

Knowledge and Social Learning for Societal Change and Sustainability

Developing a new Cross-Cutting Research Theme for IHDP

Concept Note in preparation of the Thinkshop to be held at the
Social Science Research Centre Berlin (WZB), Berlin, 19-20 February 2008

1 Introduction

Human systems are at the center of the global change discourse to an extent not seen before. Human influence on and interaction with natural systems is at the top of the research agenda; and practical responses to and social adaptation in a changing world dominate the political debate. This attention is the result of broad underlying conviction that the people of the world must become and remain active participants in building globally sustainable societies that benefit all.

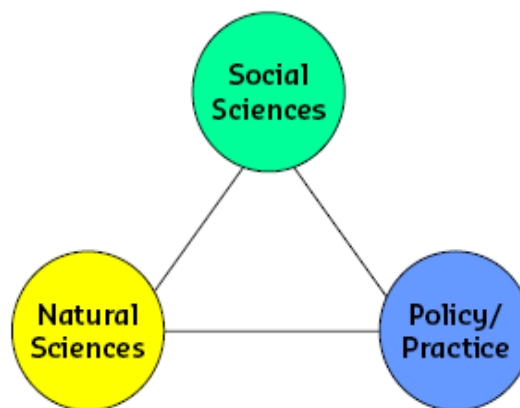
Such societies can only develop through an on-going process of communicating, learning, and sharing knowledge, engaging people in their multiple roles as individuals, as part of communities, and as members of organizations. Just as “the public” need to become informed and engaged, scientists and policy makers must also take on the responsibility to learn from, understand, and respond to their community’s knowledge, concerns, and needs, if research and policy are to lead toward sustainability. How can such social learning for sustainable societies occur and be fostered?

This multi-party engagement in communication, learning, and knowledge is the domain of study encapsulated in IHDP’s cross-cutting theme that has been entitled “Knowledge and Social Learning for Societal Change and Sustainability”. If this theme is to become effective in its own right and as a cross-cutting theme for IHDP, it seems crucial to emphasize those aspects of this vast domain, which are considered most relevant in relation to the sustainability sciences and the core projects of the IHDP. The point here is to focus and direct the research efforts on outcomes that will improve learning and knowledge for change leading to a sustainable society.

The best conceptual frameworks and methodologies for different situations and contexts will have to be explored through research and evaluation of outcomes. We would like to propose here some ideas about potentials, aims and purposes of the initiative, as well as a framework of questions as a starting point for further discussion of the structure of a future research program.

2 Context and Motivation: Knowledge and Social Learning in HDGEC research

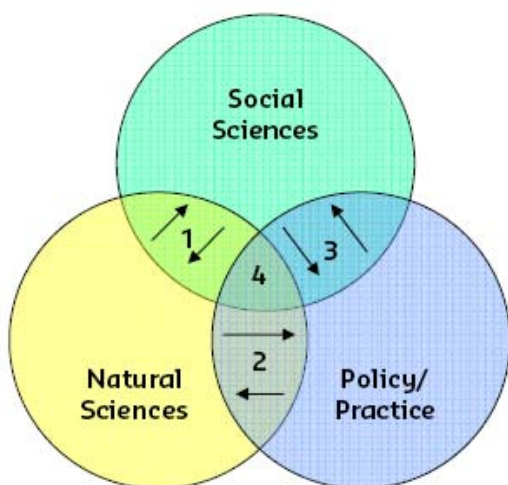
Traditionally, communities in social sciences, natural sciences and the polity interacted on topics of wider political concern but were practically separated in their work. Still, research practice is far away from actual interdisciplinarity and many communities prefer to keep a clear separation. But in the area of global change research it becomes evident that substantial new insights and policies can only be gained through collaboration of disciplines and practice communities.



As the different communities concerned with global environmental change move closer together, some areas of strong interconnection become obvious:

1) The physical dimension of global environmental change is increasingly important for social sciences. Communities are affected by natural occurrences to a new degree; vulnerability and adaptation issues gain relevance and so does knowledge about biophysical change patterns. Vice versa, natural sciences increasingly have to consider not only human actions but also social dynamics in order to assess and model environmental change.

2) Global environmental change as a policy issue and policy as issue for natural sciences increasingly overlap. In case of the former this regards responses to global change, predictions of change patterns, as well as disaster and risk projections, in case of the latter because conflicts, wars, famines, and human responses to them have an increasingly disastrous impact on ecosystems.



3) Social Sciences gain relevance for policy and political demands on the social sciences increase. In a globalized world, single states are unable to set or enforce standards, as targeted groups move on and bio-physical systems span several states or the globe. Governments take part in a complex system of complementing and conflicting regimes and need to act, negotiate and respond to their demands. Social Science insights into policy processes are crucial to develop successful policies, and the social sciences cannot refuse to engage in the debate.

4) Where these issues overlap, we see the field of knowledge and social learning; analyzing the above processes and their indirect consequences, i.e. the effect of a more politicized science.

3 Objectives and Structure of the IHDP Research Theme

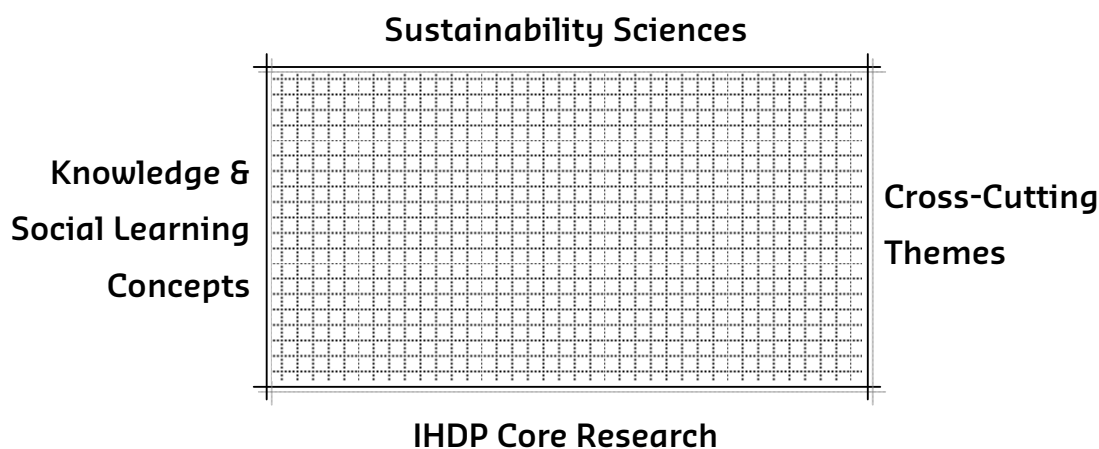
Mission of the new research programme is to study

- the role of *Knowledge and Social Learning* in and on Global Environmental Change
- for *behavioural* and *social change*
- towards *sustainable societies*.

The **goals** of the project are threefold:

- 1) To enhance our understanding of the role of knowledge and social learning in the causes of, as well as in responses and adaptation to Global Environmental Change
- 2) To assess and reflect on knowledge and social learning in IHDP research projects: How are the topics considered in research, and how is knowledge of the projects used?
- 3) To provide insights and recommendations for a constructive and two-sided Science-Policy-Dialogue beyond pure dissemination of findings and to apply insights from research on knowledge and social learning in practical problem solving.

A research programme on Knowledge and Social Learning in the context of IHDP and global environmental change can be defined and **structured in four dimensions**:



- a) as independent **IHDP research programme** it is framed by its own research agenda and science plan (to be outlined in the Thinkshop, draft see below)
- b) as **IHDP Cross-Cutting theme** it sits square to the established Core Research themes (i.e. Human Security, Urbanization, Water, or Carbon) assessing and informing this research

- c) as programme with a strong perspective on societal impacts and bridge to the IHDP **Science-Policy**-Portfolio, it similarly interacts with the other cross-cutting themes of governance/institutions, thresholds/transitions and Vulnerability/Resilience/Adaptation
- d) beyond the existing IHDP agenda it discovers, develops, and assesses the role of Knowledge and Social Learning in other areas of what is increasingly called the **sustainability sciences**.

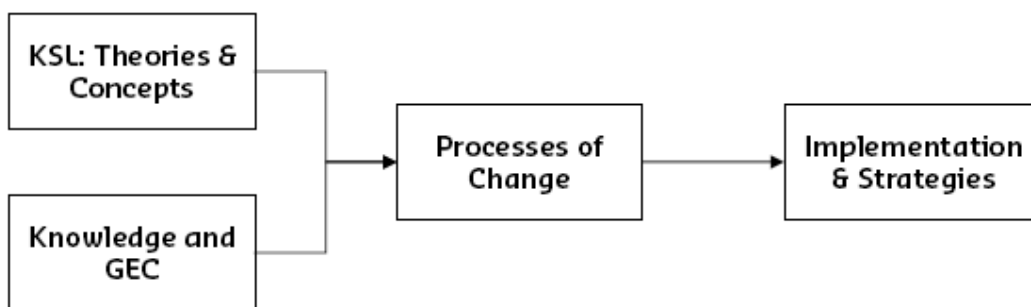
Let's take a specific example to illustrate how the new theme could contribute to other projects and simultaneously gain traction for research in their own thematic research. In the recent planning workshop on Integrated Risk Governance (IRG), the need for research on and development of effective strategies for engaging the public in learning and knowledge sharing under diverse risk scenarios was identified. The input of social learning experts would be valuable in planning the work of the IRG project. At the same time, the crucial process of learning by individuals, communities, and organizations under the diverse social, physical, and biological conditions and scenarios considered in the IRG project are fertile areas for research by the new initiative.

A few of the many possible research fields that can be linked to core projects are:

1. climate change in relation to vulnerability and adaptation – the relationship between research, knowledge, social learning and the level of understanding on one hand and adaptive capacity or reduction of vulnerability on the other hand,
2. energy security – the relationship between knowledge, social learning and consumption and production patterns,
3. equitable access to fresh water resources - understanding rights and learning to engage in governance, understanding water resources in terms of rural vs urban use and upstream vs downstream access, understanding the behavioral, cultural and development dimensions
4. urbanization and global environmental change – the relationship of rural and urban access to information and learning relevant to local environmental concerns with rural migration to urban environments,
5. integrated risk governance - understanding of risk sources and the relationship to choices made by individuals and communities

4 Framework and Guiding Questions

Considering the above aspects we propose to use the following questions to frame the direction and scope of the KLSC theme:



a) Framing the Field: Knowledge, Social Learning and Global Change

Knowledge, learning, and social learning play multiple roles in assessing, predicting, responding to, and adapting to global environmental change. Knowledge *about* GEC helps to foresee changes and social impacts, and guides political demands and recommendations. Regional, indigenous, and encultured knowledge might help societies adapting to changes. Knowledge also influences individual and collective behavior, both as it contributes to further environmental change or helping its mitigation. Attitudes towards knowledge acquisition and investment in learning influence societies' ability to change dramatically and to cope with large-scale risks.

Who needs what kind of knowledge and what kind of collective learning processes are needed with specific regard to global environmental change? That is the guiding question of this part. It has a strong link to the IHDP research projects, but should also assess other sustainability sciences: What do we know from our research? How far are these insights known? Where did knowledge and learning play a role in the research process? These questions call for a large-scale assessment using innovative and interdisciplinary methods.

In the same context, collecting and consolidating the huge amounts of data so far produced in IHDP research in freely and easily accessible databases might be a good idea to pursue. This represents the raw material of all further endeavors.

The leading questions include:

1. What kinds of knowledge - in addition to natural science - are meaningful in order for society to respond effectively to global environmental change?

2. Is the nature and content of knowledge and the process of learning for sustainability different in comparison to other contexts?
3. What conceptual and theoretical approaches to understanding and characterizing learning for sustainability are most useful in general or in specific contexts?

b) Understanding Social Learning and the Acquisition and Communication of Knowledge

How do societies learn? Learning and knowledge acquisition takes place on different levels, in individuals, organizations, communities and entire societies. The process of personal, collective, and social learning has similarities and overlaps, but also specific characteristics. We need to consider concepts and theories on how people chose to acquire new knowledge, and on the dynamics of social interactions in both voluntary and self-chosen groups such as organizations and in “given” groups such as our community or society.

This part of the project focuses on questions regarding disciplines traditionally engaged in the field, such as psychology and social psychology. But these concepts should be broadened and complemented by insights from e.g. political sciences and media sciences. One core challenge will be the scope of such a theoretically oriented part. The aim should be to gain focus and identify transformative questions, and not only add views to a field already crowded with “little kingdoms”. On the other hand learning and societal change are tremendously complex issues, to focus too strongly right from the start might prevent any innovative thinking out of the box. Therefore the project aims to first broaden the search as far as feasible, and then in a second step narrow and focus the areas considered for greater scrutiny.

The leading questions include:

4. How do individuals, organizations, communities, and societies acquire, learn, and exchange knowledge? (cognition, motivation, experience, social mediation)
5. How does the organization and presentation of knowledge affect the ability of individuals to learn under different circumstances or cultures?
6. How do institutional factors such as norms, values, power and culture influence the acquisition, exchange, and diffusion of knowledge? (institutional approach)
7. How does learning and understanding track or follow access to knowledge and what determines the speed of diffusion of working knowledge in different communities (technology, forms of governance, social or cultural integration)?
8. How does the degree of educational similarity or interoperability affect the value of networks as sources for learning for adaptation/resilience?

c) From knowledge and Learning to Behavioural and Societal Change

This field combines the first two areas to consider *instruments and processes* facilitating large-scale societal changes towards sustainability. There is a need to further study the dynamics and conditions of social learning processes as well as methods and instruments to facilitate them. Knowledge and the means to act on behavior should create a responsibility to act. Yet every day, we observe how far this philosophical mandate is from the truth. Behavioral change requires not only new insights, but also the *willingness* to change. Analogue to the normative concept of “learning organizations”, we aim for ways to foster “learning societies”.

This part of the project should involve a wide variety of analytical perspectives. (Socio-) Psychological links between knowledge, learning, motives, and behaviour, as well as economic insights on incentive mechanisms represent a rich conceptual foundation. Knowledge systems (‘traditional’ and ‘formal’) are important tools for linking ecological with the social, and therefore to get a feel on socio-ecological system organization and functions. Assessment of actors such as educational systems and the media provides further insights, as they shape the public debate and play a crucial role in change processes. Analysis of dialogue structures, collective action concepts and political negotiation models could complement such assessments.

9. How does knowledge and social learning translate into (collective) behaviour?
10. What are the critical factors influencing the success or outcomes of social learning? What internal and external factors enable or hinder people and collective actors in using their knowledge to change their behavior?
11. To what extent does learning and knowledge sharing affect individual and collective behavior in comparison with other psychological, institutional, and cultural factors?
12. How is the resilience of a community affected by understanding of critical factors valued by the the community?
13. Do states and governments learn themselves or are they merely reacting to what society already learned?

d) Impact and Outcomes: Developing Strategies

Finally, and very pragmatically, the impact of science on policy and policy on science is of central concern. Research insights will not help mitigating or adapting to global environmental change unless it reaches practitioner communities and leads to action. Where do we find bridges between these different worlds that measure and increase the two-sided impact? This focus on impact and practical includes not only dissemination of project results, but also the design of tools for improved Science-Policy-Interaction in the sustainability sciences as such. For this purpose, the pro-

ject seeks to directly involve practitioners such as trainers, teachers, journalists, advertising and marketing consultants, as well as experts from media sciences, didactics, and policy sciences.

Yet “behavioral change” is an ambiguous goal. Advertising aims at behavioral change on a daily basis, but short-lived and erratic modifications of routine decisions are not sufficient in the context of global change. In addition, behavioral changes that seem reasonable from a sustainability sciences point of view can undermine the social and cultural glue of entire societies. In the end people may survive but not their culture. History shows many examples for large-scale practical failure of initially honorable purposes. The idea of “sustainable societies” acknowledges this basic fact and modifies the idea of creating behavioral changes.

Behavioral and societal change must be fostered not only based on natural science insights about eco-systems, but also guided by cultural and ethical considerations. Therefore the humanities, philosophy and arts will have a strong component in this part of the project, to contribute their insights to the questions of *how* and *to where* to change.

14. What strategies and methods for engaging people and institutions in learning and using knowledge developed under the framework of B and C above are most effective and how could they be adapted for different communities?
15. What can we learn from implemented strategies that are considered to be or have been unsuccessful to identify potentially successful interventions?
16. What criteria and methods should be used to assess the outcome of learning and outreach strategies and what distinguishes significant behavioural change towards more sustainable societies from short-term fashions?

5 Implementation

We envision a dual role for members of the KLSC planning team. One role is as leaders, promoters, and catalysts for collaborations on research within the theme. The second role is to lend expert support in the planning and implementation of IHDP interests - core projects, other cross-cutting themes, science-policy interaction initiatives, and capacity development. In this second role, other IHDP projects would also be sources of valuable case studies and critical data.

The “Berlin Thinkshop”, as next step in project implementation aims to develop a clear and concise framework, in particular defining

- First, **the overall structure and scope of the cross-cutting theme and the sub-themes.** This includes discussions on the general framing of the field and its elements, particularly in the context of IHDP research projects and themes.

- Second, the **research themes and questions** with particular relevance for existing projects in the IHDP and the larger Earth System Science Partnership (ESSP) context to be included in the subsequent steps of our endeavour.
- Third, potential **new strategies and methods to effectively advance large-scale behavioural changes** and the **practical steps needed to launch social learning and change processes in practice**.
- Fourth, **an approach on organizing, funding, and implementing** the theme.

It will be critical to reach out to the larger social and behavioral sciences, pedagogy, philosophy, cultural and development studies and the larger humanities. The Berlin Thinkshop with its 30 to 40 experts from the above areas, stakeholders and practitioners from media, arts, policy-making and Northern/Western Research Councils is a first step in this direction. A good representation from the global South is envisaged.

6 First Ideas on Methods and Approaches

A multidisciplinary, cross-cutting research program entails both increased potentials and challenges. Just as in other themes and projects of IHDP, the KLSC theme will need to address research with insights and methods drawn from a wide range of disciplines and practices, including natural and social sciences, the humanities, development studies, and pedagogy. Keeping the research *coherent* will be the core challenge in this regard.

Interdisciplinarity issues are of special importance to this initiative, starting with the use of concepts, vocabulary, and data. In a way, the cross-cutting theme will itself be an experiment on social learning. The project has to actively identify and employ tools and methods to communicate and mitigate problems in such a context. This will have a significant impact on forming and nurturing effective collaborations.

Studies in the area are predominantly qualitative, but quantitative approaches such as measuring inputs into policy processes should be considered. The previous workshops identified a large number of relevant case studies, yet interlinkages and *comparative research* are lacking.

Traditional ecological knowledge should be analyzed using scientific procedures to put meanings into it, to transform it from 'local' to 'regional', so that one could arrive at generalizations that cut across socio-ecological system typologies. Such an understanding would enable one to take research results into policy/developmental dimensions, in the broad area of biodiversity conservation linked sustainable development of both material and human-manage systems.

The *accessibility of research data* and results is a major concern in the social sciences in general and also in global change research. Approaches to improving the collection and structured publication of research results should be considered i.e. through web-based databases and portals.

We will develop ideas by means of workshops, disseminate our results through publications and conference papers, and engage in outreach effort with and to media and arts, as well as through a range of direct mechanisms for engaging all elements of the public in the ideas and issues brought to the fore through the theme members' research.

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