative. This talk will share first insights gained and put them up for discussion in a broader audience. Among positive experiences reported were e.g. improved stakeholder relations and ownership, less time pressure and more profound mutual understanding. However, researchers also experienced an area of conflict between scientific interests, real-world priorities and specifications of funding schemes. Furthermore, extra funding for proposal development doesn’t seem to be able to resolve the problem of limited diversity in career opportunities.

**Inter- and transdisciplinary research at the Swiss National Science Foundation**

Author: **Sylvia Jeney**

Swiss National Science Foundation (SNSF)

The Swiss National Science Foundation (SNSF) is an important supporter of Inter- and transdisciplinary research in Switzerland. In this contribution we present the various SNSF funding schemes for this kind of research, more specifically the National Research Programmes, R4D, Sinergia, Bridge. A particular focus will be made on the challenges posed to evaluation of these funding schemes. Some advices will be given on what characterizes a good proposal in terms of research plan and research group..

**Fostering Inter- and Transdisciplinary Research – Mercator Foundation Switzerland**

Author: **Christoph Bossart**

Mercator Stiftung Schweiz

Invested in common welfare and complex questions of societal relevance requiring holistic answers, Stiftung Mercator Schweiz is strategically interested in inter- and transdisciplinary research. It supports research projects that aim to contribute to practically applicable solutions, actively involve non-scientific actors and communicate results in a targeted manner. The foundation understands the challenges related to the development and implementation of such projects and is currently examining new forms of support to foster collaboration between science and civil society organizations based on the results of a study recently conducted on this behalf.

## **The International Context of Research Funding for Inter- and Transdisciplinary Research Projects**

Author: **Roderick J. Lawrence**

University of Geneva

During the last decade the number of publications about inter- and trans-disciplinary research projects has increased significantly. This trend should be interpreted in relation to the long-standing and on-going debate about the lack of academic, institutional and financial incentives for these types of cross-disciplinary research. This paper will address these barriers and incentives in relation to research funding in the international and European contexts.

At the national, European and international levels, there is a growing concern about the societal impacts of research especially in relation to addressing real world concerns (such as public health challenges and applications of innovative technologies for the common good). Research consortiums at the international level and funding agencies in many countries have increasingly allocated funds for research calls that address societal challenges. The credibility, legitimacy and salience of collaboration between researchers in different disciplines and with non-academic partners have been debated. Recent reviews of documents published by research funding agencies, and surveys of researchers who collaborate across disciplinary boundaries, confirm that there are solid administrative, conceptual and institutional barriers constraining the promotion of interdisciplinary and transdisciplinary research projects. For example, recent empirical studies in some countries including Switzerland have identified conceptual/epistemological barriers stemming from a lack of communication and consensus about the meaning and interpretation of interdisciplinary research among members of academic research groups. This lack of shared understanding is an obvious barrier that needs dismantling. Administrative barriers extend beyond this lack of shared understanding to problems about the promotion and low funding of research that is not confined to conventional disciplinary research.

One of the objectives of the on-going COST Action TD 1408 “Interdisciplinarity in research programming and funding cycles” (INTREPID) is to identify documented information prepared by research funding agencies about the promotion and funding of interdisciplinary research, as well as guidelines for the evaluation of research proposals. A desktop study of documents from 14 European countries including Switzerland has been completed. The authors found that although a large majority of research calls and documents prepared by funding agencies mention interdisciplinarity, only 15% include an explicit definition and only about one third provide guidelines for the assessment of interdisciplinary research projects.

In conclusion, this paper indicates that beyond a shared concern at international and national levels about the lack of financial resources allocated to inter- and trans-disciplinary research programmes and projects, both conceptual clarification and

improved administration is necessary in order to promote and sustain innovative research that addresses real world situations and challenges by inter- and transdisciplinary contributions.

## **Improving invasive species management by integrating priorities and contributions of scientists and decision makers**

Authors: **Anouk N'Guyen<sup>2</sup>, Philipp E. Hirsch<sup>1,2</sup>, Irene Adrian-Kalchhauser<sup>2</sup>, Patricia Burkhardt-Holm<sup>1,2,3</sup>**

<sup>1</sup> Research Centre for Sustainable Energy and Water Supply, Basel, Switzerland

<sup>2</sup> Program Man-Society-Environment, University of Basel, Basel, Switzerland

<sup>3</sup> Department of Biological Sciences, University of Alberta, Edmonton, AB, Canada

Managing invasive species is a major challenge for society. In the case of newly established invaders, rapid action is key for a successful management. Here, we develop, describe and recommend a three-step transdisciplinary process to rapidly initiate action for invasive species management. We use the case of the newly introduced fish round goby (*Neogobius melanostomus*) in Switzerland and present results from the first of these three steps: assessing priorities and contributions of both scientists and decision makers.

We find that both scientists and decision makers prioritise research on prevention. Most of the available scientific knowledge contributions, however, are publications on impacts rather than prevention of the invasive species. The contribution of scientific knowledge does thus not reflect scientists' and decision makers' perception of what is essentially needed.

We argue that a more objective assessment and transparent communication of not only decision makers' but also scientists' priorities is an essential first step in the framing phase of a successful transdisciplinary project. Our three-step model can help to achieve objectivity via transparent communication and can be applied to other inter- and transdisciplinary research projects.

**What nobody talks about...****...Framing case study research on landscape development in periurban regions**Author: **Silvia Tobias**

Swiss Federal Research Institute WSL

This contribution presents the iterative process of framing an inter- and transdisciplinary research program from scratch. A small consortium of researchers from landscape ecology, spatial planning, biodiversity, and social sciences initiated the WSL research program “Room for People and Nature”. The research focus was on the threats on landscape qualities by urban development and determined the characteristics of the case study regions: rural regions with open spaces but under pressure of urbanisation. These were the starting points of the search for funding partners and for concrete case studies. After a two year period of intensive negotiation, the important stakeholders were committed, necessary resources found, and the actual research work could start.

Looking back at the framing process, I draw the following general conclusions:

1st the key-points framing transdisciplinary research are:

- the problem to be investigated/solved;
- the study cases linking scientific research to practice;
- the stakeholders involved: researchers, people affected by the research problem, funding partners;
- the resources available.

2nd general challenges with framing transdisciplinary research are:

- the framing conditions are strongly interrelated to one another and, therefore, have to be tackled simultaneously; this is particularly challenging the more different stakeholders are involved;
- the basic research question (problem to solve) must be clear from the beginning and throughout the whole framing process;
- at the same time, all stakeholder groups involved must get the opportunity of designing the research questions and processes; this helps to gain their commitment to the common project;
- distributing the costs among the funding partners and the resources among the researchers needs leadership and intuition at the same time;
- the framing phase (i.e. the time during which the money is generated) takes a long time, possibly similar to the duration of the actual research work (i.e. the time during which the money is spent).



**Within or beyond boundaries? Insights and experiences with project framing****Author: Karin Grasenick, Magdalena Kleinberger-Pierer, Renate Handler**

convelop cooperative knowledge design gmbh, Graz, Austria

In early phases of inter- and transdisciplinary research projects, and especially in framing and proposal development, researchers face many challenges. All persons involved contribute based on their specific research interests, priorities and approaches. These challenges are frequently further aggravated by time pressure and the fact that researchers are based in different locations. There might be profound underlying differences in the use of terminology, perceptions of collaboration, individual contributions and their interrelations. This can develop into a big obstacle later on in the process that is difficult to overcome or even devastating to the project.

Creating an in-depth common understanding and working base may seem like an overwhelming and extremely time-consuming task in early proposal phases, where other priorities (i.e., a focus on the pure “scientific content”) might prevail. But rather than neglecting this crucial activity completely, it can be broken down and implemented step by step. This means that a general framework and good preconditions must be created and roughly defined in the beginning, but the details can be discussed in later phases.

In this contribution, we discuss and reflect on strategies to deal with these challenges and to facilitate interdisciplinary cooperation. We draw on our experiences from teaching at universities in the field of interdisciplinary cooperation, and on our own activities in proposal writing. Conceptually, our contribution is based on the notion of boundary work. In the process of boundary work, frontiers and differences between team members and their disciplines are made explicit, and intersections between the disciplines are identified. Objects that have both a shared meaning for the interdisciplinary group, and specific meanings in each individual context, are discussed and defined to facilitate communication, and to enhance trust and respect. Combining boundary work and concept maps, we have developed a specific approach facilitating a stepwise process to establish mutual appreciation and a common understanding. The approach is based on a set of guiding questions that allow a profound analysis of individual projects, and will be presented and discussed.

## **Voices of Swiss researchers and practitioners in the field of inter- and transdisciplinarity**

### **Flash-back sur une expérience de recherche – Paroles de chercheurs sur l'Inter- et Transdisciplinarité**

Authors: **Ayuko Berchtold Sedooka<sup>1</sup>, Theres Paulsen<sup>2</sup>, Frédéric Darbellay<sup>3</sup>**

<sup>1</sup> Centre interfacultaire en Droits de l'enfant de l'Université de Genève

<sup>2</sup> Network for Transdisciplinary Research, td-net des Académies suisses des sciences

<sup>3</sup> Université de Genève

Cette présentation opère un flash-back autoréflexif sur une expérience de recherche collective réalisée sur les enjeux et les processus de la recherche inter- et transdisciplinaire, en donnant prioritairement la parole aux chercheurs de différentes institutions universitaires suisses. Cette expérience théorique et pratique a été vécue dans le cadre du projet «Analyzing Interdisciplinary Research: From Theory to Practice. Case Studies in the Swiss University Context» (2014-2015) financé par le Fonds national suisse de la recherche scientifique (FNS) via son Comité spécialisé en recherche interdisciplinaire (CoSP-ID). Nous montrons comment les pratiques de recherche inter- et transdisciplinaire ont pu être thématisées comme des objets d'étude à part entière et reconnus comme tels par le FNS. Nous nous focalisons sur la phase de structuration et d'élaboration de la proposition de recherche (contexte, acteurs et partenaires, disciplines impliquées, méthodologie, cadrage et élaboration théorico-pratique, soutien et financement). À partir de l'élaboration d'un cadre théorique interdisciplinaire et d'un modèle d'analyse multidimensionnel, diverses activités de recherche ITD développées dans 10 Centres universitaires ont pu ainsi être étudiées sous les angles institutionnel, épistémologique, méthodologique, collaboratif et identitaire sur le plan professionnel. Les dimensions de l'évaluation et de la publication de la recherche interdisciplinaire ont également été prises en considération. Le succès de ce projet repose non seulement sur le travail d'objectivation et d'analyse, mais aussi sur la mise en confiance et en réseau des partenaires de l'enquête, tous investis dans la recherche inter- et transdisciplinaire et partageant par là même – au-delà des différences et des spécificités – un horizon épistémique commun. La réalisation du projet a permis de récolter de nombreuses et précieuses données empiriques qualitatives et quantitatives qui sont aujourd'hui présentées et analysées de manière intégrale dans un ouvrage qui retrace les tenants et les aboutissants de cette aventure de recherche. Nous présenterons les grandes lignes de cette publication (*La recherche interdisciplinaire sous la loupe – Paroles de chercheurs*). Tirant enseignement des conditions de réussites de ce projet, nous concluons par un bref flash-forward sur les tendances et le devenir de la recherche inter- et transdisciplinaire.

## Poster Session

The poster session goes beyond research proposal development. It features inter- and transdisciplinary projects, methods and funding schemes as well as related projects.

## **Framing-Phase des transdisziplinären Forschungsprojektes „Sustainable Care Farming in Switzerland“**

Authors: **Michèle Amacker, Sebastian Funke, Andrea Graf, Isabel Häberli**

Interdisziplinäres Zentrum für Geschlechterforschung, Universität Bern

Das Projekt sustainable care farming beleuchtete vor dem Hintergrund nachhaltiger Entwicklung, unter welchen Bedingungen bezahlte Care-Arbeit im ländlichen Raum geleistet wird. Dabei wurden soziale Dienstleistungen untersucht, die sich an Kinder, Jugendliche sowie pflegebedürftige Menschen richten und von landwirtschaftlichen Betrieben erbracht werden (care farming). Diesen Angeboten liegt die Vorstellung zugrunde, dass das Umfeld eines Bauernhofes eine gesundheitsfördernde Wirkung besitzt. Für die Bauernfamilien stellen diese bezahlten Dienstleistungen einen Nebenerwerb dar. Sie werden hauptsächlich von Bäuerinnen und teilweise unter prekären Bedingungen erbracht, wie erste Auswertungen zeigten.

In der 15-monatigen Framing-Phase arbeitete eine transdisziplinäre Forschungsgruppe am Interdisziplinären Zentrum für Geschlechterforschung der Universität Bern, bestehend aus verschiedenen AkteurInnen aus den Bereichen Landwirtschaft, bäuerliche Ausbildung, Sozialpädagogik, Behörden und Wissenschaft, daran, den Bereich care farming in seiner Komplexität und Diversität besser zu verstehen (Systemwissen) und gemeinsam die Herausforderungen zu benennen (Zielwissen). Dies mit den Zielen, eine für Praxis und Wissenschaft relevante Fragestellung für einen umfassenden Forschungsantrag zu formulieren, einen innovativen transdisziplinären Forschungsansatz zu entwickeln, den Austausch und die Vernetzung unter den AkteurInnen sowie den Wissenstransfer in die universitäre Lehre zu fördern.

In der ersten Phase des zyklischen Forschungsprozesses wurde zuerst eine Literaturrecherche durchgeführt. Zudem wurde eine Inhaltsanalyse von Abschlussarbeiten des bäuerlichen Lehrgangs „Betreuung in der Landwirtschaft“ erstellt. Die Ergebnisse wurden in zwei Workshops anhand diverser Reflexionsmethoden, wie zum Beispiel des World-Cafés, mit der transdisziplinären Forschungsgruppe diskutiert und durch ihr Wissen und ihre Erfahrungen ergänzt. In einer zweiten Phase eruierte die Forschungsgruppe zwei Themenfelder mit prioritärem Handlungsbedarf: Einerseits die Betreuungsarbeit und andererseits ein komplexes Themenfeld von Finanzierung, Anerkennung und Qualität. Zudem wurde ersichtlich, dass eine grosse Wissenslücke besteht hinsichtlich der unterschiedlichen Perspektiven der diversen Personengruppen, welche die Betreuungsleistungen nutzen.

Auf Basis dieser Ergebnisse begann die Feldforschungsphase, in der Interviews mit ausgewählten ExpertInnen geführt wurden, um die Themenfelder Betreuungsarbeit, Finanzierung, Anerkennung und Qualität zu vertiefen. Die Resultate dieser Projektphase wurden abermals in einem Workshop mit der transdisziplinären Forschungsgruppe reflektiert. Als Ergebnis konnten in einer dritten Phase mehrere Fragestellungen für zukünftige Forschungsvorhaben formuliert werden. Die Herausforderung besteht nun darin, Finanzierungsquellen für diese verschiedenen Ar-

ten von Fragen zu finden, da sie sich im Grad ihrer Anwendungsorientierung teilweise erheblich unterscheiden.

Im Weiteren konnte eine intensive transdisziplinäre Zusammenarbeit über verschiedene Disziplinen der Praxis und Wissenschaft hinweg etabliert werden, die stets von einer offenen und konstruktiven Atmosphäre geprägt war. Ein weiteres Ergebnis dieser Zusammenarbeit stellt die gemeinsame Vernetzungstagung im November 2016 dar, bei der die identifizierten Herausforderungen mit einem breiten Publikum an AkteurInnen und Interessierten diskutiert werden.

**MAZI: A DIY networking toolkit for location-based collective awareness**Authors: **Panayotis Antoniadis, Ileana Apostol**

Nethood

Despite numerous research work and different technological solutions for the design of information and communication technologies (ICTs) for communities, there is a long way to understand the complexity introduced by the hybridity (digital and physical) of contemporary space. For this, the question of interdisciplinarity in the design of the hybrid urban environment becomes urgent. Social scientists need to become more aware of the capabilities of technology, and also have to get involved in the design processes, while engineers should engage with legitimate local social issues and their inherent complexity, going beyond simple optimization techniques and data analysis.

MAZI, <http://mazizone.eu>, is a EU Horizon2020 project under the CAPS (collective awareness platforms for sustainability and social innovation) program, which is structured around a combination of theoretical and critical interdisciplinary methodologies integrating concepts and methodologies developed in the fields of urban studies, design research and computer science, and a transdisciplinary approach around the development of the MAZI toolkit as a “boundary object” within concrete pilot studies in different European cities. More specifically, they are the young cooperative housing and living projects in *Zurich*; Berlin’s *neighbourhood academy* and the urban garden *prinzessinnengarten*; *Deptford’s network* of local communities, organizations and activists in London; and the nomadic group *unMonastery* .

Into the MAZI project, Verein Nethood, [nethood.org](http://nethood.org), brings significant experience and expertise in interdisciplinary research on the concept of hybrid space design. Its co-founders Panayotis Antoniadis and Ileana Apostol have played a key role, through the organization of several interdisciplinary events, in introducing the concept of DIY networking to the field of urban planning, as well as important concepts from urban studies to the engineering community active in building ICTs for urban environments. In MAZI, NetHood’s main contribution is to facilitate interactions between the highly diverse mix of partners and the creation of an overarching research framework that will make sure that the different perspectives and methodologies will be integrated into a meaningful approach. The outcome of this process will be materialized in the design and implementation of the MAZI toolkit and the cross-fertilization between the different pilot studies, with significant impact both for the theory of interdisciplinarity and for the empowerment of citizens in shaping together their urban hybrid space.

## **Transdisciplinarity, Triangulation, and 'Double-Loop' Learning: An Inclusive Approach to Feminist Media Historical Research**

Author: **Artemis Alexiou**

Manchester Metropolitan University

Patricia Leavy argues that 'transdisciplinary research practices are issue- or problem-centered approaches to research that prioritize the problem at the center of research over discipline-specific concerns, theories or methods'. Accordingly, this PhD project followed a transdisciplinary approach, and offered 'a new way of thinking'. In other words, I followed a 'social justice oriented approach to research' in which I integrated diverse 'resources and expertise from multiple disciplines' in order to 'holistically address a real-world issue'. In particular, after I identified an absence of transdisciplinary and/or inclusive design historical studies on late nineteenth century general feminist periodicals, I sought to resolve this problem by contributing a design/media/gender historical study which considered producers as well as readers/users/contributors/consumers in equal terms, and examined not only the anchor text, but also the paratexts attached to and around it, treating the periodical 'as an autonomous [design] object of study'.

During the framing phase, I first had to locate a suitable methodological framework that would allow an inclusive approach to the analysis of the late nineteenth century feminist periodical, which was a complex communication medium in its own right, capable of creating an 'original experience'. To that end, I followed a transdisciplinary approach to media historical research by adopting Gerard Genette's concept of the *paratext* as my methodology, and applying the concept of *triangulation* to my methods of analysis and archival access. This poster presentation, inspired by the concept of *double-loop learning*, provides a reflective account of the challenges of doing transdisciplinary research, focusing on: a. the framing stage, such as the problems of reviewing existing methodologies, and choosing the appropriate methodologies to combine; b. the analysis stage, such as the problems of adopting an inclusive approach to historical inquiry, communicating specialist terminologies and theories to non-specialist and/or cross-disciplinary audiences, and combining theory with practice to name but few. Subsequently, this poster presentation will further contribute to the study of inter-/transdisciplinary research methods and application, in the hope that researchers and funding bodies will continue to experiment with and support an inclusive approach to research.

## **Transdisciplinary approaches in practice-oriented research projects as combination of method and methodology: Consideration of need as well as requirement analysis and integration**

Authors: **Alexander Brandies, Mandy Dotzauer**

Deutsches Zentrum für Luft- und Raumfahrt (DLR), Institut für Verkehrssystemtechnik, Braunschweig

Successful transdisciplinary approaches require the integration of method and methodology into an approach. Methods concern the concrete activities when following an approach, while methodologies address the theory and the way of thinking behind the execution of methodical activities. In practice-oriented research, controversial opinions exist about the optimal balance between methodical and methodological considerations. Putting more effort into the consideration of methodology in comparison to method is criticized as leading to approaches not being practice-oriented and having limited capability to be used in practice-oriented research projects. At the same time, it is argued, that the importance of methodology cannot be denied, particularly in trans- and interdisciplinary projects. It was shown that methods successfully used in research of a certain discipline, may fail when used by researchers of another discipline, due to different methodologies within different disciplines. Considering time as a limited resource, this leads to the question of how to balance method and methodology in the design of transdisciplinary approaches for practice-oriented research projects. Thereby approaches of need as well as requirement analysis and integration are examined in research projects aspiring the development of prototypes of hybrid services. A respective approach balancing method and methodology is outlined and implications for further developments are discussed.



**CANS – Conservation of cAns in collectionNS**

Authors: **Fabio Cova Caiazzo<sup>1</sup>, Aline Michel<sup>2</sup>, Olivier Schinz<sup>3</sup>, Dimitri Bocquel<sup>4</sup>, Rudolf Schmitt<sup>4</sup>, Glenn Flückiger<sup>5</sup>, Marc-Olivier Gonseth<sup>3</sup>, Stefano Mischler<sup>1</sup>, Régis Bertholon<sup>2</sup>, Laura Brambilla<sup>2</sup>**

<sup>1</sup>Tribology and Interface Chemistry group, EPFL, Lausanne, Switzerland

<sup>2</sup>Haute Ecole Arc Conservation-Restoration, HES-SO, Neuchâtel, Switzerland

<sup>3</sup>Musée d'ethnographie de Neuchâtel (MEN), Switzerland

<sup>4</sup>Institute of Life Technology, HES-SO Valais, Sion, Switzerland

<sup>5</sup>Institute of systems engineering, HES-SO Valais, Sion

Cultural heritage consists in artworks (painting, sculpture...) but also in usual and everyday objects (tools, machines...) sometimes unexpected, such as food preserves. Patented at the early 19<sup>th</sup> century, cans attest not only to the industrial development but also became one of the symbols of consumer society. Cans represent an important technological innovation that permitted the scientific and military expeditions from the 19<sup>th</sup> century to nowadays. After having improved supplies of goods in warfare, they changed eating habits and also women's status by reducing the time allocated to the meal preparation and contributing toward developing women's professional activities. From the middle of the 20<sup>th</sup> century, cans also started being incorporated in contemporary art as reflection on consumer society.

Nowadays, cans are represented in several museum collections as witnesses to different time periods and significances. However, their conservation is particularly problematic. In fact, severe corrosion phenomena occur due to interaction with the environment as well as between the organic content and the metallic sealer. Currently, there are no conservation-restoration interventions available that allow the long-term preservation of complete cans (container and content). Stakeholders have no option but to either preserve the containers eliminating the content or let unavoidably the degradation processes go further. In order to overcome this situation and improve knowledge about cans, the CANS project proposes to develop a treatment methodology, respectful of the material authenticity and cultural values of these composite objects and solutions in terms of preventive conservation. To achieve these objectives, the following scientific and technologic research activities are carried out throughout the project:

- Investigation on the cultural values and functions of cans in our society from their production to integration into heritage collections.
- Identification of the principal problems of their conservation-restoration in different museum collections,
- Assessment of the relations between observed degradations, environmental conditions and cans composition (materials used, forms, contents...).
- Investigation on the mechanisms involved in the long-term degradation of both containers and contents.
- Proposition of preventive conservation methodologies and possible interventions.

This project constitutes an interdisciplinary research that brings together conservation scientists, corrosion specialists, conservators, anthropologists and food technology experts. The CANS project aims at improving the knowledge about the degradation phenomena of cans present in collections by understanding the mechanisms involved and proposing innovative conservation methodologies.

The CANS project is funded by the Swiss National Science Foundation in the category of interdisciplinary projects (grant n. 152946).

## **Strategies for Better Gardens: Integrated Analysis of Soil Quality, Biodiversity, and Social Value of Urban Gardens**

Author: **Robert Home**

Research Institute of Organic Agriculture FiBL

Urban gardens are often contested spaces but provide socio-cultural ecosystem services as well as habitats for above and below ground fauna and flora. The goal of this study is to examine the relationships between policy and garden management practices (in private and allotment gardens); and the effects that these practices have on the social value, biodiversity, and soil quality of gardens.

The study is based around 4 subprojects to assess: A) the influence of policy on management practices and the motivations for gardeners to implement particular management practices; B) the social values of different kinds of gardens and the outcomes gardeners experience; C) the effects of management practices on the chemical, biological and physical soil properties; and D) the contribution of urban gardens to the different aspects of biodiversity, including their contribution to maintaining above and below ground ecosystem processes and services. The study will take place in Bern, Lausanne and Zürich; cities in the Central Plateau region that has experienced particularly high levels of biodiversity decline in recent years. Understanding the relationships examined in this study will allow the formulation of 'best practice' methods for sustainable garden management with regard to social outcomes, soil quality and biodiversity; and the development of targeted strategies to encourage such practices. The integrated assessment of the social and ecological value of urban gardens can also contribute the formulation of targeted education strategies to sensitizing the population to the value of threatened urban gardens.

## PluMBER – Patina for Metal Built hERitage

Authors: **Edith Joseph<sup>1,2</sup>, Pilar Junier<sup>3</sup>, Julie Schröter<sup>1</sup>, Monica Albini<sup>3</sup>, Lidia Mathys<sup>3</sup>, Coralie Montavon<sup>3</sup>**

<sup>1</sup> Haute Ecole Arc Conservation-restauration, HES-SO, Neuchâtel, Switzerland

<sup>2</sup>Laboratory of Technologies for Heritage Materials, University of Neuchâtel, Switzerland

<sup>3</sup>Laboratory of Microbiology, Institute of Biology, University of Neuchâtel, Switzerland

The project aims to provide a new ecological and sustainable solution for protecting architectural metals using an ecologically friendly biological treatment. The method is based on the development of an aesthetical and protective *biopatina* that can be applied for preserving built heritage, in particular outdoor metal monuments and historical landmarks.

Outdoor metal surfaces encounter irreversible changes in their original appearance and structure due to electrochemical processes, chemical reactions with pollutants, and the physical phenomenon of deposit accumulation. The corrosion patina formed is considered aesthetically valuable and part of the life history of the monuments. Most often, the corrosion products present are, however, unstable and can be leached out. Constant efforts are therefore devoted to stabilize them and overcome their continuous damage through conservation-restoration interventions.

So far, the methods used for protecting metal surfaces create an artificial barrier against aggressive environments without considering the difference in terms of patina composition and stability. Most frequently, organic coatings are employed, such as microcrystalline waxes, acrylic resins and corrosion inhibitors (i.e. benzotriazole for copper alloys). However, these treatments are unsatisfactory in terms of efficiency and durability. In addition, inhibitors are toxic and pose potential threats to human health and to the environment.

In this context, our research team focuses since 2006 on the development of a biological treatment for the preservation of copper surfaces. Taking advantage of unique properties of a copper-resistant fungal strain, existing unstable corrosion products are converted into an insoluble and stable *biopatina* that provides the treated surfaces with long-term protection and no aesthetical alteration. The project aims to extend this *biopatina* process not only to copper-based alloys but also to iron, zinc and aluminium alloys that are commonly found as architectural parts. In part the following applications are evaluated:

- Stabilization of corrosion on outdoor metal surfaces;
- Pre-patination of different architectural metal elements, such as roofs, gutters and vertical sheets;
- Chromatic integration of repairs.

The application of the *biopatina* process on different types of alloys will result in the formation of a homogeneous patina providing the treated surfaces with a naturally aged appearance while inhibiting corrosion.

The project relies on an interdisciplinary research team of experts involved in art conservation, chemistry and microbiology through the collaboration of the Ra&D department of the Haute Ecole Arc Conservation-restauration (HE-Arc CR, HES-SO), the Laboratory of Technologies for Heritage Materials (LATHEMA) and the Laboratory of Microbiology (LAMUN) of the University of Neuchâtel.

## **Die Planungsphase inter- und transdisziplinärer Verbünde managen – Beispiel transdisziplinäre Innovationsgruppe ginkoo**

Authors: **Bettina König, Sven Lundie, Anett Kuntosch, Lukas Wortmann**  
Humboldt-Universität zu Berlin

Das Idealmodell inter- und transdisziplinärer Forschung erfordert bereits in der Planungsphase das Überwinden disziplinärer Perspektiven, um das erste Syntheseprodukt, den gemeinsamen Projektantrag zu erstellen. Während die Synthese bereits als fortdauernde Kernherausforderung inter- und transdisziplinärer Forschung allgemein anerkannt ist, so fehlt es über die bekannten Hürden hinaus an Wissen was dies speziell für die Planungsphase inter- und transdisziplinärer Forschungsverbünde bedeutet. Bei der Konzeption der Planungsphase stellt sich die Frage, wie Verantwortliche mit der Herausforderung der inhaltlichen, methodischen und koordinierten Zusammenführung und Bewertung von wissenschaftlichem und Erfahrungswissen praktisch umgehen können und was dies für ihre Rollen bedeutet. Im Rahmen des neuen Förderformats „Transdisziplinäre Innovationsgruppen für das nachhaltige Landmanagement“ des BMBF war es durch die Förderung einer Stelle bis zu 12 Monaten und Mitteln für eine externe Moderation für die Vorbereitung eines Verbundvorhabens möglich, sich diesem Thema methodisch und praktisch zu nähern. Ausgangspunkt der Planungsphase war das Forschungsinteresse der Wissenschaftspartner zu verschiedenen Aspekten von Innovationsprozessen für ein nachhaltiges Landmanagement und Herausforderungen der Praxispartner für das wertschöpfungsketten- bzw. regionenübergreifende Management der Entwicklung von Innovationen.

Für die Entwicklung des Projektes ginkoo wurde eine Prozessplanung und gemeinsame Arbeitsschritte mit Wissenschaft und Praxis im extern moderierten und visualisierten Austausch zwischen Wissenschaft und Praxis durchgeführt. Ziel war es gemeinsam aus dem inhaltlichen Diskurs zwischen den wissenschaftlichen und praktischen Beiträgen gemeinsame Forschungsfragen, Systemgrenzen für den betrachteten Untersuchungsgegenstand, Syntheseziel und Ziele der Einzelbeiträge zu entwickeln. Vier transdisziplinäre Workshops rhythmisierten die Planungsphase, d.h. nach einem transdisziplinären Workshop (mit externer Moderation) wurde jeweils ein interdisziplinäres Arbeitstreffen zur Nachbereitung durchgeführt (mit interner Moderation durch die Managementverantwortliche).

Aus der Sicht aller Beteiligten konnte das entstehende Verbundteam mit dem gemeinsamen Verbundkonzept eine qualitativ gute Basis für die Hauptphase legen und gemeinsame Forschungsfragen für das Innovationsmanagement anhand konkreter Vorhaben für eine ethischere Tierhaltung und den Erhalt von Kulturlandschaft formulieren. Durch die prozessorientierte Planungsphase konnten die Beteiligten beim Beginn der Hauptphase auf das gemeinsam Erarbeitete mit einem wahrnehmbaren qualitativen „Vorsprung“ im Hinblick auf das gemeinsame und praxisrelevante Verständnis zurückgreifen. Unser Poster illustriert den Prozessverlauf in der

Planungsphase sowie Zwischenergebnisse und zeigt auf, dass von allen Beteiligten Beiträge zu diesem Integrationsprodukt geleistet wurden und spezifiziert diese. Wir diskutieren anhand von organisationalen, administrativen, prozessualen und ressourcenorientierten Aspekten, dass in der Planungsphase mit internen und externen Mehrdeutigkeiten und Unsicherheiten umzugehen ist. Ein offener, aber strukturiert organisierter Planungsprozess sowie eine angepasste externe Moderation sind nach unserer Erfahrung eine Möglichkeit, um die temporär spezifische Vagheit in der Planungsphase von Verbänden zu handhaben.

## **Herding the cats: managing teaching and researcher stakeholder representation in proposing innovative and interdisciplinary research ideas**

Author: **Kristine Lund**

CNRS, University of Lyon

Thirty-one higher education institutions in Lyon, and neighboring St. Etienne, France are organizing themselves into eight academic colleges. These latter are:

- Arts, culture, design, architecture
- Lettres, Langues, Philosophie
- Sciences sociales
- Droit, économie, gestion
- Education, cognition, langage (EduCoLa)
- Sciences formelles et de la nature
- Sciences de la vie et de la santé
- Ingénierie et technologie

The goal of these academic colleges is to collectively elaborate, and share information that falls into the perimeter of the college, in order to develop synergies between disciplines. This information includes undergraduate and graduate degrees, national evaluations of these degrees and of research structures, and definitions of new teaching and research positions at the different higher education institutions. In addition, on the basis of these evaluations and on emerging research themes, each academic college is currently building a prospective document (limited to 10 pages) that will develop the strategic project of the college. It will include goals concerning teaching, research, international collaborations, professional training, how the college's disciplines can contribute to environmental concerns, and propositions for establishing relations with local and national organizations involving the development of innovation, research, and teaching. Finally, the prospective document will contain propositions for putting together proposals that will potentially be funded by the French government, should Lyon succeed as one of the cities granted in late 2017 the status of initiative of excellence (IDEX).

I am the coordinator of EduCoLa, a college that includes the academic disciplines involved in educational, cognitive, and language sciences and am organizing the writing of this prospective document, involving around 15 people that represent (often in a directorship capacity) a selection of teaching and research structures in the Lyon and St. Etienne regions. We have a first working committee meeting in mid October and we have funding to organize a workshop that should also contribute to writing the document. I can share the analysis I performed of our scientific perimeter in order to orient consensual decisions about committee representativeness and the issues that were raised during the initial writing of our prospective document, based on methods that I hope to implement. That said, if I can attend the Swiss Inter- and Transdisciplinarity Day 2016, I hope to gain insight on how I can better design the process in order to deliberately frame our prospective document so that the



different disciplines and stakeholders are adequately represented. In addition, it could be interesting to develop methods to compare strategies across academic colleges.

## **Formative research for transdisciplinary action: integrating community-derived solutions into an epidemiological trial design for malaria elimination in the Gambia**

Authors: **Joan Muela Ribera<sup>1</sup>, Yoriko Masunaga<sup>2,3</sup>, Fatou Jaiteh<sup>2,3</sup>, Susanna Hausmann-Muela<sup>1</sup>, Koen Peeters Grietens<sup>2,3</sup>**

<sup>1</sup> Partners for Applied Social Sciences PASS-Suisse, Neuchâtel, Switzerland

<sup>2</sup> Department of Public Health, Institute of Tropical Medicine, Antwerp, Belgium

<sup>3</sup> Medical Research Council Unit, Fajara, The Gambia

Introducing an innovation requires locally adapted and context-appropriate implementation strategies. The success and sustainability of these strategies depend on a concerted action of relevant stakeholders, which in turn depends on the integration of scientific and non-scientific bodies of knowledge to support problem-solving efforts. A key question is how to do this in practice.

We addressed this question in a recently started randomized controlled trial in the Gambia, aimed at testing a novel approach to eliminate malaria in low malaria transmission settings. The epidemiological hypothesis of the so-called “Reactive Household-based Self-administered Treatment (RHOST) Trial” is that in areas of low transmission most malaria parasite carriers are asymptomatic and clustered around clinical malaria cases at the household level. Therefore, treating not only the actual patient who has been diagnosed with malaria at the health center, but *all* individuals residing in the patient’s household, should reduce the human reservoir of infection and possibly interrupt transmission.

The RHOST trial is carried out by a multidisciplinary team, including epidemiologists, medical anthropologists, health systems researchers, and health economists. But the biggest challenge for the success of the trial relates to community understanding, acceptance and implementation of the intervention in the affected households. To identify and integrate appropriate community and other stakeholders-derived solutions into the trial design, we are applying a formative research approach, i.e. research carried out before and during the intervention to determine and refine the implementation design.

Formative research is flexible but solid research that permits to adapt the RHOST trial design to the local context. The methodological approach is based on grounded theory and mixed methods. To achieve incremental improvement, it includes making changes and monitoring results, then adjusting. This is done through a systematized five-steps formative research process, allowing us to capture emerging themes relevant for the project, detect enablers and obstacles, elaborate solutions as problems arise, and actively engage local communities.

First results show an amazing creativity and simplicity of community solutions, while at the same time creating an increasing sense of community ownership. The continuous reality check and refinements, accompanied by solid research, makes formative research a promising approach for putting transdisciplinary projects into practice.

**ENGAGE' : ENseigner les sciences au PRIMaire, un GAGE d'avenir**

Proposition pour continuer le projet ENGAGE en Suisse au niveau primaire

Authors: **Francine Pellaud, Ignacio Monge**

HEP PH Fribourg

Nous sommes actuellement des partenaires du projet européen ENGAGE, qui durera jusqu'à la fin mars 2017. Le projet est en train d'offrir aux enseignants en sciences des ressources qui permettent de traiter en classe des dilemmes socio-scientifiques. Les élèves visés, de 11 à 16 ans, sont alors motivés pour apprendre la science et la technologie derrière ces questions ; en même temps, chaque ressource vise l'entraînement dans une compétence. Nous avons, en effet, identifié une série de compétences qui viennent structurer la démarche d'investigation, celle-ci étant nécessaire dans la résolution du problème socio-scientifique posé. Il y a à la fin mars 2016, en Suisse, 286 utilisateurs enregistrés ; nous comptabilisons 1827 événements de téléchargement.

Les ressources Engage sont de nature transdisciplinaire, dans le sens qu'une ouverture au-delà d'une ou plusieurs disciplines est indispensable dans la démarche d'investigation pouvant mener à la résolution du dilemme en question.

Si bien depuis le début du projet nous avons surtout interagi avec des enseignant-e-s du secondaire I (élèves de 12-15 ans), nous avons eu aussi des échanges avec des enseignants du primaire et avec des étudiant-e-s qui se préparent pour y enseigner. En concret, nous avons suivi des travaux d'adaptation de deux ressources au niveau du cycle 2. Ces expériences ont été très informatives et nous ont révélé le potentiel de l'approche utilisé par Engage pour créer des matériels très utiles dans le primaire. Nous pensons qu'il y a également un potentiel important quant à la contribution que ces moyens d'enseignement peuvent faire pour le développement personnel des élèves.

Tenant compte de l'inertie et de l'impact, que nous jugeons positif, de ce projet en Suisse, nous voulons poursuivre l'expérience pédagogique, en nous concentrant spécifiquement sur le niveau primaire. Cela a du sens, il faut le signaler, dans le contexte professionnel où nous nous trouvons à la HEP PH Fribourg, entourés de collègues qui ont des compétences multiples et riches pour ce niveau d'enseignement.

## Stakeholder Video Interviews: Co-Design of Scientific-Cinematic Data

Author: **Jeanine Reutemann**

Institute Aesthetic Practice and Theory, University of Applied Sciences  
and Arts Northwestern Switzerland, FHNW

There is a historically long established relationship between science and filmmaking since the very beginning of moving images. Thereby, moving images have been used in various ways including to document research processes, visualize phenomena's invisible to the eye, an instrument of research or for popular science dissemination

Through recent technological development of digital cameras, easy and cheap online publications options for video based material and a digitization trend towards video abstracts and video-based online teaching the production of videos for scientific content increases rapidly. These videos, produced by researchers themselves, university own IT-centres, or students vary widely in terms of their use of audiovisual narration, accuracy of image use, preciseness of words and reflection about the media-specific affordances. But throughout this development, a renewed interest in inter- and transdisciplinary collaborations between scientists and filmmakers emerged. Such collaborations investigate the role of moving images regarding their own medial characteristics about/for/in the research project as they can add (e.g imagery aspects) and transform the content of scientific knowledge.

Accordingly, I propose that if researchers are interested in using videos for a research project, it's crucial that experts from the field of filmmaking are already included in the framing and proposal writing phase of an inter- and transdisciplinary research project as such an early co-design process can realize the synergies between film and research significantly more effectively compared to the dominant approach of giving the film making only an *add-on* role in research.

The poster will give an example of such a co-design process in video productions of interview situations with stakeholders in the field and display an overview of chances, pitfalls and the potentials of a co-design knowledge generation process in a collaboration of researcher and filmmaker. The example is based on an inter- and transdisciplinary field project about the 'Conservation Management Field Course Beinn Eighe, Highlands of Scotland' of the Chair of Ecosystem Management of the ETH Zurich with the author.

**Chicken, Egg and Rooster - Which comes first, implementation funding, research funding or outreach funding?**

Author: **Tim Reutemann**

UNEP DTU Partnership, Copenhagen, Denmark

The ideal research project is embedded in a larger implementation project, the ideal implementation project comes with an outreach and learning project, and the ideal outreach and learning project comes with a research project.

Each one of them needs significant funding to be conducted meaningfully by itself. Our poster graphically outlines these conflicting needs, with a focus on variations in lead-times between private sector actors, research funding, funding for teaching and courses and international agencies funding implementation, using examples from the climate and development sector.

But even for the view situations where lead-times would theoretically allow for joint applications, the extensive demand for pre-knowledge of detailed activity plans by funding agencies and the low share of successful proposals in each call it is hardly feasible to co-submit a research proposal to a research funder with each implementation proposal to an implementation funder and a teaching project to a teaching funder. Doing so can easily lead to a situation where all three parts are funded – but unfortunately on three different continents.

The poster rounds up with a number of fictional (and potentially humorous) titles for calls compatible with a transdisciplinary approach and a few ideas on using research programs instead of projects to allow the degree of flexibility required by researchers to adapt the outline of their work to shorter-term decisions by implementing partners.

## **Enhancing transformative research for sustainable development: mutual learning between research programmes**

Authors: **Flurina Schneider, Theresa Tribaldos**

Centre for Development and Environment (CDE), University of Bern

Increasingly complex problems of global change challenge science to produce transdisciplinary knowledge that is relevant to advancing sustainable development. In this context, research programmes play a crucial role because they set the research conditions for their projects. However, there is still rather limited knowledge on how research programmes can best incorporate transdisciplinary approaches into designing and implementing tangible research agendas that ultimately support sustainability transformations.

To address this gap, the overall objective of our project is to facilitate reflection and learning within and between large research programmes in order to increase their accountability towards society and their contribution to sustainability transformations. The participation of societal actors combined with extensive empirical research will nurture learning processes. We will study 1) which context conditions are set by research programme schemes such as formal regulations which encourage or hinder transdisciplinary research; 2) how individual programmes incorporate these framework conditions into their own designs, internal procedures and activities; 3) how different researchers and societal actors respond to specific activities; 4) to what extent programmes contribute to real-world sustainability transformations; and 5) the formulation of best practices for sustainability transformations through research programmes. Programme schemes for investigation include the international Future Earth Programme, and the Swiss National Research Programmes NRP as well as the R4D Programme.

The expected results impact the designs of research programmes through discussions in programme reflection groups and recommendations for future programmes. Moreover, the project triggers the empowerment of societal actors in their recognition of responsibility and claims for more participation in research processes for sustainability transformations.

**Organisers**

Tobias Buser (td-net)  
Theres Paulsen (td-net)  
Wolfgang Schatz (Universität Luzern)

**Partners**

Universität Luzern  
www.unilu.ch  
Sustainable Development at Universities Programme  
www.sd-universities.ch

**Organising Institution**

Network for Transdisciplinary Research, td-net  
Theres Paulsen (Director)  
Tobias Buser, Gabriela Wülser and Eva Schumacher (Scientific Collaborators)  
Scientific Advisory Board:  
Jakob Zinsstag (President)  
Roderick Lawrence, Jan C. Schmidt, Bernhard Truffer, Urs Wiesmann  
ex-officio members:  
Lea Berger (SAGW), Stefan Nussbaum (SCNAT), Sylvia Jeney (SNF), Daniel Marti (SBFI), Sergio Bellucci (TA-SWISS)

**The «Swiss Academies of Arts and Sciences»**

The Swiss Academies of Arts and Sciences is an association of the Swiss Academy of Sciences (SCNAT), the Swiss Academy of Humanities and Social Sciences (SAHS), the Swiss Academy of Medical Sciences (SAMS), and the Swiss Academy of Engineering Sciences (SATW). It further comprises the centre of excellence for technology assessment (TA-SWISS) and Science et Cité as well as other scientific networks.

[www.swiss-academies.ch](http://www.swiss-academies.ch)

# Swiss Inter- and Transdisciplinarity Day 2016

How to develop a successful inter- and transdisciplinary proposal

Bringing together researchers' and funders' perspectives

Partners 2016:

UNIVERSITÄT  
LUZERN



**Sustainable Development at Universities Programme  
(sd-universities programme)**

Supporting the Sustainable Development at Universities Programme event series:

**STIFTUNG  
MERCATOR  
SCHWEIZ**

**td-net**

Network for Transdisciplinary Research

Haus der Akademien

SCNAT | td-net

Laupenstrasse 7, Postfach, 3001 Bern, Schweiz

**t** +41 (0)31 306 93 60; **e** [td-net@scnat.ch](mailto:td-net@scnat.ch)

[www.transdisciplinarity.ch](http://www.transdisciplinarity.ch)