THE INITIATIVE 2042: CONSTRUCTING TRANSFORMATIVE LONGITUDINAL RESEARCH

EXPLORING LONG-TERM RESEARCH IN THE LIGHT OF SUSTAINABILITY AND TRANSFORMATION

INTRODUCTION AND MOTIVATION

- Ever since Rio 1992 the need for transformative change in human-nature interaction is evident and much emphasis is placed upon the long-term nature of the sustainability challenge. Suitable long-term monitoring and indicator systems are still needed for effectively guiding action to foster sustainability.
- Interlinkages between existing long-term studies and data sets from diverse disciplines, on various scales and topics, remain underexplored in the cause of developing unifying approaches for understanding and evaluating transformations.
- I propose a research design for a systematic review and exploration of relevant long-term data sets and respective publications regarding e.g. investigated issues and inferred causes. I contribute to establishing a more comprehensive view on potential contributions and gaps in the empirical basis available for addressing the problem of understanding and evaluating transformations.

THE RESEARCH DESIGN IN A NUTSHELL

The wealth of potentially relevant literature requires an approach which allows for the compilation of a manageable sample of literature while staying sensitive to the multiple and diverse fields of relevant inquiry. The research design (Fig. 2) consists of 2 phases and 4 steps:

1. Selection of long-term studies and data sets from relevant fields informed by theory
2. Exploration and meta-analysis of selected studies and data sets
3. Compile research papers which use selected studies or data sets via key word search
4. Systematic review of literature using a semi-quantitative method

BACKGROUND AND THEORY

Figure 1: Framework showing exemplary relevant fields and interactions between social and ecological systems (adapted from Redman et al. 2004)

- Scholars from long-term socio-ecological research provided frameworks for studying socio-ecological interactions (3) (containing political and biophysical conditions, social and ecological patterns and interactions) which can be adapted for informing selection and analysis of relevant data-sets and literature in this review (Fig. 1)
- Long-term research for sustainability is meant to address complex interaction of social (man made) and ecological (natural) systems and is critical for assessing extent and causes of changes as well as impact remedial measures

Expected Contributions

- Support designing schemes for prospectively observing and evaluating transformations, their antecedents and impact of measures across scales
- Contribute new perspectives to research dealing with integration of biophysical factors and aspects of governance and societal trends
- Gain insights on how to exploit and further develop empirical research on various scales for case and place based transformative sustainability research

REFERENCES

Visions in Science Policy by Swiss Researchers

Figure 2: Phases and steps of research design