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Improving Interaction between NGOs, Universities, and Science Shops: Experiences and Expectations

GERMAN CASE STUDIES REPORT

by

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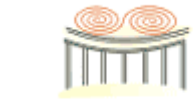

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1 Executive Summary

The aim of this Case Studies Report (CSR) is to examine the interaction between NGOs, scientists, and Science Shops. The research is based on the data collection and analysis of three case studies. Semistructured interviews with representatives of NGOs, research institutions and Science Shops were conducted and analysed according to the content analysis by Mayring. The German CSR consists of two cases (1 & 2) that were taken from kubus (university based Science Shop in Berlin) and of one (no. 3) taken from WiLa Bonn (non-university based Science Shop in Bonn). All of chosen cases are similar regarding their general aims (fostering NGO activities in the environmental field by knowledge transfer), but differ regarding the methods used as well as regarding the role of the respective NGOs within the preparation and execution of the project.

1.1 Main findings

Though these Science Shops belong to two different types of intermediaries ("knowledge mediation" and "knowledge offering" respectively) both types can play a crucial role in networking as well as the empowerment of small action groups and NGOs, e.g. by the provision of

- professional networks between civil society and universities (case 1),
- support of the capability for social protest by the mediation of scientific knowledge (case 1),
- support of their work by improving co-operation and conflict-management among and within NGOs (case 2),
- support of their work by showing opportunities of funding (case 3).

The impact of the examined projects on transdisciplinary research is not regarded as being very high. However, it was shown that the Science-Shop-projects can make a valuable contribution to :

- the provision of practical experiences for students, e.g. by the mediation of diploma-theses and the involvement of students in their projects, which is not covered by the regular curriculum,

- the transdisciplinary team-work by assembling mixed teams for fostering the transdisciplinary knowledge-production and appliance,
- the interlinking of research and society through the mediation between theory and practice.

Regardless of their type, Science Shops can contribute to the establishment of the civil society by making the potentials of scientific knowledge available for individuals and NGOs.

Science Shops certainly have a great potential for providing the dialogue between science and society. So far the fostering of the interaction between science and civil society is mainly taken place on a discourse level. By putting its work more into the public and by increasing efforts in presenting its goals to policy makers, Science Shops can play a crucial role in putting this discourse into practice.

The following policy recommendations and implications have been drawn from the case studies:

- The regional covering with Science Shops should be improved, because the establishment and fostering of networks is more promising on a regional level. Additionally the idea of Science Shops, that they are open for the public and close to the citizens, implies an even regional spreading of Science Shops.
- A basic funding would be helpful here as well, as this guarantees the dealing with small projects that are close to the citizens.
- Science Shops should build up or extend their marketing strategy, so that potential clients and partners have better access to their services.
- German universities should take the role of small intermediary institutions more seriously and should better use the potential for themselves (compare the situation in the Netherlands).

2 Preface

Michael Strähle and Sosser Rasmussen

The objective of the INTERACTS project is: to draw out policy implications for future co-operation in Science, Technology and Innovation, in particular the co-operation of small and medium NGOs with universities through intermediaries such as Science Shops.

INTERACTS is a pioneer cross-national study by organisations and institutions from seven different countries – Austria, Denmark, Germany, the Netherlands, Romania, Spain, and the United Kingdom - collaborating across disciplines to identify necessary changes in structures and routines in the RTD system for improving future interaction between NGOs, researchers, and intermediaries like Science Shops. By bringing together the results from different countries, a broader picture emerges concerning past experience of the impact of Science Shops, future expectations and policy relevance. In this way, INTERACTS contributes to strengthening the interaction between research institutions and society, and gives more in-depth understanding of the processes and effects of knowledge production.

INTERACTS is an Accompanying Measure to ISSNET (Improving Science Shop Networking), and financed by the European Commission, DG 12.

INTERACTS comprises five activities, which are interlinked. These National Case Studies Reports constitute the second activity in the INTERACTS project:
1. The State-of-the-Art Report provides an overview of the political and institutional conditions for co-operation between small to medium non-governmental organisations (NGOs), Science Shops, and universities in Austria, Denmark, Germany, Romania, Spain and the United Kingdom.
2. The **National Case Studies Reports** examine the practical experience and impact of interaction between NGOs, scientists, and Science Shops.
3. Participatory workshops in each of the partner countries form the next step, allowing discussion of future expectations and perspectives for co-operation with NGO representatives, researchers and policy makers. By giving voice to a broader range of stakeholders, INTERACTS contributes to the democratisation of science and technology policy.
4. The final report will identify potentials and barriers within the research and development system for improving conditions for future co-operation.

5. In a final step, the INTERACTS findings will be disseminated through national and international workshops and conferences.

Further information: http://members.chello.at/wilawien/interacts/main.html

3 Introduction to INTERACTS Case Studies and Methods

Irene and David Hall

Experiences and Expectations of NGO / Science Shop Interaction

The European Commission has shown itself keen to build up the scientific work of research and technology development, but concerned that many studies of public attitudes show there is little interest in science, but a considerable amount of public distrust in science.

One of the functions envisaged by Europe in promoting a dialogue between science and society is to address this distrust through an 'early warning' system to alert the scientific community to citizens' concerns that are not being met by science as currently practised; the converse of this is to improve the public image of science, damaged by concerns over BSE, GM food etc., by greater communication to and respect for the public. As in the United States, there is also a concern in some circles, to democratise science by not leaving all the policy decisions to 'experts' but also to involve citizens and civil society (European Commission, 2002).

Regarding this dialogue, it has been argued that

> *"the relationship between science and society must become more two-way, involving scientific institutions listening to and learning to understand public concerns and values, and not merely educating them … there needs to be a long-term process of mutual learning between the public and science, which will necessarily involve new institutional relationships and forms."* (Fischer, Wallentin et al, 2002: 85)

The development of "new institutional relationships and forms" implies a new form of scientific governance. In Europe this development has included the emergence of intermediary organisations to link local groups with the sources of knowledge production (usually universities). It has been argued that these science shops have a vital role to play in the interface between science and civil society, because they can mediate between the concerns of citizens regarding their local conditions and

environments and scientists who have access to the scientific and technical knowledge to meet those concerns (Irwin, 1995: 156).
Science shops consciously seek to "create equitable and supportive partnerships with civil society organisations", where they make their services available on "an affordable basis, free of financial barriers." As the research support is provided in response to community concerns, it differs from "the traditional hegemony of science." (Mulder et al, 2001)

In the European 'Science and Society Action Plan' (European Commission, 2002) this role of the science shop is recognised. In relation to engaging in a dialogue between science and the citizen, science shops are mentioned as an example of actions where

> *"science is placed at the service of local communities and non-profit making associations. Hosted by universities or independent, their common feature is that they answer questions from the public, citizens' associations or NGOs on a wide variety of scientific issues."* (European Commission, 2002: 15)

A sub-project of SCIPAS[1] considered the other side of the equation – the impact of science shop activity not just on the community but on university teaching, learning and research. The report argued that

> *"besides assisting citizen groups, science shops can also contribute to the development of university curricula and research." (Hende and Joergensen, 2001: 5)*

All these developments illustrate that access to knowledge has to be spread more evenly through society, and that within the universities, curriculum change is also required to produce scientists who are aware of their social responsibility. Science shops have a key role to play in mediating the relationship between the public and science and in forwarding new awareness. As science shops now have considerable experience in this activity, and have become diverse in response to local and national conditions, it is timely to review whether they have been able to deliver these ideals, and whether their further development should be promoted through the support of European policy. The INTERACTS research is designed to address these issues, by tracing and comparing the experiences of science shops and asking whether these experiences have brought about benefit to community groups through improved

[1] The SCIPAS network attempted to catalogue the variety of science shop activity and to investigate their different methods of operation. Important outcomes were a conference in Leuven, Belgium in January 2001, proposals for establishing a network of science shops with a newsletter and the Living Knowledge website (www.bio.uu.nl/living-knowledge).

scientific knowledge and whether they have helped develop university teaching and learning strategies as well.

Case Study Approach

The method of research chosen for this project is case study research, as this approach will provide detailed data on the varied experiences of the very different science shops in the member countries. Case studies are not merely descriptive, they are based on analytic categorisation and are designed to inform policy. According to key writers in this field:

> *"The research goal in a case history is to get the fullest possible story for its own sake. In contrast, the case study is based on analytic abstractions and constructions for purposes of description, or verification and/ or generation of theory. There is no attempt at obtaining the fullest possible story for its own sake."*
>
> *(Strauss and Glaser, 1977: 183)*

Criticisms of case study research usually relate to the idiosyncratic nature of a case, with the argument that case studies cannot deliver the kind of generalisable data that more positivistic, quantitative approaches can produce. Lincoln and Guba (1985) prefer to replace the concept generalisability with "transferability" as the latter term more accurately expresses how cases can be transferred from specific contexts to illustrate particular differences and similarities between cases. With INTERACTS, data is also being transferred to a wider policy context, through a method which involves comparison of cases.

For social policy researchers the case study has distinct advantages.

> *"All who wish to understand voluntary action will need to balance the parochialism of the case study approach against its attention to process and dynamics. Dense, located detail, critically analysed, is as important as thinner, if numerically significant outputs. This is a message for all who study voluntary organisations, whether as policy makers, practitioners, researchers or students".*
>
> *(Scott et al: 2000)*

The work of INTERACTS is intended to generate policy implications and recommendations by showing the empirical reality of science shop work "on the

ground". If current policy does not connect with empirical experience then policy needs to be reviewed in the light of the evidence we produce.

As researchers we have collected information with a structured outcome as an objective, through gathering data via semi-structured interviewing using a standardised interview schedule, and using a common framework for analysis. The research has been designed to make the information accessible and coherent, so that both common and unique features can emerge, along with explanatory discussion on the wider issues of impact and implication for policy (Hall & Hall: 2002).

Donmoyer (in Gomm et al, 2000: 61) notes a key advantage of the case study method when he states that "case studies can take us to places where most of us would not have an opportunity to go". Similarly, Stake (1986) believes the role of the evaluator is to provide narrative accounts that provide vicarious experience. This report can therefore seen be considered as providing access to a variety of community experiences, a "window on the localities" of science shops in action. The account of unique situations and individuals provides models for action, while the "rich data" collected adds nuance and subtlety to overarching theoretical perspectives.

Interview Questionnaire

The case study is the means by which grounded experience can be developed into policy discussion. Each case is a study which has been conducted by a science shop, and is based on interviews with all the key participants on two levels – those who have been directly involved (Level 1) and those who have a view on the policy implications of the activity, such as university deans or organisational managers (Level 2). In this way it is hoped to represent the overlapping spheres of university, science shop and NGO activity, similar to the model of the Triple Helix of university-industry-government relations. (Leydesdorff, 2001)

A common methodology has been devised, with interview schedules (see Appendix) derived from the issues that partners have decided are central to the understanding of science shop work. Initial suggestions from partners of suitable questions were formulated into a pilot questionnaire, and feedback from the pilots was used to develop the final questionnaires to participants at level 1 and level 2.

So, for instance, the NGO respondent, researcher(s), supervisor and science shop were asked about the main research questions and methods, findings and recommendations and about the organisation of the project – how it was initiated,

channels of communication, budget and timescales. The outcomes of the research were also investigated, in terms of usage and publication, long term benefit to the organisation, and relation to the wider objectives of the organisation.

These policy issues were also explored with level 2 respondents, although with the diversity of roles involved, it was more difficult to find questions which could be asked across all 6 countries, and some of the questions asked about science and society questions rather than about the specifics of the cases.
A major purpose of the study is not just to show whether negotiated applied community research can be effective – but to examine the case for the intermediary organisation in facilitating such research. So direct questions have been asked about the role of the science shop and about the advantages and disadvantages of the three way relationship between science shop, community group and researcher.

Open ended questions have been used to enable both the development of relevance to the particular case being studied and flexibility between cases (as national contexts are so different). The interviews had to be conducted according to ethical procedures and the following instruction was given by the designers of the methodology:

> *"Before any interview take place, it is important to gain the **consent** of the participants for this research to be used by INTERACTS and for possible future publication. Please enquire whether they wish themselves and/or their organisation to be anonymous – and a pseudonym to be used."*

Sample

It was agreed that partners would study cases of NGO-Science Shop interaction that were:

- Complete (so that activity was finished and impact could be assessed)
- Recent (so that those interviewed could recall fairly accurately what happened)
- With Impact (so that cases contributed to knowledge or to usage)

It was also agreed that case studies would focus on the three main actors:

- NGOs (with activities regarding the environment or social welfare and health)
- Researchers (students and/or supervisors)
- Science Shops

It was suggested that a minimum of 6 interviews per case would be required:

- 3 with those directly involved in the research, one each from NGO, Researcher, Science Shop (level 1)

- 3 with those involved in the research at a policy level, one each from NGO, Researcher, Science Shop. These might include NGO manager or regional network coordinator, University Dean with responsibility for curriculum and/or research profile, Science Shop manager (level 2)

In the event, it was difficult to interview three level 2 participants for each case, because the science shops were all at different stages of development – with the level 1 science shop co-ordinator often being the only science shop worker. Further, not all the science shops were university based, and policy makers in academia, who would be willing to participate, were not easy to locate.

Finally, each partner agreed to complete three case studies, one of which would be from a science shop in their country, which was different from their own. It was felt that this would supply further comparative perspective to the study and increase the validity of the research – so that the findings would be less heavily biased to personal experience and justification of action. It is recognised that this will not provide "objective" or "value-neutral" research, as all researchers are, after all, committed to the ideals of science shop activity. Researcher involvement requires awareness of 'positionality' – of the positioning of the researcher within a wider structure which relates to how they have come to understand knowledge as well as how they have come to produce it (Rhoads, 1997: 17).

But the extension of the sample to other science shops would enable the inclusion of questions and issues which the INTERACTS members might not have encountered in their own science shops and might provide further insights into negative or difficult problems which can arise.

Link to Science and Society Policy, WP3 (State of the Art Report), WP5 (Scenario Workshops) and WP6 (the Final Report)

A first task for the INTERACTS research project has been for each national partner to contribute to a 'State of the Art' report, to set out the baseline with regard to science shops and science policy (Fischer, Wallentin et al, 2002). The case studies provide an opportunity to relate practice on the ground to the wider issues of policy at the national level of each partner through the conjunction of level 1 and level 2 interviews. The state of the art exercise sensitised the researchers to the policy environment of the cases and raised issues for questioning and analysis.

It is expected, in turn, the cases will provide the agenda for the scenario workshops which will further refine the issues introduced in the state of the art report, and worked

through in the cases. Finally, WP6 will bring together the national findings into a comparative analysis for dissemination to NGOs, researchers, science shops and policy makers at national and European level.

Reflection and the Research

All partners were required to complete a pilot case, which became the basis of reflection on and development of the study through email and workshops. All partners were advised to keep a research diary to record their experiences of the pilot. “Reflection in action” is the process of thinking about what you are doing, as the work progresses and is distinct from “reflection on action” which is a *post hoc* activity – “stop and think” when the action is no longer current (Schõn, 1983). Such reflection in action, Schõn argues, provides a way of opening thought up to possibilities which might otherwise be blocked off. It helps produce flexibility in finding solutions when objectives are unclear or problematic and so produces improvisation which is thoughtful rather than reactive.

For the INTERACTS partners representing different cultures and experiences, reflection in action is crucial, if not always comfortable, to finding solutions which are creative and scientifically sound, and which represent the commonality and the diversity of the cases. The interview schedule, for instance, was modified after extensive consultation and reflection by partners, and the analytic framework was similarly revised. The case study research has thus been improved on the basis of both substantive and methodological considerations.

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SECTION 2
German Case Studies Report

4 Introduction

4.1 Description of the science shops from which the cases have been chosen

4.1.1 kubus - Kooperations- und Beratungsstelle für Umweltfragen/TU Berlin

kubus, the Kooperations- und Beratungsstelle für Umweltfragen (Co-operation and Consulting for Environmental Questions) is a Science Shop at the Technical University Berlin. It was founded in 1986 as a pilot project. After evaluation it became part of the Zentraleinrichtung Kooperation (Centre for Co-operation), a service institution of the TU Berlin for environmental and social questions. This centre is not attached to a specific faculty. WE, one of the three scientific staff members of kubus, was in charge for the project “Tiergartentunnel”.
kubus functions as a link between the university and different partners of the society. *“We are a link between university and the society. That means, for people, who normally have no access to the university and its resources.” (WE)* In this role kubus considers itself as a neutral intermediary, as a moderator. The target groups are mainly NGOs, initiatives, public institutions, different departments of the city and district administration and small businesses (SME and the respective associations). The aim of these relations is knowledge transfer, in which “*transfer is not a one-way traffic. From our perspective it has to go in both directions.” (WE).* kubus deals with co-operation projects, conferences and workshops related to all kinds of social-ecological questions (website: www.tu-berlin.de/zek/kubus).

4.1.2 WiLa Bonn - Wissenschaftsladen Bonn

The Science Shop Bonn (Wissenschaftsladen Bonn e.V.) was founded in May 1984 focussing on ecology and environmental protection. It is a non-profit and self-administrated institution with the set objective to make science/ scientific results accessible for groups, institutions and individuals who wouldn’t be able to do that on their own (“knowledge transfer close to the citizen”). WiLa Bonn is not linked to the

university of Bonn, but there are contacts with scientific experts of different institutions all over Germany. It is well established in the region and nationwide well known by its networking activities. The staff of the Science Shop has a lot of expertise in a wide range of environmental and related topics. The services of the WiLa Bonn cover counselling and project-development, workshops and conferences, reports, surveys, and newsletters (website: http://www.wilabonn.de).

4.2 Choice of case studies, typicality and differences

4.2.1 Selection of cases

For the case selection the criteria agreed on in the INTERACTS project were used (e.g. completed projects with co-operating actors). The chosen cases reflect the wide range of topics and demands (counselling, networking, research, moderation, project development, personal transfer, organisational services, PR acitivities etc.), covered by as well NGOs as Science Shops in Germany.

4.2.1.1 Case 1

This case (project carried out by **kubus**) was chosen, because it was a large project which got wide public attention and which included many co-operating actors. Additionally it exemplifies a characteristic Science Shop research project, i.e. NGO-members contacted kubus with a request on a scientific question.

4.2.1.2 Case 2

This case (project carried out by **kubus**) was chosen because it shows a different aspect of Science Shop projects. Here the project was initiated by the Science Shop, but conducted in close co-operation with NGO members and researchers.
Case 1 and 2 have in common, that as well some of the NGOs as the responsible staff member of the Science Shop (WE, kubus) were involved in both of the projects. But as well the aims as the methods used were different.

4.2.1.3 Case 3

This project was initiated, planned and conducted by the Science Shop itself (**WiLa Bonn**). Because NGO members were “only” active as participants of the respective workshops this project is not a typical case of INTERACTS. This example was chosen because it reflects well the general situation of NGO related to knowledge transfer in

Germany. The case focuses on the detailed interview of TB (Science Shop staff). The interviews with both of the other two involved persons (lecturer and NGO member respectively) are presented summarised.
Regarding the involved Science Shops there is a institutional difference between case 1 and 2 on one hand and case 3 on the other hand, which affects to some extent the planning process and the realisation of the respective projects. Kubus is a university-based Science Shop (with an easy access to experts of the university), while WiLa Bonn is not linked to a university and usually works with its own experts or has to hire them externally.

4.3 Links to the national issues touched upon in the State-of-the-art report

All of the cases more or less exemplify as well the general discourse on science and society as the political trends reflected in the State-of-the-art report.
Especially referring case 1: There is an ongoing discussion as well about urban environmental problems as on reasons for indebtedness of municipalities and Länder (federal states), partially caused by huge construction projects in all parts of Germany, especially in Berlin. But so far the function of NGOs and science as early warning systems is not appropriately reflected in the media.
Especially cases 2 and 3 reflect the as well problems as chances of NGOs to become active promoters of a civil society. Science Shops should assist NGOs including action groups of the Local Agenda 21 to improve their communication and to establish the organisational and financial frame to strengthen their activities.
In general the interviews prove that the public perception of knowledge transfer and the activities of Science Shops needs improvement from “both sides”, regardless of the valuable results of the presented projects.

5 Methodological Approach

5.1 Application of questionnaire/ Conduct of interviews

For the qualitative interviews the common interview guide was used in its original form (English original and German translation see Chapter 6). Especially on level 2, some questions about policy proved to be quite difficult to answer for the interviewees.
As the case study 3 was a quite unusual project in the INTERACTS-context, the interview guide had to be adapted in this respect, that questions on co-operation were referred to co-operation in general.
The interviews for case study 1 all took place in the office of the Science Shop kubus. For case study 2, the interviews with the level 2-partners were conducted in their offices. They lasted between 60 and 75 minutes. With agreement of the interviewees the interviews were tape recorded. All interviewees agreed, that the data may be used for research reports and publications.
The interviews for case study 1 and 2 were conducted and analysed by two different researchers.

5.2 Selection of interview partners

5.2.1 Level 1:

5.2.1.1 Case Study 1

There was one interviewee selected for each sector: the Science Shop, the researchers, the NGOs. For the Science Shop the staff member was chosen, who was mainly involved in the project and who is the staff member at the science shop, who is most familiar with NGOs. For the researchers a person was chosen, who was mainly involved and who kept in touch with the Science Shop and also worked on follow up projects.
For the interview partner of the NGOs one of the main actors of the NGO was chosen, who was also the link between the NGO and the Science Shop.

5.2.1.2 Case Study 2

As for case study 1, there was one interviewee selected for each sector: the Science Shop, the researchers, the NGOs. For the Science Shop the same staff member was

chosen as for case study 1, as he was involved in both projects. For the researchers a psychologist was chosen, who moderated the workshops in KREKO. The interview partner of the NGOs was a person , who was intensively engaged in KREKO as well.
As the case studies of INTERACTS are focused on the co-operation process during all phases of the chosen projects, no workshop participants were interviewed, but the workshop organisers and moderators only.

5.2.1.3 Case Study 3

The case focuses on the detailed interview of TB (Science Shop staff), because this project was initiated, planned and conducted by him as the staff member in charge of WiLa Bonn.
The interviews with both of the other involved persons (lecturer/researcher and NGO member respectively) were conducted on a modified and shortened guide line, because both of them were not directly involved in planning and realisation of the project. The modified interview guide lines were focused on the perception of the project and the co-operation with WiLa Bonn. These interviews are presented summarised.

5.2.2 Level 2

5.2.2.1 Case Study 1 and 2

For level 2, on both case studies only one interviewee per sector was interviewed, as these persons were familiar with both projects.
For the NGO-sector, the interview-partner was asked for level 1 in case study 2 and for level 2 in case study 1 and 2, as the interesting constellation occurred, that he took part in the project in case study 2 and additionally, as the chairman of an NGO that was active in both projects, had a “meta-position” which was interesting for level 2 as well.
On the university-sector, a psychology professor of the Technical University Berlin was selected who was directly involved in case 1 and indirectly in case 2 (as the interview partner on level 1 for case study 2 belonged to the scientific staff of his department).
For the Science Shop-sector no interview-partner was found, as the accordant person refused the interview.

5.2.2.2 Case Study 3

Unfortunately there were no appropriate interviewees of all of the 3 targeted sectors available on this level. However there was one very interesting person interviewed (initials KW), who was involved as well in the NGO sector as on the political/

administrational level. Because of his mixed involvement he had to refuse an official interview, but his most important statements are integrated into the chapter Policy Evaluation.

5.3 Data analysis

For pragmatic reasons the interviews were only partly transcribed, focusing on the sections most relevant for the research questions.
The texts (interviews and documents) were analysed along proceedings from the concepts “global analysis” (cf. Legewie, 1997) and qualitative content analysis (cf. Mayring, 1983). In a first step an open and exploratory approach was used in order to explore the data for new aspects relating to the general research question of the INTERACTS project. In a second step the data was approached by the questions of the interview guide.

5.3.1 Reflective report on how researchers placed themselves in the research

Working on a contract of services and temporary contract respectively, both involved researchers/authors of this reports were in a relatively neutral position, as they were no permanent staff members of kubus or the WiLa Bonn, but only on the INTERACTS project. They were working in close contact with the INTERACTS-co-ordinator for Germany at kubus though.
So both researchers had the position of observers, not being part of the Science Shop structures, but of course being influenced in their view by the close co-operation with the co-ordinator at kubus. Additionally both researchers are convinced of the Science Shop idea which of course relativises the neutrality as well.
But this bias was reflected very carefully during the research process.

5.3.2 Documentary evidence available/ Analysis of documents

All accessible documents, reports, press articles, internet sites, etc. on the cases were collected and viewed. These were mostly accessible via the Science Shop (refer to the Bibliographic-Appendix).

6 Case Study 1: Tiergarten – Tunnel

6.1 Project Description

6.1.1 Name of Project

„Tiergarten Tunnel. Erarbeitung einer Stellungnahme zum Bauvorhaben Tiergartentunnel Berlin.“
„Tiergarten Tunnel. Development of an expertise about the planned construction of the Tiergarten Tunnel Berlin”.
(Explanation: “Tiergarten” is the largest park located in the centre of Berlin.)

6.1.2 Summary of the Project

Especially in context with the German reunification a lot of huge constructions activities were planned and are partially still carried out in Berlin, the new capital of Germany. One of the biggest project is the so called „Tiergarten - Tunnel“, a system of tunnels for railway and motorway use under the largest public park Tiergarten.
Because of the estimated social and environmental impacts of the project an umbrella organisation of different action groups named „Anti-Tunnel GmbH (ATG) was founded. According to the German „Federal Nature Conservation Law“[2] Non Governmental Organisations which are specifically recognised by the administration are allowed as well as requested to report about construction plans which could affect the natural environment. The respective statements are considered by the responsible departments of the administration. Recently there are some Federal States (Länder) in Germany where officially recognised NGOs are allowed to bring an action against governmental institutions and the administration, if there is some evidence for a considerable environmental impact of construction measures. Differing from laws within other EU-member states the possibility to bring an action in comparable cases is very often restricted to the violation of individual property rights (cf. Umweltbundesamt, 2002). That is the reason why the association Anti-Tunnel GmbH included officially recognised NGOs and supported concerned individuals (e.g. residents of the construction site) at the court.

In 1994 ATG contacted kubus to find experts and expertise to develop a research report that could be used as an expert-report in the legal case against the tunnel

[2] Cf. § 29 of the German Bundesnaturschutzgesetz.

project. For different reasons the planning and construction process could not be stopped by the pressure of NGOs. The reasons were the politically motivated top down decision making of high ranking Berlin politicians, the dominating influence of the construction lobby as well as the decision of the court, that the evidence for the environmental risk of the tunnel construction was not strong enough to stop the tunnel.

6.1.3 Participants

Anti Tunnel GmbH, NGO.
Interview partner: one of the active initiators and co-ordinators of the NGO.
Initials: KL.

kubus, Science Shop of the Technical University Berlin.
Interview partner: researcher at the Science Shop, who was responsible for this project.
Initials: WE.

Different Researchers of the Technical University Berlin.
Interview partner: Researcher at the Institute of Biology and Ecology, TU Berlin.
Initials: MB.

6.2 Brief Description of the Organisations Directly Involved

6.2.1 NGO: Anti-Tunnel GmbH

The initiative “Anti-Tunnel GmbH”(ATG) has been founded in March 1994. It was an alliance of about 60 social and ecological initiatives. The aim was to organise protests against the plan of the Berlin Senate to construct a tunnel underneath the largest park of Berlin, the “Tiergarten”.
The initiator to found the Anti-Tunnel GmbH has been the NGO “Bürgerinitiative Westtangente” (BIW). BIW was founded in the mid 1970s and is still active. It was founded to protest against a motorway through the park Tiergarten. When the plan to construct a tunnel for a motorway and for railways came up, the BIW decided they could not organise protests against this tunnel on their own, but needed to build a larger network. So they founded the umbrella organisation “Anti-Tunnel GmbH” (ATG). KL, our interview partner, was one of the key actors in this process.
The NGO BIW played an important role in the Anti-Tunnel GmbH and acted as the office of the Anti-Tunnel GmbH at the beginning. Later on the ATG got one staff on a

job creation scheme and an office in the umbrella organisation “Haus der Demokratie” (house of democracy).
“We had the aim to prevent the tunnel as a whole.” (KL, NGO). With this aim the Anti-Tunnel GmbH wanted to prevent the ecological effects on the “Tiergarten” and the investment of a huge amount of public money for such a “prestige”-project.
The name of the initiative needs explanation: “GmbH” in Germany is a specific legal form for a company. In analogy it is here used as an abbreviation for “Gesellschaft mit besonderer Hoffnung” (“Association with extraordinary hope”).

6.2.2 Research Institution: Technical University Berlin / Institute of Biology and Ecology

There were about 20 research assistants from different institutes of the Technical University Berlin involved in the project. 4-5 of these did the project work, the others played advising roles.
The Institute of Biology and Ecology is one of the research units of the Technical University Berlin. Our interviewee, MB, worked at this institute. Other participants were members of the institutes for planning, hydrology, soil science, process engineering and community psychology.

6.2.3 Science Shop: kubus - Kooperations- und Beratungsstelle für Umweltfragen

kubus - Kooperations- und Beratungsstelle für Umweltfragen / Co-operation and Consulting for Environmental Issues is a science shop at the Technical University Berlin. WE, one of the three scientific staff of kubus, was responsible for the project “Tiergartentunnel”.
kubus functions as a link between the university and different partners of the society. “We are a link between university and the rest of society. That means, for people, who normally have no access to the University and its resources.” (WE) In this role kubus sees itself as a neutral intermediary, as a moderator. The target group consists mainly of NGOs, initiatives, different departments of the city and district administration and small businesses. The aim of these relations is information transfer, in which “transfer is not a one-way traffic. From our perspective it has to go both ways.” (WE). kubus deals with projects related to all kinds of social-ecological questions.

6.3 Background of the Project

6.3.1 Objective

In 1994 the city government and administration of Berlin planned to construct a tunnel underneath the largest public park in Berlin, the “Tiergarten”, connecting the city highway with the “German Reichstag” (German parliament). The NGO Anti-Tunnel GmbH wanted to stop this project, because they suspected serious environmental risks for the park Tiergarten. Also, the NGO rated the tunnel as a “prestige”-project, which would seriously debit the public budget. The estimated costs for the tunnel project were 2.5 Billion Euros.
The NGO Anti-Tunnel GmbH planned to prepare environmental impact reports to proof the bad environmental impacts of the tunnel project, and bring up counter-charges before court. Since the NGO had little financial resources, it was not able to commission private research institutes to provide the reports.

We were a relatively small group. Almost all of us have worked voluntarily and of course people were overtaxed. Thus, our first aim was, to organise the process as efficient as possible.(KL, NGO)

The area of topics contained questions of hydrology, geology, construction, transportation, questions of behaviour, psychology, the moderation of social processes, and also economy, environmental economy, ecology, etc. This was a spectrum of questions, that citizen groups and initiatives can not proceed themselves on a voluntary level. It is not possible. And that was the reason why representatives of the Anti-Tunnel GmbH came to kubus and asked for support. (WE, Science Shop)

Moderated by kubus there was made the attempt to build up an anti-publicity and also a scientific anti-initiative against the official tunnel plans. (MB, TUB)

The court case took place in July 1994, but the counter-reports were not considered as critical enough to stop the construction of the tunnel. The tunnel is still in the process of being build. The costs will most likely exceed the estimated sum.

6.3.2 Initiation

The idea to use kubus as an intermediary to get researchers from the Technical University involved was realised by WE (kubus/TU Berlin) and MB (Institute of Ecology and Biology/TU Berlin). MB and WE used to be colleagues in the Institute of Ecology

and Biology at the TU Berlin within a multidisciplinary project on forest decline in the Berlin conurbation area.
Thus, personal involvement and networks were the starting point for this co-operative project between the Anti-Tunnel GmbH, kubus and other departments of the TU Berlin. *"Well, that were old, existing contacts, of which one led to the next one." (MB, TUB)*.

6.3.3 Time Frame

The Anti-Tunnel GmbH was founded in March 1994. Shortly after that the contact to kubus was made. The court case, which can be seen as the goal and the ending of this stage of co-operation within this project took place in July 1994.

6.3.4 Budget

The Stiftung Naturschutz Berlin (Foundation for the Conservation of Nature Berlin) financed the research with about 12,500 Euros. kubus did not get extra-funding. The staff and the infrastructure was financed by the Technical University Berlin.
The NGOs were mainly based on voluntary work. One position in the co-ordination office of the ATG was available on a job creation scheme.

6.3.5 Main Research Questions

There was not one single research question, because different smaller studies have been done in different disciplines. The general scope of the project was as follows:
Expert reports concerning the ecological effects of the tunnel provided by the municipality and the construction companies should be reviewed and critically commented.
New studies should be done to supplement the analysis and alternative recommendations should be made.
The produced results should be joined to a "counter-report", which should be the base for the law-suit against the tunnel.

Thus, the research studies were mainly focused on the question: "What are the environmental risks of constructing the tunnel in the Tiergarten area?" Additionally, studies on alternative solutions for different problems of the inner urban traffic were done.

6.3.6 Documentation

The project and its results are published as an official report of the NGO umbrella organisation “Berliner Landesarbeitsgemeinschaft Naturschutz” (BLN - Berlin Working Group on Nature Conservation), which was handed over to the City administration in July 1994 (cf. BLN, 1994). Later on the report was submitted to the court. Some of the results were published in the media (newspapers, TV, radio). Certain results are compiled by a working group of Public Health psychologists from the TU Berlin in the documentation “Tiergartentunnel - Akteure, Positionen, Konflikte” (TU Berlin, 1995).
A lot of “grey literature” of this period is available at the BLN office as well as at kubus. Lots of them are cited in the book “Großbaumaßnahmen in Berlin und das Konzept nachhaltiger Entwicklung”, which deals with large construction plans and its impact on sustainable development (Blais & Spars, 1999). The publications of follow up projects are given in chapter 3.3.

6.4 Key Findings

The key findings of the research were unexpected. In sum they showed, that from an ecological perspective the tunnel-project is not as problematic as the NGOs had expected (even though there are still critical points that have not been investigated, like the problem of soil contamination during the building process). Still, some of the results brought up new perspectives, especially concerning the groundwater management. Additionally there were some interesting results about alternative solutions for street as well as railway traffic (cf. kubus, 1995a, p. 19ff.).
The results were used for the court case against the tunnel.

6.4.1 Political Impacts

Research
From the research perspective the project was successful. The results contributed to a clearer view on the environmental risks of the tunnel project and made the planning project more transparent. One of the analyses about ground water in the Tiergarten even lead to a political success. It showed that the investigations on behalf of the construction company were not strict enough in ecological terms and needed corrections. The company even had to change their water management and take action to lift the ground water level.

NGO

For the NGOs the project was less conceived as a success. They also found the scientific support important: "*Without the know-how we got access to by this [by the co-operation with kubus], we could have never proceeded the topics on such an expert level and in this breadth." (KL, NGO). B*ut since it did not bring the political power they had expected, some activists had mixed feelings about it. The courts did not consider the report as substantial enough and therefore did not stop the construction of the tunnel.

A positive effect was that the planning process got slowed down and that a great number of people got mobilised against the tunnel.

It was at least a little success, that at the end there was a wide criticism against the tunnel. And that the planning process got slowed down by our work: there were 19,000 objections passed in. That was the greatest number of objections in any such planning process ever in Berlin.(KL, NGO)

The NGO activists were not very happy about some of the research results because they had hoped to get stronger ecological arguments against the tunnel.

They [NGO activists] had this negative expectation and wanted us [the researchers] to confirm, that the tunnel has terrible effects. And when I signalled that I cannot confirm that, their interest in the results was very small. (MB, TUB)

Still, the most important effect was that the building companies got somehow controlled by the public. This was reached by the public attention that was built up by the NGOs. The public pressure on the tunnel project was high. The tunnel planners had to spend a lot of money on public relations to promote the tunnel project. Thus, indirectly the NGOs even built up economic pressure.

On the political level I would say: it seemed to be a total defeat for the anti-tunnel activists. But looking back, I have to say, they have managed to bring the topic into the public debate for a long time. (WE)

Science Shop

The science shop staff assesses the project as a success. The aim of the project was reached: an academic report was presented. Even though the tunnel project could not be stopped, on the long run the project was politically successful. The good public relations had an impact on public awareness. There is a much stronger attention for environmental issues related to the Tiergarten, as for instance recent protests against the Love Parade (a yearly techno-music event in Berlin) in the Tiergarten show. Also

the awareness of the municipality of the importance of groundwater management was raised.
kubus appraises NGOs as an early warning system for ecological and social problems. This system can be optimised by the support from science shops and community related research.
The combination of public/political pressure and scientific expertise seemed to be very effective. A higher public acceptance of social movements can be reached by using such scientific backup.
In terms of university policy kubus did not notice any general positive development promoted by this project. Positive effects on research topics are restricted to the fields of the vitality of trees, different aspects of hydrology and soil science, and some aspects of environmental psychology. Within these fields further studies have been done at the TU Berlin mostly in close co-operation with NGOs as well as the Department for Gardening and Nature Conservation of the Berlin District of Tiergarten (since 2001 called District of Mitte). Recent projects are carried out along the banks of canals and other water bodies within or close to the Tiergarten Park (kubus, 2002)[3].

In relation to the university I have not seen much effect. The only really realisable was, that the topics "conservation of trees" and "groundwater" became topics of research – co-ordinated by kubus.(WE)

Based on the experience of internal conflicts within the Anti-Tunnel GmbH additionally some workshops about conflict management and co-operation between NGOs were organized by kubus in the period of 1996 to 1998 (refer to case study 2 "KREKO").

6.4.2 Use of the Results

The results were used for different purposes:
Mainly for the expert reports for the law suit against the tunnel.
Some of the results were used for public relations of the NGO (media coverage).
The results got presented to the municipality.

In the follow up the results were used for:
Two expert forums organised in 1995. Experts, NGOs and the general public were invited to get informed about the project and to discuss the results.
The counselling for further research about environmental impacts of the open air party "Love Parade" on the ecosystem of the Tiergarten.

[3] For further kubus projects see: http://www.tu-berlin.de/zek/kubus/ .

6.5 Evaluation

The evaluation of the project focuses mainly on the co-operation among the involved partners. Further, the motivations for co-operating in the project and follow-up projects are analysed.

6.5.1 Co-operation

Internal Communication

The researchers had regular project meetings. But there were no official meetings with other NGO activists or with the NGO umbrella organisation Anti-Tunnel GmbH (ATG). Only some of the researchers participated in the Anti-Tunnel GmbH meetings, but not in their role as researchers. They never discussed the research results at these meetings. That did not only have organisational reasons. Also the NGO activists were not so interested in it, because the research results did not fully back up their political claims that the Tiergarten-Tunnel is an unacceptable environmental risk for the park.

There was a permanent contact between kubus, the researchers and the NGOs. One reason for that was, that kubus kept in touch and continuously followed up the development of the project. Kubus functioned as the intermediary and co-ordinator. They did not get involved in the content of the research though.

Kubus facilitated various meetings in their rooms, especially at the beginning of the project. The meetings were thoroughly prepared by the kubus staff. They always prepared a clear time schedule, cleared the expectations of the meeting and moderated the process. The participants were generally very content about the outcomes of these meetings. *"There was always a clear time schedule.[…] There has not been a single meeting of just gossip-talking"* (WE). For structuring these meetings conventional methods were used, like moderation, metaplan-technique, visualisation, agenda, time schedule, brainstorming.

While kubus was involved in the moderation of the meetings dealing with technical issues, they were not involved in the political meetings of the NGO, which were much more problematic. *"The single meetings we have moderated well. But we did not think of the process as a whole."* (WE). According to WE it could have been helpful if the science shop had also offered support for the NGO meetings. At some points of the process even a mediation for the participants of the NGOs might have been helpful. According to the science shop staff the process within the ATG was not well moderated.

The kubus staff participated in the NGO meetings as a private person, not as a Kubus representative.

External Communication

There was quite a lot of communication with the media. There were reports in the newspapers and in the news on TV and in the radio about the project.

The public relations work has been really good. Also the public actions were all in all communicated well. (WE, Science Shop)

It got also covered in connection with other events: during the Love Parade (big open air event in the Tiergarten) the media also presented news about the environmental problems of the public park Tiergarten and also mentioned the Tiergarten-Tunnel.

Some of the research results got also presented at the responsible parliamentary committee of the senate for city planning and at the local level in the Berlin District of Tiergarten.

One form of communication was, that I was able to present the results before the board for green spaces of the district of Tiergarten. Thus, science and politics came together. (BE, TUB)

Co-operative Working Culture

The interview with the researcher (MB) took place in the office of the science shop. He had also worked with kubus for one year in 2001. When he was entering the kubus office for the interview he was greeted and hugged very warmly by his former colleagues. The interviewer perceived the atmosphere in the science shop office as warm and personal. Such working culture could be an important dimension for the co-operation with other institutions and should be considered in further investigations. On the one hand the open and warm atmosphere of the science shop could have a positive effect on co-operating with other institutes, on the other hand it could also be incompatible with more formally organised partners.

Multidisciplinarity

The project was described as multidisciplinary, not interdisciplinary. Various disciplines were involved, but they did not integrate the produced knowledge. Obviously that was not necessary in this project either, because the experts' report was organised in different sections according to the disciplines anyway.

In the scientific counter-expertise each expert has worked out his part. And we have communicated about that, but it was not interdisciplinary work, but multidisciplinary. (MB, TUB)

Transdisciplinary Understanding

Most of the NGO-activists involved in the project were academically educated and highly interested in the topics, so it was no problem to communicate about the tasks and aims of the scientific studies.

One problem mentioned in the interviews was to communicate the content of the research to the solicitors the NGO had commissioned for the legal process. Thus, *"the presentation of the arguments was not precise" (MB, TUB)* by the solicitors in the legal process, even though they were specialised in environmental matters.

6.5.2 Motivations and Interests of Actors

Research

The actors from the universities involved in the projects were all research assistants, who were mostly interested in the topic as well as in the political impacts of the project.

The interviewee MB mentioned the following motivations to get involved:

Political: He is politically interested in the conservation of trees and forests.

Scientific: As a biologist he is interested in issues of environmental protection. In this specific project he was interested in transferring a method of the research of forest decline to the field of the conservation of inner city parks.

Career/financial: he also was interested in project funding to consolidate his job in the research institute.

I would like to continue working in this field. But the bitter experience was, that this kind of work does not get supported in a way one would like it. Nobody I know got a long-term job from this. (MB, TUB)

No professors were involved, for the following reasons:

Economic interests: they had either private contracts (e.g. private architectural offices) from the construction contractor or they got funding for research projects at the university in the context of the tunnel project. So they wanted to stay neutral and not get involved in political initiatives against their financier.

"At the Technical University the professors never had a great interest in applying for funding for the project. […] One reason for that was, that in some cases the professors were subcontractors of the Deutsche Bahn [the German Railway Company] in the construction project." (MB, TUB)

Economic dependency: the professors were dependent on the funding by the Berlin Senate in other projects and therefore would not like to take sides against the city planners.

Political interests: they were not politically interested in such a project.

Time: some professors who are politically interested and involved, usually have a heavy workload, because they are involved in societal projects besides their normal work. For this reason they did not have enough time to work on this project.

Science Shop

The interviewee from the science shop, WE, called his main interest, to base political criticism of NGOs on expert knowledge. Also he was interested in raising public attention to the environmental impacts of the tunnel project.

Further, he is interested in the feedback of such societal issues into the educational system and wants the environmental topics to become essential issues in research and in teaching at the university.

He would like to create a continuous work on such topics out of this single project. The Anti-Tunnel GmbH fell apart after the courts had decided to go on with the construction of the tunnel. WE would like to continue working on related issues by applying for follow up projects and by involving former as well as new actors.

My interest was that the work was professional, so we could make the results public with really being convinced by them. My interest was also to give it a wider public attention, in which the Technical University is also mentioned as an actor. And my interest was, that the topic becomes object of research and teaching. […] And my interest was, that from the single project a continuity develops. […] The latter did not develop, because the Anti-Tunnel GmbH fell apart then. (WE, Science Shop)

NGO

The representative of the NGO (KL) was politically motivated. At the beginning of Anti-Tunnel GmbH he already had been involved in NGOs for more than 10 years. He is currently also working in an umbrella organisation for NGOs.

Table 1 gives an overview over the motivations and interests of the interviewees for the co-operation in this project:

Motivation / Interest	**Science Shop**	**Research TU Berlin**	**NGO**
Political	Political criticism should be based on expert knowledge.	Political criticism should be based on expert knowledge	Widen the political coalition by co-operating with scientific institutions. Produce public acceptance for political goals by scientific grounding.

Education-al	Put societal issues on the research- and teaching- agenda of the university. Transfer academic knowledge into the NGOs and the society.	Identify research projects that are applied and relevant for the society. Get funding for research projects.	
Personal	Develop networks for follow up projects	Combine profession with political interest. Develop networks for follow up projects and for academic career.	

Tab. 1: Motivations and interests of the actors involved in the project.

6.5.3 Follow up Projects

The co-operative project lead to a couple of follow up projects. For these projects the science shop played an important role: "*Later there were a couple of follow-up projects, which were initiated by kubus" (KL, NGO).* The preconditions for the follow ups were twofold:
The acquisition of know-how, and
the networks developed during the project.

With the know-how about the Tiergarten kubus did consulting for a research project about the impact of the annual open air party "Love Parade" on the Tiergarten.
The networks to some offices of the municipality and to different NGOs in Berlin were the starting point for environmental studies about the Tiergarten with the "Stiftung Naturschutz Berlin" (Foundation for the Conservation of Nature Berlin) and the "Senatsverwaltung für Stadtentwicklung Berlin" (Senate for Urban Development).

In the following the main follow up projects are listed:
Two expert forums were organised in 1995. Experts, NGOs and the general public were invited to get informed about the project and to discuss the results (cf. kubus, 1995a).
A media analysis was carried out by a working group of Public Health psychologists, published in the documentation "Tiergartentunnel - Akteure, Positionen, Konflikte" (TU Berlin, 1994).
Accompanying study on behalf of kubus: "Photographische Dokumentation zur Vitalität der Kronen von Laubbäumen im östlichen Tiergarten" (Barsig and Bisom, 1994).

Research project “Pro Tiga – Für den Tiergarten -Baumvitalität, Wasserstatus und Altlastenproblematik im Bereich des Tiergartens”, expert report about the tree vitality and the ground water management in the Tiergarten (cf. Kubus, 1995b). Project carried out by kubus in co-operation with the “Berliner Landesarbeitsgemeinschaft Naturschutz (BLN)” (NGO umbrella, formerly involved in the Anti-Tunnel GmbH). Financed by the “Stiftung Naturschutz Berlin” (Foundation for the Conservation of Nature Berlin). Budget: 12,500 Euro.

Accompanying study during the construction measures on behalf of BLN, funded by Stiftung Naturschutz Berlin: “Baumvitalität im Berliner Tiergarten während der Großbaumaßnahmen” (cf. Barsig and Klöhn, 1997).

Accompanying study during the construction measures on behalf of and funded by the Berlin Authority for the Preservation of Monuments: “Baumvitalität im Berliner Tiergarten”(cf. Barsig, 1998).

Application for another Tiergarten project together with debis (private investor). Did not get accepted.

Counselling of a research project about environmental impacts of the “Love Parade” on the ecosystem of the Tiergarten. This research project won a scientific award (“Jugend forscht”, 2001).

Follow up projects in a wider sense were carried out in the fields of conflict resolution and environmental psychology. Based on the experience of internal conflicts within the ATG during the co-operation process some workshops about conflict management and co-operation between NGOs were organised by kubus in the period of 1996 to 1998 (refer to case study 2).

Since 2001 kubus co-operates with the Institute for Social and Environmental Psychology of the Technische Universität Berlin within the seminar “Specific Problems in Environmental Psychology“. Within this seminar research and practical interventions have been carried out in the context of environmental protection of the park Tiergarten. Linking university teaching and practical projects in such co-operation also has an impact on the future development of the labour market in the environmental field.

6.6 Policy Evaluation

As the interviewees on the policy level were interviewed on case 1 *and* 2, please refer for the policy evaluation to 3.2.4.

6.7 Reflective Part

Some conclusions can be drawn from the first case study. New questions came up, that might be answered by the following case studies and by comparing them. A phases-approach for comparing further cases is suggested. These conclusions are preliminary and need further investigation.

6.7.1 Social Protest

The research on social movements shows that the combination of formal (legal and organised representatives of the movement) and informal (semi-legal, street protests) protest can build up more political pressure than just one of the protest forms. This case study indicates that research might be a further important factor in increasing the political pressure. Arguments by the social movement that are backed up with research results will increase the public acceptance for protest. Most likely this is especially true for results from established, “serious” research institutions like universities.

6.7.2 Transdisciplinary Knowledge Production or Research Service?

In the knowledge based society research and other societal systems – like environmental policy – become closer and more inter linked. Transdisciplinary research is a resulting need. Science Shops have a great potential for the mediation between theory and practice.
If the Science Shop projects integrate and produce transdisciplinary knowledge, or if the research is just used as a service for political interests, seems to depend on the research object. In the example of the “Tiergarten”-project there seemed to be no strong need for the integration of disciplinary and practical knowledge. The need was for disciplinary research reports – a research service for the NGO.
It would be interesting what impact Science Shops can have on the forms of knowledge production in such projects and how they can support the integrative character of knowledge production.

6.7.3 Neutrality of the Science Shop

The Science Shop’s self-understanding seems to be ambivalent: on the one hand it claims to be a neutral moderator, on the other hand its fundamental idea (to transfer academic knowledge to the society and connect experts and lay people) is a political one, and also the staff is politically involved.
This role should be cleared and made transparent for the public, for co-operation partners as well as for possible financiers. An open political vision can be an advantage

for the profile of the Science Shop. A “neutral” position could increase the credibility of project results.
Obviously the political position of a Science Shop is a sensitive question, as the case at hand shows: the NGOs were disappointed with the research results, which did not back up their political arguments very well. Thus, the Science Shop is confronted with the paradox that political organisations did not seek “truth”, but legitimation.

6.7.4 “Old Boys’ and Girls’ Networks”

It seems that even for an intermediary science shop that has the task to professionally organise co-operation, the personal “old boys’ and girls’ networks” (Dienel, 2001) are crucial. This project came about because of the personal contact between the kubus staff and some of the researchers.
A couple of questions result from this observation. An interesting question for further research would be to differentiate and further analyse the two different ways of initiation of a co-operation: personal contact versus professional networking. Further: how can personal links of the involved actors be more effectively used and integrated in the co-operative process?

6.7.5 The Science Shop’s Role in Different Project Phases

Loibl (2001) has identified four project phases as relevant for the co-operation in research projects: the initiation phase, project start, project phase, and the project ending.
Applying this phases approach to the role of science shops in a co-operative project seems fruitful. The present case shows that the science shop had especially important functions at the beginning and the end of the project.

Initiation phase
The case at hand shows that personal networks of the involved science shop staff is of major importance for the start of a co-operative project between university, NGO and Science Shop. Personal involvement in NGOs and personal contacts lead to the realisation of the project.
Such networks are as relevant when the Science Shop applies for research funding and takes the initiative for starting a project.

Project start
At the beginning of the project “Tiergarten-Tunnel” the organisation and moderation of the first meetings was taken care of by the science shop. This is a crucial phase,

because here the common goals have to be developed and the arrangements about the co-operation have to be made.

Project phase

In this phase the process seemed to work well by the self organisation of the researchers and the NGOs. In the case under consideration there seemed to be no need for mediation by the science shop in order do arrive at the goal of the project: to develop expert reports. Kubus still kept in touch with the partners during this phase, but there seemed not much need for further involvement.

Still, the sphere of the Science Shop's tasks could of course be widened. For instance in the interviews there was a possible need for conflict mediation within the NGOs mentioned. Even if this could have not been covered by Science Shop staff, the involvement of communication-experts from social sciences departments at the university might have been possible.

Project end

With the end of a project the ties between the partners very often get cut. Often nobody feels responsible anymore for important work like the documentation and publication of the work. Therefore in this phase the Science Shop played an important role in the case at hand. The results got collected, documented, and presented at expert forums. The Science Shop also fosters the developed networks and initiates follow up projects. This creates the potential for continuity in such co-operations.

Initiation	**Project start**	**Project phase**	**Project end**
Personal networks.	Organisation and moderation of first meetings. Goal setting.	Keeping in touch.	Collecting, systemising and publishing of results. Fostering of developed networks. Initiating of follow-up projects.

Tab. 2: The Science Shop's role in the phases of the "Tiergarten-Tunnel"-project.

The focal points and tasks of science shops will differ within the process in other cases. The phases-approach seems helpful for comparisons of further case studies.

7 Case Study 2: Kreativkomitee (KREKO) – Creative Committee

7.1 Fact Sheet

7.1.1 Participants

Berliner Landesarbeitsgemeinschaft Naturschutz (Berlin Working Group on Nature Conservation - BLN), NGO.
Interview partner: Chairman of the NGO.
Initials: MS.
Kooperations- und Beratungsstelle für Umweltfragen (Co-operation and Consulting for Environmental Questions - kubus), Science Shop of the Technical University Berlin.
Interview partner: Researcher at the Science Shop, who was responsible for this project.
Initials: WE.
Two Researchers of the Technical University Berlin (TUB).
Interview partner: Researcher at the Institute of Public Health, TU Berlin.
Initials: MJ and HL.
As the focus of INTERACTS is set on co-operation within the Science-Shop-Project, no workshop participants were interviewed, but the workshop organisers and moderators.

7.1.2 Duration

March 1997 (beginning of preparation) – March 1998 (finishing documentation)
There were 3 workshops taking place between November 1997 and January 1998, and an extra one in February 1998.

7.1.3 Costs

The Stiftung Naturschutz Berlin (Berlin Foundation for the Consercation of Nature Berlin) financed the project with 3,000 EURO. The money was mainly spent on contracts for services for three members of KREKO (workshop moderation and public relation) and on the documentation of the project (design and print). In addition kubus and the BLN were involved with own resources (manpower of WE and MS).

7.1.4 Aims

The aims of the project can be summarised as follows:
-address problems within and between NGOs, environmental groups and environmental associations and improve internal communication and co-operation
-become attractive for new activists
-establish new forms of workshops and discussions for NGOs, environmental groups and environmental associations
-revive the “we-feeling” amongst the activists
-promote to take pleasure in environmental-political engagement
-enforce the environmental-political influence

7.1.5 Outcomes

The following outcomes can be reported:
-three workshops with different topics (Visions of successful and effective Co-operation, Communication, Conflict Management) plus one additional workshop to discuss the outlook took place
-the workshops offered the opportunity to ‘get to know each other”
-a team was founded to organise a yearly ecological open-air-festival of environmental activists (“Öko-Fete”)
-the chairman of “Naturschutzbund Deutschland” (Association of Nature Conservation of Germany - NABU) a large German association for environmental preservation, offered counselling for projects and groups dealing with environmental protection (concerning project proposals)
-a planning-group was founded to plan and establish regular meetings of the Berlin environmental “scene” on co-operation
-another working group “Kompetenz-Datei” (data file on competencies) was founded (here, the idea was, to collect all addresses of experts or consulting services (science shop like institutions etc.) for different aspects of environmental and ecological matters in the Berlin/Brandenburg area and to make them available in a data base. This project was given up, as the idea turned out to be not manageable in total.[4]

Another result is, that about 60 participants attended the first workshop and the second, third, and fourth one were each attended by about 40 participants. The

[4] But it’s worth to be mentioned, that an address list of NGOs, science shop like institutions and environmental services of the City of Berlin is published in every issue of the magazine “Der Rabe Ralf “ (“The Raven Ralf”; published by the NGO Grüne Liga – Green League). Additionally kubus has provided a data base about research and education at TU Berlin on all aspects of sustainability and agenda 21 (firstly published in January 1999).

participants were members of big, medium and small NGOs or civic action groups. From the bigger NGOs, only “basis-members” were present, from the smaller ones, chairpersons as well.
From the participants‘ perspective (apart from the first workshop, which was seen quite controversial), the workshops were assessed positively.

7.2 Brief Description of Organisations directly involved

7.2.1 NGO

The “Berliner Landesarbeitsgemeinschaft Naturschutz” (Berlin Working Group on Nature Conservation, BLN), founded in 1979, is an alliance of 15 varying smaller and bigger associations for environmental preservation dealing with specific topics like “hedgehog protection” or environmental protection in general. Some associations are regional, other work Germany-wide. This network represents about 50,000 members. The aim is to co-ordinate the work of theses 15 associations to be able to make a stronger impact participating on public plans concerning urban/ landscape development. The BLN supports participation by co-ordinating critical statements of the 15 associations on drafts of landscape-plans, on land utilisation plans, on programmes on protection of species and landscape architecture, on project approval procedures and on interventions on nature and landscape. Additionally, the BLN works out reports on questions of law and environmental preservation. The BLN receives financial support from public departments on urban development, from membership fees and donations.
Most of the work is done by volunteers of the 15 member-associations. Apart from this, there’s one employee working as a chairman for the BLN and another being responsible for financial matters.
Our interview-partner MS is the chairman of the NGO.

7.2.2 Researcher

The interviewed researcher was working at that time for the project-group “Co-operative project-development for communal health promotion”, which was integrated in research network Public Health at the Technical University Berlin. Supervisor of the team was TUB professor HL (TU Institute for Social Science), who was interviewed on the second level as well.
But it should be mentioned, that the interviewee MJ took part in the Science Shop-project KREKO as a private person.

7.2.3 Science Shop

See introduction.

7.3 Process of project origination

The kubus-researcher WE was dealing for years with the question on co-operation and conflicts inside and between NGOs. The project “Tiergarten-Tunnel” (refer to case study 1) gave an example for problems and conflicts which finally led to the break-down of the NGO-network “Anti-Tunnel GmbH”. So there was a (non-thematic) correlation between the two projects “KREKO” and “Tiergarten Tunnel”. As WE was an active NGO-member by himself, his interest in this topic was twofold: private and professional.
As a consequence in November 1996 WE initiated a “Zukunftswerkstatt” (future workshop, cf. Jungk & Müllert, 1989), a special kind of workshop to work on problems and develop new ideas, which was open for members of NGOs and other groups, dealing with environmental protection (“the environmental movement”). The focus was set on specific problems of NGOs and civic action groups: “Environmental Movement in the dead end – a way out of home-made frustration“ (“Umweltbewegung in der Sackgasse – Auswege aus dem hausgemachten Frust”). For the moderation of the workshop, WE acquired MJ (TU Berlin) and a student working for MJ at the Technical University (Institute of Public Health).
The workshop was successful in this respect that two participants, WE and the two moderators founded a project team or committee, the “Kreativkomitee” (Creative Committee - KREKO), to organise further workshops to get deeper into the topic, as they realised that there was a demand.

WE emphasised that it was important to him to build up a project committee, as he saw his role as an initiator but not an organiser or manager. (In order to guarantee that the participants didn’t become *“incapacitated”* (WE) but take over responsibility for their situation by themselves.)

7.4 Process of project negotiation

After the foundation of KREKO, the committee started to meet regularly (weekly or fortnightly) from March 1997 until the end of the project (February/ March 1998).
The “project negotiations” took place during these meetings. The committee negotiated how the workshops should be organised, which topics should be in focus, which

workshop-methods should be used, how much money would be needed and how the funding could be realised. Additionally it was negotiated which members of the committee would be paid for the work and which ones not.
There was a clear role allocation: MJ and his student were the experts on workshop-methods and -organisation, WE, MS and another NGO-member had the contacts to and the knowledge of the "NGO-scene" in Berlin, whereas WE, as a kubus representative, took over the role of an intermediary between NGOs and the Technical University Berlin as well as organisational tasks (e.g. organising a room at the university, posting invitations).

Science Shop

WE (kubus) reported the team negotiations and the team work in general to be extremely constructive and fruitful, where no one wanted to prove power. The negotiations and discussions were mostly related to project-topics, the members accepted different points of views and worked as a team for the common goals. So things which normally destroy a team easily (like the fact that three members of the committee were paid, two not) didn't matter. They had though hard discussion, but they were led under the condition, that the committee wanted to reach a shared aim, i.e. to organise and carry out the workshops.
In WE's opinion the reasons for the good co-operation were that MJ was a person with a high level of social-competence and thus moderated the meetings professionally. Additionally everybody was ready to place back own interests behind the team interests. So nobody had a "bad feeling" and the committee even worked on the consensus-principle.

As a conclusion WE said, that KREKO wanted to prove and exemplify that a fruitful voluntary engagement is possible. But he admitted that it wouldn't have been possible over a long time, but only project-related. As they all spent so much time on KREKO, the committee didn't want to continue the work after the project ended officially.

Researcher

For MJ, the project-meetings were a *"fun-factor"*. There were a lot of constructive debates but to his mind no (conflicting) negotiations at all. It was very easy to find a common sense, and the whole committee got a long with each other very well, which was to his mind the most important basis. It was like working in a transdisciplinary team with a good co-operation, because the different roles, the members took over, made the work complete.
But concerning the role allocation in the committee, he mentioned that WE had a pretty difficult standing, because of being as well a NGO-member as a kubus-employee. He

was regarded as a rich *"give-me-money-father"*, who should care for his children. But on the other hand he had no official role/ power assigned by the NGOs.
In general, according to MJ, money was a difficult topic on NGOs side. He regards the envy on money as being symptomatic for the conflict of voluntarily-working people on *"the dealing with self-exploitation"*. So the question was raised, if the money for contracts of services for certain KREKO-members couldn't be spend on the whole project, which finally didn't happen.

NGO
MS (BLN), like the other interviewees, described the co-operation very positively: *"I think we "fructified" each other"*, as everybody had a different background, which made the committee complete. E.g. he never co-operated with a psychologist in such a context before. Additionally they all got along with each other very well on a personal level. So the atmosphere was very positive.

7.5 Main research/ project questions

The main focus of the project was the competition and co-operation within and between environmental groups/ NGOs and the support of constructive dealing with these problems: *"I thought, and I wasn't the only one: there are things slumbering in the subsoil which have to come out. These things are repressed."* (WE, kubus)
Additionally KREKO wanted to bring members of different groups/ NGOs together and initiate a "getting to know-each other" and networking of groups and persons.

There were several more personal aims expressed by the interviewees as well:
MJ, TUB: *"To merge single initiatives and groups, so that the powers which are there, are merged as well. In other words co-operation."*
WE, kubus: *"We wanted to have fun working together, to work on a creative level, to make extraordinary things and to „break through rituals", to try new techniques of communication and new forms of workshops. Although we knew that there were a lot of provisos against these methods on NGO-side. But on the other hand nobody wants to attend workshops where exactly the same things happen all the time."*
MS, BLN: *"We wanted to acquire new people for our work. We know each other, but we need somebody who supports us in writing statements."*

7.6 Channels of on-going communication

The main “channels” of communication were the regular project-meetings (weekly or fortnightly). In between, if necessary, KREKO communicated via telephone, fax or email.
There was a controversial evaluation of the communication in the project:
WE (kubus) assessed the communication to be easy but very time-consuming. Everybody of the committee was ready to spend so much time on the project, but only for a defined time-frame. So it was very important, that the project had a clear start and ending. To his mind, a project like this, with such an amount of time to be necessary, is not repeatable.
MJ (TUB) on the other hand reported the communication to be very regular, continuous, without interruption and without annoyance: *“Easy, direct, spontaneous.”*
MS (BLN) as well reported the communication to be very continuous and easy. They communicated whenever it was necessary. To him as well it was important, that the work was effective, as everybody in the committee had other things to do.

7.7 Outcomes

7.7.1 Main findings and recommendations

Science Shop
From the Science Shop’s perspective, the outcomes were as follows:
-three workshops with different topics (visions of successful and effective co-operation, communication, conflict management) plus one additional workshop to discuss the outlook took place
-“get to know each other” succeeded
-the annual party “Öko-Fete” was established by the foundation of a planning-group
-the chairman of a big German NGO (Naturschutzbund Deutschland (NABU) – Association of Nature Conservation of Germany) attended one workshop and offered counselling for groups dealing with environmental protection concerning project proposals (this was seen very positively as there was the impression, that the larger associations blackballed KREKO)
-the foundation of a planning-group to plan and establish regular meetings of the Berlin environmental “scene”, to promote exchange and discussions (this group gave up after a while, again because the larger associations didn’t show any interest in a co-operation)

Researcher

From the research perspective, the project wasn't successful. KREKO made a start to bring people of different groups together, so that there was an exchange, but *"it could have gone one step further."* People met and came together, but there was no continuation and real networking. *"The seedling didn't grow any further."*

NGO

For the BLN, the establishment of a group to organise the annual "Öko-Fete", a free and easy meeting of activists, was a success. MS mentioned as well the planning-group that wanted to continue the workshops but broke-down after a while.
It is obvious, that the single project-members had different expectations on the project.

7.7.2 Fulfilled objectives set by the organisation

Science Shop

For the Science Shop kubus the innate objectives were fulfilled, as kubus was able to take over the role as an intermediary link between university and society: NGO benefited from the psychological knowledge (on workshop methods and conflict management) and the researchers/ psychologists gained knowledge as well and used the outcomes for their research.
Another positive point for WE was, that it could be exemplified that the tool "neutral and professional moderation" is important for successful workshops or meetings.

Researcher

For the research project at the TUB, KREKO fitted well into the wider research context (co-operation and participation), so the outcomes were used for a publication (cf. Böhm, Janssen, Legewie, 1999) and MJ and a colleague even won the "Berliner Gesundheitspreis" (Berlin Health-Price) 1998 for his work on communal health promotion by co-operation.

NGO

For the BLN, the set objectives were not fulfilled. Nobody found its way to the BLN to become an active member.

7.7.3 Documentation of the results

The project, the workshops and the results are published as a kubus-project-publication, which is available at kubus (via the kubus-publication list, which can be found on the web[5]). Moreover the resonance in the print-media was high, so there were

[5] http://www.tu-berlin.de/zek/kubus/

a lot of articles in the Berlin newspapers, which are collected in the kubus-report as well.
Additionally the results were used as a case study for a publication (cf. above) of MJ and his colleagues.
Apart from a formal publication, WE was expected to "carry" the results informally into the scene, e.g. via the Öko-Fete, as kubus is well known in the eco-scene.

7.7.4 Usage of the Project

Science Shop
There was no direct usage of the results for kubus, but a personal insight for WE concerning his work. He's been convinced of the need for a professional moderation of workshops: *"Methodical-communicative aspects are as important as thematic ones."* So current workshops are professionally moderated, and therefore effective. And WE himself won't participate in workshops/ larger meetings without external moderation anymore.

Another insight derived from the project was related to the role of kubus as an intermediary or 'pulse generator', rather than a representative of a department or NGO. To take over this role properly it is, according to WE, important to acquire people with different backgrounds to enhance the probability that interested participants take over the project, so that kubus can draw back after a while.

Researcher
Apart from the publication there was no direct usage for the TUB/ the project, but for MJ personally. MJ finished his career as a researcher soon after the project finished, so the project wasn't of usage for him in this respect. But as he became a free-lance trainer and consultant, it was a valuable experience to organise and conduct those workshops, which facilitated his start as a free-lancer.

NGO
MS uses the documentation as a part of information to present the work of the BLN. From a contents point of view, there was no ongoing debate on the topics of the workshops (networking, co-operation) although there are irregular discussions on the topics (at anniversaries, at the Öko-Fete).
Concerning a long-term purpose for the BLN, the Öko-Fete is important, as it is a yearly occasion to acquire new members.
Not to forget the meaning of the workshops to revive old contacts: "Maybe the workshops were a good contribution: to meet each other again and to have contacts in such a frame."

7.8 Participants' Evaluation

7.8.1 Specific interests and expectations

Science Shop

WE expressed expectations on two levels: for the NGOs it was his interest to emphasise/ reinforce similarities in the Berlin environmental movement, to support the idea to be a part of a whole/ of a common movement. (But even the term "environmental movement" was doubted by some of the participants!) Additionally it was important to him to emphasise the positive side of environmental commitment/ work, i.e. that it is possible to work with motivation and pleasure and not only to work out scenarios of catastrophes.

But his idea that the deep going conflicts between participants and groups would be softened in subsequent workshops (after the project was finished) wasn't fulfilled as there was no continuation (apart from the "Öko-Fete"). Obviously it wasn't a realistic wish that a new permanent planning-group was established, that would guarantee a continuation of the debate on co-operation.

On the other hand, on the kubus-level, WE wanted to be the link between NGO and university: i.e. support transfer *"out of science into science"*. And on this level, his expectations were achieved, MJ and his student managed to bring knowledge from psychology into the project and draw knowledge out of it in return.

Researcher

For MJ it was the form of work he was interested in. To merge different groups together, to put forward development in this direction, to conduct such workshops. So his interest was on a scientific/ methodological level (Organisational Psychology), combined with the opportunity to work with (political) groups that were *"politically green"*.

NGO

For the BLN, MS expected to acquire new members/ new interested people to support the BLN with statements. And to have the opportunity to discuss long-term objectives of the work and to build-up a network with other members of associations/ institutions *"to get them into the boat"*. On the more personal side, he was interested to get to know techniques to moderate meetings/ seminars and to get experience in conducting seminar-like workshops.

7.8.2 Positive and negative aspects of the project

Science Shop

To summarise the most positive aspects of the projects, WE named the following:
People came together who didn't knew each other before, or (even worse) knew each other only from conflicts.
Kubus could take over the role as a neutral moderator and could clarify the role (Environmental) Psychology could play in dealing with co-operation. Or more general, the significance of communication was emphasised.
The "Öko-Fete" is taking place regularly since then.
The participation and constructive offer of a chairman of a big association.

The prevailing conflicts between single persons or groups weren't easy to handle, so WE emphasised that the outcome should be appreciated. Another problem were the very different and sometimes contradictory expectations of the participants: there were participants who wanted more structure, there were others who wanted less. There were strong provisos against new workshop-methods but as well demands not to offer the usual workshop forms.
So the project-committee adapted the methods to the wishes of the participants as far as possible, but as the most sceptical people stayed away from the following workshops anyway, the problem regulated itself.

If he could do the project again, there were several points WE would do in a different way:
Preparation: less intensive and shorter preparation, that is not that time-consuming and closer to the interests of the "target-group" (the exchange/ contact during the preparation phase was not sufficient)
Workshop: quicker reaction on the various expectations of the participants in the first workshop
Evaluation: track the usage of the outcome on both sides (NGO and university) by asking twice a year what happened with the results
Resources: organise more money

Researcher

For MJ the most positive aspect of the project was the work in the project-committee itself. *"The best thing was the co-operation with the others. We were co-operative, we became a team, we had different roles and we had fun and success together."*
Additionally he mentioned that there was a common sense to work on a high level, i.e. to produce a professional documentation, which implied to spend money an things like the logo (the fish), that wasn't really necessary for the success of the project, but for the fun (the name "KREKO" as well).

On the other hand, another positive point was the experience of the workshops. So he keeps the project in good memory.

As for WE, lacking money was a problem for MJ as well. *"If we've had more money, we could have done more: more workshops, get deeper into the topic, and continue the project."* On the other hand, there were tensions amongst the participants during the workshop, maybe caused by methodological failures (*"Small mistakes may have great effects on participants."*). But these problems were solved during the workshops in the committee.

Things MJ would have done in a different way if he could do the project again were as follows:
Workshop: address the energy of the participants more directly and lead it into the process by placing certain emotional topics into focus (e.g. economic envy, frustration, self-exploitation, hope), rather than cognitive topics like negotiation and conflict. *"So that something will break open and start to move."*
Continuation: there was no continuation, as the workshops were too closely connected with the existence of the project-team KREKO; it would have been necessary to targetedly build up new structures/ new forms of organisations out of the different groupings, to allocate tasks and responsibilities for a continuation.

Additionally he would work on the topic "leadership" in NGOs, as he is convinced, that every form of group or organisation need somebody to fill in the function of an "alpha wolf", who has the trust of the others to take over a leading position. This is true for NGOs as well, but this is against the culture some (especially smaller) NGOs. For MJ, this should be a development towards "professionalisation", in order to make use of the existing potential and know-how.

NGO
As a summary of the most positive aspects of the project, MS named the following:
"We have been motivated (by kubus) to deal with such a question, co-operation in the environmental movement."
It was a try to acquire new interested members.
It was made clear, that kubus can play an important role for such topics/ workshops, that a single association cannot organise alone (a current example are the workshops dealing with banks of water bodies in Berlin who could be used by the BLN to write statements and to get new contacts).

The most striking problem of the project according to MS was, that important policy- and decision makers of the large environmental associations didn't participate and

didn't support the project (apart from NABU). They weren't convinced that such a debate on networking and co-operation was reasonable and necessary. To MS the background is, that there's a lot of competition amongst the large associations about acquisition of members. So they avoid these topics and want to deal with other things. Even the "Öko-Fete" doesn't manage to reach the leading members of these associations. So there's no exchange on meta-questions of the work of associations. But KREKO wasn't discouraged and found other people who were interested in these topics.
The only thing MS would do in a different way, if he had the possibility, is to formulate certain questions on co-operation that could be worked on.

7.9 Policy Issues: Science shop collaboration

7.9.1 Accordance with wider objectives set by the organisation

Science Shop
For the Science Shop itself, the project was in accordance with the set objectives/ the profile: to support participation in order to develop environmental protection, health and sustainable development and to support self-help.

Researcher
For MJ there was no wider context concerning the objectives of the TUB, as he worked for KREKO as a private person (who could use the outcomes for his concrete research project).

NGO
Ask for the accordance with the wider objectives of the BLN, MS emphasised the Öko-Fete as a measure to encourage single persons to write statements on urban planing projects. The participants there are confronted with thoughts and problems on urban planning and there is time and opportunity for private conversation.

7.9.2 Subsequent projects

Science Shop
There has been no subsequent project with MJ or the research network Public Health, but out of KREKO, a stronger co-operation with the department of Environmental Psychology at the TUB has been established. So with every project that comes up, kubus examines if there is an intersection with Environmental Psychology.

Researcher

There were no further projects with kubus apart from a single workshops, he moderated on a kubus symposium on 'conflict management in agenda processes' (Konfliktmanagement in Agendaprozessen, cf. kubus, 1998).

NGO

There were no subsequent projects with kubus, but since 2000 the BLN is a participant in current workshops on banks of water bodies, organised by kubus.

7.9.3 Co-operation (with Science Shops)

Science Shop

The advantage of working together with psychologists was to get to know new perspectives and new methods. But on the other hand, this meant that WE has to deal with many different topics.

Researcher

Concerning the advantages of the co-operation with kubus MJ emphasised the extremely uncomplicated and pleasant contact with the kubus staff (*"eat spinach with tofu and talk"*). Without kubus there wouldn't have been a project, as kubus provided resources, and functioned as a door-opener to the NGOs. WE made the contact and brought different actors together.

MJ and his student were able to contribute to the project because of their "foreignness" in the NGO-scene, but only because of the contact of WE who said: *"Hey folks, there is somebody, if we work together with them, that makes sense!"*

So again, WE was an intermediary between science and citizens.

NGO

"We wouldn't have made it alone." If it had been a project initiated and organised by the BLN alone, the participants would have come from the member-associations only. So with the support of kubus, it was possible to address a wider subgroup of participants. Additionally it is doubted that they would have dealt with these topics on their own, as there are a lot of members who want to do practical work like *"counting birds, build up toad-fences and save toads from cars. So for them there is no need for a philosophical superstruction."*

Without kubus there wouldn't have been a co-operation with psychologists from the TUB as well. So kubus was able to arrange contacts inside and outside the university (to other NGOs and to researchers).

7.10 Policy Evaluation

7.10.1 Importance of collaborative research

7.10.1.1 Co-operative research projects with and without science-shops

Researcher

The TUB-professor HL has done a lot of research work following the paradigm “action research”. I.e. the (qualitative) research is done in close contact between researcher and “research subject”, in which these two are regarded as partners having equal rights, having a continuous dialogue to feedback the results into the field.

In this context HL has done a lot of co-operative work with smaller initiatives, public departments, civic action groups and NGOs. He has even done ethnographic research and lived in a poor Berlin working class quarter to explore the life there. And his self-conception as a researcher implied as well that his students were learning by doing. I.e. his seminars were project based so that the students did smaller action research projects in the field, often building up co-operations with initiatives, NGOs, civic action groups, etc.

Co-operation without Science Shops

Examples for HL’s co-operative-projects are:

Foundation of a “urban-shop: meeting place Waldstrasse, counselling in Moabit[6]” (“Stadtteilladen: Treffpunkt Waldstrasse, Beratung in Moabit”): developed as a students’ project, the projects dealt with the building-up of a psycho-social contact and counselling place, in close co-operation with institutions in the district, parishes, civic action groups

Long-term research on the psychical consequences of the Tschernobyl-catastrophy: here, there was a “side-co-operation” with civic action groups, HL was invited by civic action groups to give a lecture on the Tschernobyl-research-project and to give (as a psychologist!) help on problems and conflicts within the group; additionally HL supervised some diploma-theses on “Political Consciousness, Development of Engagement and Empowerment” in this context

Co-operation with kubus

The Tschernobyl-project was seen by HL as the motive for another research project, where he co-operated with kubus, doing research on the Anti-Tunnel GmbH (refer to case-study 1). The project “Civic action groups support health in the city” (“Bürgerinitiativen fördern Gesundheit in der Stadt”, cf. Legewie & Janßen, 1996) dealt

[6] Moabit is an urban working-class quarter in the western part of Berlin.

with the “inner life” of civic action groups working on issues related to environmental protection or health-protective living-conditions. 5-6 groups/initiatives were examined over two years with focus on their societal relevance and working style. The objectives were to write publications in order to help civic action groups to develop “manager competencies” and to find out what special needs on consulting these groups would have. Additionally a model for political support was developed that proposed a “planning fee” on larger urban development projects to finance participation (to support citizens- and science-shops to offer training and counselling for NGOs).
“Some groups are very successful, they have a good climate, they co-operate very well, with others it doesn’t work out, they fall apart, there are destructive powers.”
The intersection with kubus on this project were colloquia on the Tiergarten-Tunnel, organised by kubus where students of HL moderated working-groups.

Excursus: Co-operation with Science Shops in general
Asked for projects he did in co-operation with a Science Shop he responded that there is no Science Shop in Berlin, so he couldn’t do projects with science-shops. HL obviously doesn’t perceive kubus as a Science Shop.
According to HL he has taken over the function of a Science Shop by himself: *“We have been the Science Shop!”*, as he did counselling, interview-studies, training, workshop moderation to support and empower various kinds of groups. *“We did no “aloof” kind of research, but dialogue-research, were the interviewee profits from the results.”* So there was no need to initiate a co-operation with kubus.
There were though several requests on corporate projects by kubus, but HL had enough work to do with his own projects, so that he had to refuse. But if he had seen the possibility to use kubus for his research, he would have co-operated with kubus. *“It was more a structural problem. The reality was that if there was an intersection with kubus, I used it, if not, not.”* This had to do with time and financial resources: the requests were interesting for him, but he was working on the topics anyway, so he didn’t need a “thematic” impulse from the outside. Moreover he needed more money for his research than kubus could make available, so he decided to write project-proposals on third-party funds on his own. But kubus was a valuable source for him get “grey literature” on sustainable development.

NGO
Co-operation with kubus
The BLN co-operated with kubus in two projects, (if co-operation is understood as a corporate preparation, realisation and documentation): KREKO and Tiergarten-Tunnel (refer to the case studies 1 and 2).
Moreover the BLN is a participant in current workshops of kubus on banks of Berlin waters, but this is not regarded as a co-operation.

In addition MS emphasises that he has and had a lot of contact to WE (kubus) because of WE's own strong NGO-engagement during the 90ies.

Co-operation without Science Shops

There's only one more project, where the BLN co-operates with other (non-member) organisations: "Natural Cemetery" ("Friedhof natürlich") is a project conducted by the BLN in close co-operation with district-departments, parishes, environmental associations, etc. on environmental conservation on cemeteries. Since 1997 the project team has been dealing with nature protection, renaturation, and waste management on cemeteries and has been organising an exhibition on the topic.

7.10.1.2 Science-Shop-Research

Researcher

The researcher HL isn't familiar with 'pure' Science-Shop-research projects (apart from his own-projects he would define as 'science-shop-like-research-projects').

Science-Shop research vs. Non-Science Shop-Research

Asked for the comparison between science-shop- and non-science-shop-research HL compares "classic" research and his approach to "action research". HL criticises the experimental ideal of the classical (most quantitative) research where the people are regarded as research-objects and data-suppliers, who doesn't know anything about the purpose of the research. Neither objectives nor results are discussed. *"The "classical" researcher comes from the idea, that there is a reality outside, he, like God, wants to capture."* Whereas action research is regarded as a dialogue-process with human beings involved and examined.

Excursus: Action Research

The most important features of "Science Shop-like" action research can be summarised as follows: this kind of research takes up up-to-date societal problems, scientists are asked to use their competence to help, to support, not to allocate the usual roles of researcher and research object, but work as partners, where the researcher can be regarded as an expert for (research-)methods and the others as experts for the topic under scrutiny. So research here is understood as an exchange. The idea should be supported much more, especially students should be educated on a methodological level (e.g. moderation) to be able to do this kind of research. HL proposed to establish a project-based course of studies.

The negative features of action research are entwined with the advantages. Because of the fact, that the researcher works so closely in the field/ close to the subjects, action research can be very exhausting. The researcher has to take care not to get involved

too intensively, not to loose the distance, not to take the part of the subjects by himself, and not to be functionalised and played off by different parties for their interests. So he has to reflect his role very carefully.
In the 80s/90s action research was despised, as the paradigm was brought into discredit because of qualitatively-poor projects. But meanwhile, a change has taken place, and research-ministries even ask for action-research-based projects to grant certain funds.

Case Study-Projects
As far as the kubus-project Tiergarten-Tunnel (refer to case study 1) is concerned, HL was involved as he was examining the Anti-Tunnel GmbH in a student-project (cf. TU Berlin, 1995). The students interviewed activists, did media-analysis on the different opinions of the case, and even have been present at hearings for court cases.
It was one amongst a lot of other projects HL did during this time, but he reports it as being diverse and exciting, as they could do interviews with the persons involved, to work out the different opinions. HL regrets, that, as it was "just" a student project, there was no deeper analysis of the interviews and no consecutive publication, but only a discussion on the results in the seminar at the university.
About the other kubus-project "KREKO", he just heard something, but there's nothing he could remember in detail (*"That's too far away."*). Maybe this is partially due to the fact that his employee MJ, who was working for KREKO, was finishing his contract at the TUB at that time and didn't communicate his experience with KREKO very well into the project. But MJ saw himself as a non-TU-member of KREKO anyway.

NGO
MS is familiar with Science Shop research because of the work of the "Science Shop Bonn". He reads the newsletter regularly and the BLN *"can use one or the other for our statements.*" A current example for a Science-Shop-Research Project he recently came across is one on 'consequences of electrical overhead lines on nature and human beings'. Additionally he is interested in the offers of WiLa Bonn on "how to apply for funds donated by private or public donors" and on " how to use and administer public funds".
Concerning Non-Science-Shop-Research MS reports not to have enough time to deal with current research results by reading the pertinent scientific literature. But he participates in meetings and conferences from time to time (e.g. on interventions in ecological systems and compensation of interventions) and reads certain magazines on nature and landscape planning.
As MS is a member of the advisory board for nature protection and landscape conservation (Beirat für Naturschutz und Landschaftspflege) in Berlin, he gets personal

information on interesting workshops and conferences by other members of the board (e.g. from one TUB professor).

Science-Shop research vs. Non-Science Shop-Research

To draw comparisons between Science-Shop- and Non-Science-Shop-Research, MS reports that he doesn't deal with Science-Shop-Research in detail, and he refers to the comparison 'closeness and distance'. The research at the universities in Berlin is much more present and closer to him: *"I know that much better, as before my job here at the BLN, I have been working at the TU Berlin where I did research myself."* So MS knows the professors and their field of research and can tell the relevant projects (for the BLN) from the less relevant projects easily. *"The other (Science-Shop-Research) is somehow far away and there we doesn't have such relations."*

So MS deals with research results on a network level, via 'old' personal contacts originating from his time as a researcher at the TUB, as it is easier to find relevant information. Another example for this network is a TUB professor who is the chairman of one the member-associations of the BLN, so there's an exchange and passing-on of information here as well.

But it should be noted, that according to the Science-Shop-researcher WE, leading NGO-membership or familiarity with NGO interests of university-professors is an exception with a decreasing tendency.

Case Study-Projects

The BLN was involved in the Tiergarten-Tunnel-Project (refer to case study 1) as this association was one of the main complainants/accuser of the Tiergarten-Tunnel court case. But the project was that big, and roles were clearly allocated, that MS wasn't involved in the kubus-part of the project. He read the report, charged by kubus, but didn't get to know anything on the co-operation with kubus. The project was conducted in 1994 and he just started working for the BLN in 1993 and wasn't responsible on statements that time (the report was used for the court case and for writing statements). MS was working on the financial side of the project, organising and administering the funding for the court case.

From BLN-perspective the most striking problem with the Tiergarten-Tunnel-project was closely related to the idea of KREKO: co-operation amongst the members of the umbrella-organisation Anti-Tunnel GmbH. The BLN disagreed with actions taken by some other members of the Anti-Tunnel GmbH, but there were no arrangements amongst each other. This was one of the reasons for the BLN to quit with the Anti-Tunnel GmbH. Moreover, there were so many different personalities involved who sometimes didn't got along with each other well. Here, another important Science-Shop-function becomes obvious: offering supervision/ mediation for NGOs.

Concerning KREKO, please refer to level 1 in case study 2.

7.10.2 Response to and support for intermediary organisations as Science Shops

7.10.2.1 About Science Shops

Researcher

HL reports to know not much about Science Shops, but he supports the idea and always wanted to deal with it in more detail. He has personal contacts to somebody who is the chairman of a "self-help-centre" (Selbsthilfezentrum) in Munich, which to his mind, is similar to a Science Shop. On the research level, he has close contacts to another professor at the Free University in Berlin who follows a similar research approach like him. So his contacts to Science-Shop-like institutions are based on personal contacts.

NGO

MS knows science-shops activities because of the newsletter of the Science-Shop Bonn. Like HL, MS doesn't associate kubus with Science Shops. In general, MS describes Science Shops as institutions, doing public relational work and passing on information. In addition he sees the role of Science Shops in performing a knowledge transfer out of the university into society.

The special mission and objective of kubus is defined by MS as follows: do networking within the TUB and knowledge transfer in both directions, transfer research results to the outside and "field-knowledge" from outside into the TUB.

7.10.2.2 Relevance of Science Shops for the own organisation and other relevant groups

Researcher

At the Technical University of Berlin, there is a lot of motivated society-related research, but most of the research is done in the "classical" way. Being a Technical University, the TU is interested in "applied" research on practical problems (although the understanding of the VDI (Verein Deutscher Ingenieure/ German Association of Engineers) of the term "technics" implies 'improvement of human living conditions'!). For the TUB the volume of third-party-funds of projects is crucial, in order to secure its business location.

To HL's mind, kubus has a difficult standing at the TUB. That can be derived from the fact, that the university doesn't invest much money here. *"It's more like an exotic fig-leave, that was obtained by fighting by the left-wings, but that isn't taken seriously by the people who have the power here. The left-winged professors who defended it and*

once set it into the world, have been retired in the meantime. So kubus is a descendant of the left reform-section."

NGO

MS doesn't assess the current importance of Science Shops for the BLN as being that high, and the BLN doesn't co-operate with Science Shops too much. But MS admits, that *"maybe we haven't realised the meaning of Science Shops for us yet. But in Berlin, so many things are going on parallel and we don't have good networking".*

Concerning the influence of Science Shop-activities on other relevant current policies affecting the NGO-sector, MS guesses that Science Shops co-operate with political parties and fractions as well (as they cannot survive on requests of the NGO-sector alone), but he doesn't know anything about it. Anyway, this isn't true for kubus, the Science Shop doesn't want to co-operate with political parties.

Future of Science Shops

Researcher

In general, HL is convinced of the science-shop idea and would support the development of Science Shops. Most important for HL is to establish quality standards for Science Shops, in order to guarantee a good standing of these institutions. To achieve this Science Shops need a better financial situation, e.g. to qualify the staff. HL proposes an orientation at the quality concept developed by Bobzin, Stark, Strauß (1996).

So money is the critical barrier for a development. To HL's opinion there's a general "roll-back" at the moment. And as Science Shops are often *"degraded as 'knick-knack', one doesn't necessarily have to afford, one can save here."*

What is important for Science Shops to be recognised and contacted is good marketing and good projects. This is the best "outside-presentation" saying: *"We make good projects that can move something!"*

NGO

MS like HL recommends to support Science Shops. Especially the availability of scientific knowledge should be expanded. Obstacles he sees are on the financial level as well. Who should pay for Science Shops? As well as HL, MS is of the opinion, that Science Shops should gain publicity by good marketing, and for this, they need more staff.

'Target-group-specific' marketing and public relations are in turn crucial to encourage NGOs to contact Science Shops with their requests. But this could be done by the universities as well: *"There are others working at this point, universities could do this on their own."*

It should be noted at this point, that most universities doesn't perform this transfer on NGO-level.

7.10.3 Development of relationship between community, NGOs and academic institutions

7.10.3.1 Improvement of the public understanding for science

Researcher

HL reports, that he doesn't know enough about Science Shops to assess their role in improving the public awareness of science. But his wish is, that the university and other institutions support science-shops much more, in order to empower Science Shops to take over this role. There should be more systematic research on the work of Science Shops and successful methods. Unfortunately there are too many methodologically-poor projects because of the lack of money and qualification. As a consequence Science Shops need support with better training/education for the staff, with the establishment of quality standards and with the systematic use of modern methods of knowledge-management (e.g. more efficient use of the Internet to offer online-workshops on knowledge-management-tools).

So, according to HL, every institution with good PR, successful projects and influence on the living-conditions in the region can take over a Science Shop role.

NGO

For MS, Science Shops can support "knowledge transfer" out of the university into the public. So scientific knowledge should be processed in a way, that it is understandable and applicable for non-experts. But as MS said before, this can be done by universities as well.

(Refer to "Empowerment of society and NGOs" as well.)

7.10.3.2 Empowerment of society and NGOs

Researcher

The contribution Science Shops can make for the empowerment of the society and NGOs is crucial to HL. Science Shops can function as intermediaries concerning methodological competencies, they can conduct or charge surveys and reports, but what is more important, they can empower NGOs to learn these things to do by themselves: give or organise seminars on methods for moderation, or working with groups in general, to catch up the destructive group-dynamical processes. *"Positive engagement mustn't be worn out, and disencouragement has to be prevented."*

Other institutions that could take over this role are adult colleges (Volkshochschulen), universities or action researchers (as action research is an exchange, it is common, that the researcher offers a workshop, …, as a door-opener to the field).

NGO

To support the empowerment of society and NGOs, MS suggests two offers, that would enhance the meaning of Science Shops for NGOs:

Knowledge Transfer/ "processed" scientific knowledge: It would be very helpful if Science Shops worked up scientific results in a way that they can be used for the work of NGOs: *„That's a function we cannot take over."* Especially for issues which are rare and very specific like consequences of wind energy systems, overhead lines, light-ecology (street-lamps that prevent damage on insects), emission and noise protection, waste incineration, or in general issues at the intersection of Environmental Technology/ Physics and Environmental Conservation. These are highly-specialised domains, with only a few experts, and MS and his colleagues don't know enough about these topics to write statements on related issues. The consequence is, that there are statements of poor-quality because of information-gaps. So these scientific results should be made applicable.

In other domains like Landscape Planning and Nature Conservation this service is covered by special publications and contacts with authorities through statements.

But MS admits that he hasn't asked Science Shops for articles yet. Anyway he would prefer to ask kubus than the Science Shop in Bonn, as kubus is "closer" to him.

Workshops and Seminars: Another offer of Science Shops could be workshops and seminars on certain topics like 'possibilities of participation on urban-planning-projects', on 'the declaration of protected areas', on 'problems of the work in NGOs, associations or civic action groups', on 'strategies for NGOs, associations or civic action groups to improve their work'. The role, Science Shops could take over here would be to find and invite experts and to offer the organisational frame. The emphasis should be on very specialised topics that address certain sub-groups.

The BLN did this as well, but MS thinks that this could be a task for a Science Shop as well.

Services other institutions could offer to support the work of NGOs (the BLN) are related to the provision of work-resources in public departments. Participation of NGOs and citizens on planning procedures should be taken seriously and as a consequence, it should be possible to have access to the necessary material. So there should be a room, where it is possible to work on the material and it should be possible to take home material over the weekend.

On the other hand, the complexity of planning-projects is so high, that NGOs need somebody here as well to "work up" the material and to do the thematic preparation of

the material. So what is necessary is professional/ technical advice. *"On public debates on planning-projects, one sits there in front of a bunch of experts and feels very helpless. We need a technical support here."*
As a consequence, for recent projects, the BLN applies for money at the "Stiftung Naturschutz Berlin" (Berlin Foundation for Environmental Preservation), in order to engage Landscape-Planning-Offices by contracts of services as consultants, to inspect critically the plans of the planning department.

7.10.3.3 Improvement of the relationship between university and society

Researcher
For the TUB an intermediary as a Science Shop is one of the best possibilities to present itself into the society. But the problem is, that universities take over large research projects/contracts of financially-powerful industries and Governmental Organisations and *"are not interested in the "small-small"-research of Science Shops, and this is exactly where the mistake is, because for research the saying is true: Small is beautiful."*
HL did science-shop work by himself and according to him, every action researcher is able to do that. One has to go into the field by oneself, but not only for a short period of time, as it is not enough just to give a short impulse and then draw back again. This will lead to disappointment.

NGO
As said before, the role, MS sees for kubus is to transfer research results of the university in a "processed" form to "the outside". This is an important contribution, kubus can make to improve the relationship between university and society. Moreover this cannot only be done for research results, but for groups as well. So a very important function for kubus is to "merge" or bring together people from different groups from outside and inside the university, like kubus is doing in the current project organising colloquia on banks of Berlin waters bodies.
MS says this from the perspective of his own experiences as a researcher, as most of the time, he was working with the TUB, there were no contacts with administrations, environmental associations or civic action groups and so the results of the research didn't reach them. They tried to build up contacts by having an "open day", but those activities should be improved and expanded.
This transfer-work could be done by other institutions as well. These should have a superordinate status, so that they doesn't work only for single universities. A current example for this kind of institutions is the Federal Representative for Nature Protection and Landscape Conservation (Landesbeauftragter für Naturschutz und Landschaftspflege). This institution collects and systematises certain reports and

ecological surveys on landscape (e.g. mapping of plants), parks, water bodies. It is possible to submit requests and to borrow this material. But there are only three employees working part-time, so this is expendable as well.

7.10.4 Relationship with national policy on Science and Society research

Researcher

As far as national policy on Science and Society Research is concerned, HL expects more and more open-mindedness towards dialogue-research. As *"it is easy to clarify, that this makes sense, and that it leads quickly and pragmatically to results."* So the demand will rise (e.g. there are obligations to meet concerning process rules on public participation in urban planning, so research on this field will become more and more important). Science Shops could play an (unfortunately undefined) role here.

HL doesn't know enough about Science Shops to assess their role in the light of the national/European policy on Science and Technology, but to his mind, a sufficient amount of research results has been produced. The problem is the realisation, but politics will only realise projects that are regarded as politically powerful. The best example for him is the PISA-study. The crucial point concerning society-related research is, that *"there are other priorities. These things (e.g. participation on urban-planning) are not important enough to win elections."*

NGO

MS doesn't know enough about Science Shop and Society Research to assess the relationship with the national policy on these topics.

7.11 Reflective Part

7.11.1 The client perspective: the social context of the project

7.11.1.1 Project Initiation

Science Shops in Germany work on an 'offer and request' basis. So, like it happened in the Tiergarten-project, members of a NGO contact a Science-Shop with a request, or like it was in KREKO, Science Shops offer a workshop, a colloquium, ... where NGOs can be involved as either participants or active organisers.

KREKO was an 'offer' for NGOs in this respect, that the project was initiated by the Science Shop kubus. WE acquired interested NGO-members and researchers to found the project-team KREKO, in order to continue the dealing with problems on co-operation.

In this case it was very important for the Science Shop, to give the impulse for a participatory project: i.e. to build up a 'project team', consisting of members of the 'target-group' and external experts and not to organise the workshops alone. This is a typical example for the self-conception of the Science Shop kubus: be an initiator but not an organiser or manager, in order to support 'empowerment instead of tutelage'.

7.11.1.2 Expectations of the client

The chairman MS reported the following expectations concerning KREKO:
acquire new interested people to support the BLN with statements
have the opportunity to discuss long-term objectives of the work and to build-up a network with other members of associations/ institutions
get to know techniques to moderate meetings/ seminars and gain experience in conducting seminar-like workshops

7.11.1.3 The Science Shop contribution to fulfil the expectations

It was kubus' contribution, that the BLN took part in KREKO and MS admits, that the BLN wouldn't have organised workshops on this topic on their own, so kubus here *gave an impulse* to deal with this topic.
Additionally, if the BLN had organised a workshop like this, it would have addressed the member-associations of the BLN, so the 'inner circle' wouldn't have been extended. As a consequence, kubus managed *to open this circle* and to *bring people together* who haven't been in contact before.
Apart from this, kubus made an *organisational frame* for the workshops available.
So kubus played exactly the role, the client expected: it was possible for the BLN to *expand their network*, they had an *opportunity to acquire new activists*, and MS got to know workshop-techniques.
Moreover, kubus organised a transdisciplinary project-team by involving social scientists in KREKO. Without kubus there wouldn't have been a co-operation with psychologists from the university at all. It should be emphasised that it was this transdisciplinary experience that was regarded as being very important by all committee members.
So kubus *performed a transfer or mediation* of contacts and knowledge on two levels:
mediation of contacts on the NGO-level (NGO - NGO)
mediation of contacts/ knowledge on the NGO-university-level (NGO – university)

7.11.2 The co-operation process

7.11.2.1 Goal-setting

As can be derived from the answers of the interviewees, the committee KREKO planned and organised the workshops in regular project meetings. As WE (kubus) reported, during the preparation-phase the committee stayed in close contact with "outside" NGO-members to get feedback on their ideas. The reason was that it was an important objective for the committee to offer workshops that match the needs of the participants. To achieve this, KREKO decided to use participant-orientated workshop-methods like the metaplan-technique, topic-related moderated working-groups, and role-playing. Additionally, the committee took the feedback given on the first workshop very seriously and adapted the concept for the second workshop (where on the first workshop the topics of the working-groups were given by KREKO, on the second workshop, the participants found the relevant topics, they wanted to work on, by themselves).

7.11.2.2 Co-operation

As it was said before, all the committee-members reported the work in the committee and the communication between the members as being very positive. It is a very interesting aspect of KREKO, that, according to WE, the committee not only dealt with the workshop-topics directly in the meetings but on a meta-level as well: obviously the committee wanted to prove and exemplify that a fruitful voluntary engagement is possible, so everybody was ready to place own interests behind the team-interests.
But what the committee had to experience was, that the project was that time-consuming, that nobody wanted to continue and WE (kubus) even evaluated the project as not being repeatable because of the time, it demanded. So, the question on a 'sustainable' and successful long-term voluntary engagement will remain unanswered. An appropriate 'time management', or in other words an appropriate 'demand on time' seems to be one pre-condition. Other aspects of good co-operation, that can be derived from the project were personal sympathy of the project-members, and professional moderation.
Of course, personal sympathy is a critical aspect, as quite often, people have to work together who doesn't get along with each other very well. So besides moderation, Science Shops could offer or arrange mediation or supervision for NGOs as well.

7.11.2.3 Motivation/ Expectation

Like the BLN chairman MS, every member of KREKO had clear (but different!) expectations on the project:
NGO/MS: see above
Researcher/MJ: learn on the methodological level (the form of work, to merge different groups together and to conduct such workshops) in a green surrounding
Science Shop/WE: reinforce similarities in the Berlin environmental movement, emphasise the positive side of environmental commitment/ work; promote the Science-Shop idea by being the link between NGO and university

So, next to environmental engagement, personal sympathies and fun in working together, everybody had expectations concerning their own qualification or the benefit for their organisation. In this project, the different expectations (and as a consequence evaluations!) of the project weren't a problem, as the expectations were obviously not contradictory. Moreover there was a shared goal for the projects as well. But is can be seen here very clearly, that this could be another role for a Science Shop, to take over the responsibility, that there is a project-phase of "clarification of expectation" at the beginning of a project, so that the shared and non-shared goals are made transparent.

Transdisciplinary team-work
The special aspect of KREKO is, that it worked like a transdisciplinary team, where the different roles, the members took over, and their different competencies made the team and the work complete:
MJ and his student were the experts on workshop-methods and -organisation, WE, MS and another NGO-member had the contacts to and the knowledge of the "NGO-scene" in Berlin, whereas WE, as a kubus representative, took over the role of an intermediary between NGOs and the university. MS and WE took over organisational tasks (seminar-room at the university, invitations, ...) as well and made resources of their organisations available. Moreover WE and another KREKO-member were responsible for the documentation.
In conclusion, for the Science Shop kubus the innate objectives were fulfilled, as kubus was able to take over the role as an intermediary link between university and society (refer to 3.2.5.1 as well).

Personal contacts
Like it was stated in case study 1, the role of personal contacts was crucial for KREKO as well. All the project-members were brought together by WE, who took over a networking function. Most of them reported that they know kubus because of personal

contacts to WE. Obviously, WE managed to perform professional networking on personal contacts very successfully.
Additionally, personal contacts played a crucial role not only for the initiation of the project, but for the 'spreading' of the results back to the NGOs as well.
So networking and personal contacts were not only the goals of the project, but important pre-conditions for the success of the project as well.

7.11.3 Impact of the project

7.11.3.1 ... for the client

Networking and acquisition of new contacts
From the BLN's point of view, an important impact of the project was the establishment of a working-group to organise the yearly "Öko-Fete". Although nobody of the workshop-participants became a member of the BLN, the Öko-Fete is an important occasion to acquire new activists or to convince single persons to write statements on urban-planning projects. Moreover it offers possibilities for an informal exchange on the work in environmental groups. The workshops of KREKO had a networking-meaning for MS as well, as he revived old contacts there.

7.11.3.2 Continuation

But what KREKO didn't achieve was to involve the bigger environmental NGOs, so there was no networking going on and no continuation in dealing with co-operation amongst the Berlin environmental movement. The Öko-Fete cannot be a place for that kind of exchange, as especially leading members of bigger NGOs didn't take part here as well.
The reason for this is that the bigger NGOs were not so much interested in a co-operation at that time, as they are in competition on members. So the planning-group that was built out of KREKO couldn't have success in organising a big meeting, as there was no response from the bigger NGOs on their invitation. So the group fell apart.
But from the perspective of the KREKO-members MJ and WE, KREKO could have done more to support the continuation of the debate: WE proposed to track the usage of the outcome on both sides (NGO and university) by asking twice a year what happened with the results and MJ admits that KREKO should have built up structures and assigned roles and tasks for the new planning-group during the last workshop.
So a structured assignment of responsibilities and the maintenance of contacts should be taken more seriously by the Science Shop, in order to guarantee, that the generated impulse is carried on.

7.11.3.3 ... for the Science Shop

New methods

There has been no subsequent projects out of KREKO, but a change in the forms of work at kubus: as WE has been convinced of the need of professional moderation of workshops, current workshops organised by kubus are professionally moderated, and therefore effective.

Additionally as it proved successful to assort a team with members of different backgrounds (NGO, university) and competencies, KREKO proved as a 'best practice example' for the built-up of project groups. Refer for example to the current kubus-project on banks of Berlin water bodies (kubus, 2002) and its forerunners.

New co-operation

Moreover a stronger co-operation with the department of Environmental Psychology at the TUB has been established.

7.11.3.4 *... for the university*

MJ finished his career as a researcher soon after the project finished. So he doesn't know anything of a subsequent impact of KREKO apart from the publication.

But by taking part in KREKO, MJ of course supported the work/ the research approach of his supervisor, the TUB - professor and action-researcher HL, who pleads for a better training for students on workshop methods by a better curriculum and by being involved in projects like this. So MJ's student had the opportunity to learn workshop-moderation in KREKO. Furthermore, the researchers could use KREKO as a case study for a publication.

MJ himself regarded KREKO as an experience concerning his own competencies on workshop-organisation and -moderation as well, which supported him in starting a career as a free-lance moderator, trainer and consultant.

So there was no direct impact, but positive outcomes for the involved persons.

Counter-Models of Science Shops

Concerning the (scientific) relevance of Science Shops both interviewees on level two reported that the relevance for their institutions isn't very high. Obviously they have their own Science Shop-like networks, and in case of HL, he worked as a Science Shop by himself. The interesting aspect here is, that for HL, a Science Shop seems to be more a role, that a person or an institution takes over, than a special institution. He took over the role by himself, and he is convinced, that every action researcher and every institution with a good regional standing (because of good projects) and a good

network can do this as well. So a relevant feature of Science Shops is a good network in the region they work.
Moreover the role of personal contacts to get and exchange knowledge or information is obvious here as well. For the NGO-member MS, it is striking, that 'old' contacts to his former employer and colleagues help him to retain an overview in the 'information age', i.e., help him to tell relevant information from irrelevant information. In conclusion, this network serves as a Science Shop as well. Additionally to his mind, universities/ professors can take over a Science Shop role by themselves as well, like HL did.
It is not doubted that typical Science Shop functions can be taken over by researchers and certain institutions. But the questions is raised if a continuous and systematic transfer is guaranteed if no institution is commissioned for this role. Reality has proven quite frequently that resources (time, money) are not sufficient anyway, so it is unlikely that they are spend on "side-tasks" (like knowledge-transfer to NGOs) if there's no clear and official role allocation. Furthermore a university based Science Shop like kubus regularly offers assistance for project origination and management including acquisition of funds and administrative co-ordination. The latter is a very important offer to research units because as well the necessity of getting third party funds as administrative support is of increasing importance for researchers.
Apart from this, it is assumed that MS wouldn't have these 'old' contacts, or wouldn't use them to this extend anymore, if he had moved to another city. But anyway, according to this model it is more or less a question of chance if someone is part of a network or not. So it is very important, that an institution like a Science Shop does professional networking and tries permanently to systematise its search for contacts.

The role of Science Shops

The role for Science Shops, which is characterised by the interviewees is as follows: performing a transfer on knowledge (scientific and methodological), a transfer on contacts, and on management competencies, in order to empower NGOs.
In more detail: Science Shops can
-provide specific "processed" scientific knowledge, which is applicable for the work of NGOs
-function as a professional network to bring people together
-organise/ give seminars on specific topics (e.g. special scientific questions or acquisition of funds) and on management competencies for NGOs

The very interesting aspect here is, that both interviewees reported not to know much about Science Shops, but they have a clear vision of the function of Science Shops. These are quite exactly the functions and tasks Science Shops would ascribe to themselves and which they have already taken over. So the question here is, why

Science Shops aren't recognised and acknowledged with their services to an appropriate extend, or in other words, what kind of marketing do Science Shops need.

Quality Criteria

The problems the interviewees see for Science Shops, refer to their standing in the public. For HL it is crucial, that Science Shops fulfil certain quality criteria, in order to guarantee a high quality of the work, to be taken seriously. Additionally, like it is done in INTERACTS, Science Shops should be under scrutiny in research projects, to assess their work. This is crucial to be acknowledged by clients like NGOs as well as by financial backers.

Of course, according to the interviewees, what is necessary to develop the Science Shop-idea is money: to implement a quality system, to achieve the standards, and to fulfil the functions, mentioned above, more staff is required, in combination with a proper qualification of the staff.

Professionalisation/ Profiling

But what is mentioned here, is the question of professionalisation of Science Shops. Of course, it can be debated, how professional a Science Shop should be, or in other words, how 'professionalisation' is defined. Does this for example imply that no student-projects should take place anymore, as they are not professional? That requests should be only accepted, if they fulfil certain quality criteria? Additionally especially smaller NGOs might be attracted by the 'familial' image of Science Shops and possibly deterred otherwise (like universities that are sometimes regarded as 'non-accessible ivory towers').

Perhaps it is more a question of the profiling (of the work) of Science Shops according to the needs of the 'target-group', than of professionalisation alone. Very often intermediaries have to deal not only with one kind of 'target-group', but with clients of different forms of organisations (researchers, public departments, small to big NGOs) or even contradictory interests (e.g. within the Agenda 21 process). That's why quality criteria as well as the marketing strategy have to consider the big variety of themes and clients.

Marketing

As it was mentioned before, another crucial point for Science Shops is public relation/ marketing. Obviously (some) services of Science Shops are not noticed by potential clients. The impression is given, that contacts and requests of the Science Shop kubus mostly originate from personal contacts. Personal networks and contacts have proven to be a very efficient marketing instrument, but it should be considered to build up a holistic marketing strategy.

Additionally it was mentioned by an NGO-member, that Science Shops should deal with very specialised topics that meet special needs of certain NGOs. So it is important, that there is a continuous exchange between NGOs (and of course other clients) and Science Shops. Intermediary institutions should have, but as well take the chance to get to know which topics are interesting/ relevant for NGOs. Like knowledge transfer in general, this exchange should be two-way as well: Science Shops should proactively promote their services, but as they work on an “offer and request basis”, they are dependent on proactive NGOs, that communicate their interests and needs as well. Of course the best instruments here would be continuous forums, where this exchange can take place.

Although there is no specific exchange-forum in Berlin, there are some examples in this context during the late 80ies and 90ies. E.g. kubus was promoting the establishment of the NGO “Water Network” (“Wassernetz”) and of monthly meetings of environmental councillors, leading to the establishment of a regional NGO named LAUB (Landesverein der UmweltberaterInnen in Berlin - Berlin association of environmental councillors). Monthly meetings of activists of the Local Agenda 21 from NGOs of many Berlin districts including representatives of the City Administration were organised by kubus. Apart from the following congress at the TU Berlin in 1998 these meetings were useful as instruments for a “market analysis” on sustainable development and environmental protection regarding the demands of NGOs and the public sector. This analysis clarified again, that the potential ‘target-groups’ of Science Shops comprise a wide range of organisations as well as themes.

So, it will be a challenge to build up a holistic marketing-strategy on a thematic and client centred approach. As it was mentioned before, it is recommended that the conceptualisation of this strategy goes hand in hand with a clarification of the profile of Science Shops.

8 Case Study 3: Stiftungen für Umweltschutz und Lokale Agenda 21 - Foundations for Environmental Protection and Local Agenda 21

8.1 Fact Sheet

8.1.1 Participants

Förderverein Lokale Agenda 21 Treptow – Köpenick/ Arbeitsloseninitiative - Innovations- und Ideenbörse (Friends of the Local Agenda 21 Treptow/ Köpenick – Unemployeds' Initiative – Innovation- and Idea-Market) Interview partner: one of the voluntary members of the NGO,who took part in the workshops (initials: WS), and one of the chairmen (initials KW).

Fundraising Akademy Frankfurt/Main; Interview partner: Lecturer at the second workshop. Initials: LS.

Wissenschaftsladen (WiLa) Bonn, Science Shop in Bonn; Interview partner: researcher at the Science Shop, who was responsible for this project (chairman of the association, managing co-ordination).Initials: TB.

8.1.2 Duration

The project started in October 2000 and was finished in July 2002. The main working year was 2001. This period of time was defined by the duration of the funding.

8.1.3 Costs

The project budget amounted to about 120,000 EURO, which was mainly financed by the Umweltbundesamt (UBA, Federal Environmental Agency), in arrangement with the Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU, Federal Environmental Ministry). The Science Shop took over about 10% of the sum.

8.1.4 Aims

The main aim of the project was to create modules for a Germany-wide information-, co-operation- and development-network dealing with foundations in the field "Environment and Local Agenda 21".
To reach this wider aim, the project consisted of five sub-aims or modules:

- to write and publish a compendium that gives an overview on the foundations in Germany that (financially) support groups and initiatives in the field environmental protection and Local Agenda 21
- to establish a network of initiatives that want to build up a foundation, so that they can support each other and can be supported by the Science Shop (incl. a platform in the internet)
- to conduct workshops on "founding a foundation" offered for initiatives that want to build up a foundation
- to offer a conference "Foundations as Motors of the Local Agenda 21", where smaller and bigger foundations where presented
- to write and publish the documentation of the conference as a textbook on "Foundations as project-agents for sustainability"

8.1.5 Outcomes

- two workshops and a conference took place
- a textbook and a compendium on existing foundations and the founding of foundations were published, which are sold successfully; these books are unique in Germany as there are no other comparable publications in this field
- there are more requests at the Science Shop by groups and initiatives concerning foundations that could financially support them or concerning consulting on founding of foundations than before
- the Science Shop Bonn got well known as a relevant "information-junction" concerning foundations in Germany
- there will be a follow-up-project, financed by the Bundesamt für Umwelt, Naturschutz und Reaktorsicherheit (BMU, Federal Environmental Ministry) as well, with the focus on the attendance and consulting of initiatives that what to found a foundation

8.2 Brief Description of Organisations directly involved

8.2.1 Förderverein Lokale Agenda 21 Treptow-Köpenick

This NGO was institutionalised to make it possible to apply for project-funding and to employ people. It is located in the Berlin district of Köpenick, which is now fused with the neighbouring district of Treptow. They have three offices with three employees each. Their work is based on the Declaration of the UNCED Conference in Rio de Janeiro (1992) on Agenda 21. Since 1993 the Förderverein promotes voluntary work to generate projects in different fields of sustainable development at the local level, completed by transnational partnership with developing countries. The activities of this NGO including their specific structure (the so called “3 colum model”) are well known all over Berlin and other parts of Germany.
They are well documented (see Bezirksamt Treptow-Köpenick, 2002, “grey literature”, website: www.agenda_buero_koepenick.bei.t-online.de).

8.2.2 Fundraising Akademie

The Fundraising Academy was founded in 1999 in Frankfurt/Main as a private institution by the German Fundraising Association and two organisations of the evangelical and catholic church. It is the only centre in Germany which offers a course of studies on fundraising of two years. Most of the students and alumni are employees or volunteers working with social and charitable organisations.

8.3 Process of project origination

Background information about the NGO, Förderverein Lokale Agenda 21 Treptow/ Köpenick, are presented first for a better understanding of the project. WS, unemployed engineer and active member of the Arbeitsloseninitiative (unemployeds’ initiative) of the Förderverein Lokale Agenda 21 Treptow/ Köpenick, took part in one workshop of the project and the conference. The Förderverein was very interested in the project, as they plan to found a foundation by themselves. As WS had the time to go to Bonn (which is far from Berlin), he was sent to the workshop as a representative of the Förderverein.
The Förderverein has taken part in the seminars of the Science Shop over a quite long time now. There were three different members taking part in different workshops. They all try to feedback the results into the Förderverein, but WS describes this strategy as being problematic, as the workshops and seminars were consecutive. However, this is

a general problem of voluntary work: it is not likely to find somebody who can take over the responsibility for one topic alone.

8.4 Participant's evaluation of the project

WS evaluated the workshop and the conference very positively: *"I have to praise the Science Shop, they have done a fair work."* The organisational frame was good, the seminar hotel (seminar room, accommodation and catering) was good, the thematic preparation was good and the workshop as well. *"We got excellent information and had the possibility to apply the learned knowledge."* The invited experts were very professional and the staff of the Science Shop Bonn was competent as well, as *"they are in this business for a long time now*".

WS emphasised the applied workshop-methods as being very effective: *"We passed through a training. We worked on three examples of successful foundations with paper and flip-chart, we got results concerning these foundations, so we learned special methods that are known in the advertising industry as well. So we adopted things that are already known and applied."*

The only negative point was, that the workshop was too short. But he admitted, that especially for voluntary working people, it couldn't have been longer.

8.5 Outcome/ Usage

The agenda-work needs money, as it cannot be based on voluntary work alone: an office is necessary, with people being employed over a longer time, that have the opportunity to deal with the topics thoroughly, to build up a standing in the area and to build up contacts with relevant partners like departments and companies. *"We don't just need ideas and knowledge concerning project development, but we need help to get money!"*

So the project was very useful for the NGO, in order to build up a long-term funding-strategy. As they don't get (enough) money from the municipality, they plan to found an agenda-foundation, to live from the interests of the foundation-capital. But the crucial point is of course to organise the foundation-capital. For WS, the outcome of the project was, that the establishment of a foundation and the according fundraising process is a tedious and long-term work, he cannot take over by himself.

So on the one hand, the Förderverein needs engaged members, who carry this process and on the other they need support from outside.

The Science Shop can play an important role in this process: the networking with foundations and other initiatives that plan to found a foundation is very valuable, the

follow-up-project to exchange experiences and to profit from the knowledge of others is another valuable aspect. But the problem here is, that the Science Shop is in Bonn, so regular meetings are a problem, as he couldn't pay the travelling expenses by himself.
Another helpful offer of the Science Shop are the publications. Not only of the project, but (as a member of the unemployeds' initiative) the weekly publication "Job Market[7]" as well, but it would be his wish, that these services are for free.

8.5.1 Co-operation with Science Shops

The Förderverein got in touch with the Science Shop through their chairman KW.
WS describes the co-operation with the Science Shop as being very good: *"They invite me, they correspond via email, telephone and mail with me. They are friendly, courteous and polite. They paid my travelling expenses, if I didn't have the money. They are business-like and professional, they know what they talk about."*
The Förderverein would like to take part in the follow-up-project, so a further co-operation will be project-based. *"The other services and offers like thematic counselling are too regional for us, so we cannot profit from this. Anyway, the Local Agenda is a local business."*
But there would be other local possibilities to support the NGO from Science-Shop-side: Science Shops could organise seminars and lectures, organise media-campaigns on special topics, in order to inform the public and to make the Local Agenda known. Although money is necessary here as well, the most important potential of Science Shops here are their contacts, the NGO doesn't have, as it is crucial for a successful event to find the right experts and to invite enough people.

Background information about the Fundraising Academy Frankfurt an the interviewed Staff member LS are presented for a better understanding of the context. LS, chairman of the Deutscher Spendenrat (German Donation Council), is lecturer and one of the founders of the Fundraising Academy Frankfurt/Main. He was involved in the foundation-project as the lecturer of one weekend-workshop on fundraising.
The Fundraising Academy works from time to time for other institutions like hospitals or parishes, and this time for the Science Shop Bonn. There has been no co-operation before, the Science Shop contacted the academy to book a lecturer for a weekend-workshop on fundraising. So it was more a contract than a co-operation, but there was a philosophy-accordance amongst the two organisations, as they are both engaged for the establishment of a civil society, *"where everybody takes over responsibility for the things that are happening in this world"*.

[7] This weekly journal provides a media-analysis of vacant positions all over Germany in social and environmental areas.

LS was free in his curriculum, but there was an agreement of the contents with a colleague of TB (Science Shop Bonn), who organised the workshop, and they worked out a day's schedule together.

8.5.2 Evaluation of the project/ the co-operation with the Science Shop

LS evaluates the workshop organisation and the co-operation with the Science Shop as excellent: *"It is rare that everything is prepared that good."* The organisational frame (the seminar room, accommodation and catering, greeting, material) was excellent, arrangements were kept, the participants were motivated and it was possible to work in small groups. The co-operation with the Science Shop was excellent, as the communication (in advance via email) was frictionless, unproblematic and quick, without misunderstanding. *"Everything was well thought out."*: he got directions concerning the location, the seminar material, he sent to the Science Shop in advance, was duplicated for him. *"Everything was awesome."*
LS wasn't involved in and didn't deal with the whole project, but only came across the publications of the project, he evaluated positively as well.

8.5.3 Co-operation with Science Shops

After the workshop finished, no further co-operation has been planned. LS is not familiar with the concept of Science Shops and doesn't judge them to be supporting for him or the fundraising academy. One reason here might be, as for HL in case 2, that the fundraising academy is an educational institution dealing with knowledge transfer into society by themselves (in a very special field though).

On Science Shop-level the staff member TB of Science Shop Bonn was interviewed. TB is researcher at the Science Shop and was responsible for the project "Foundations for Environmental Protection and Local Agenda 21". Additionally he is the chairman of the association „Science Shop Bonn" and its managing co-ordinator. He gave essential information about project origination and negotiation.

8.6 Process of project negotiation

8.6.1 Initiation and previous activities

Over years the Science Shop Bonn has been offering seminars on the topic "Project funding by foundations". So there already was a network of foundations and interested persons. Additionally there were regular requests on information concerning

foundations in the field environmental protection and Local Agenda 21. It became clear, that there was not only an interest in how to get financial support by foundations, but in the question how to found a foundation as well.
So the idea came up to design a project on this topic and to apply for financial support at the Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit. As a member of the ministry (KW, refer to policy level) had taken part in one or two seminars of the Science Shop on the topic, a helpful contact had been established.
The project was initiated, planned and conducted by the Science Shop Bonn, mainly by TB, with the support of two colleagues of him. TB was responsible for the project-development, the coordination, the conduction and the contacts to *"the outside"* (foundations, initiatives, NGOs, ministry, ...) as he mainly conceptualised and realised the five modules (see fact sheet): he worked on the publications and prepared and conducted the conference. The workshops were organised by a colleague, who supported TB with the publications as well.
As there were already contacts to persons and groups that were interested in the topic, the participants were personally invited by the Science Shop.

So the project was co-operative in the way that the Science Shop hired experts whenever it was necessary, made the contacts to foundations and the ministry and invited interested persons, initiatives and NGOs, but these weren't involved in the initiation or planning of the project.
The project-partners were
-experts for the workshops on foundations (and the building up of a foundation and on fundraising, Local Agenda 21, including tax consultants and accountants,
-foundations, that sent members to the conference and the workshops, even a spokesperson of the Bundesverband deutscher Stiftungen/ Arbeitskreis Natur-, Umwelt- und Landschaftsschutz (Federal Association of German Foundations/ Working Group Protection on Nature, Environment and Landscape) took part on the conference as well,
-the Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit that funded the project,
-persons, groups or smaller NGOs that were interested in the topic as they planned to establish a foundation by themselves, in order to build up a sustainable funding strategy.

TB describes the co-operation with these project-partners as very good. The experts were paid and so a professional co-operation was expected anyway (*"This is part of their professional every-day business."*), and for the foundations, the project was a good public relation, so they were interested in a good co-operation as well. The Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit was interested in

the topic as well: the ministry can point out other opportunities for funding to persons or initiatives that applied for funding from the ministry and that were refused.
The participants were content as well, not only because of the positive side effect, that a network of contacts between interested groups and the foundations involved in the project was established because of the indirect intermediary work of the Science Shop. As mentioned before networking was one of the project-aims: “We set an impulse for informal networks, contacts and co-operations, but we haven’t been directly involved in these co-operations anymore. That was pushed by the contacts and information coming from the project/ the Science Shop”. It was emphasised by TB (like by WE of kubus before, refer to case 2), that it is important, that a Science Shop creates a basis where people come together and work together without the further support of the Science Shop.

8.6.2 Main research/ project questions

Apart from the aims and modules described in the fact sheet, another objective of the project was to make the potential of foundations available for the field environmental protection, sustainability and Local Agenda 21.
Because of reforms on tax laws in Germany, there is a boom of new foundations at the moment. So the project aimed to seize the opportunity to support the engagement for the Local Agenda 21. According to TB, the Local Agenda 21 hasn’t been institutionalised in Germany yet, so there is still a need of funding. So the project wanted to provide information on project-funding by already existing foundations and moreover encourage initiatives to build up a foundation by themselves.

8.7 Outcomes

The main outcomes are summarized in the fact sheet.

8.7.1 Fulfilled objectives set by the organisation

The objectives set by the Science Shop were clear: present results of a high quality, in order to be recognized by relevant groups and persons. In other words, in order to *“be able to present ourselves as an outstanding organisation in this field”*.
According to TB, the Science Shop was successful in both aspects of the project: they presented a good work and have worked out a good standing in the field, being known as experts now.

8.7.2 Documentation of the results

Two publications were already part of the project-aims: a compendium, that gives an overview on foundations in the field environmental protection and Local Agenda 21 (Bühler, Valentin, & Janenz, 2001) and a textbook that documents the conference and provides project- and case-analyses, including experiences on foundation-founding and up-to-date information on the issue (Bühler & Valentin, 2002).
Moreover there were articles on the project and the publications in the newsletter of the Science Shop (WiLa inform) and another Science-Shop publication (Arbeitsmarkt Umweltschutz/ Job Market Environmental Protection). Additionally the textbook will be presented in different smaller articles in own publications of the Science-Shop and of the Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit.
The compendium was additionally presented in a review-volume, published by the project "Ökologie und Lernen[8]" (Ecology and Learning) by a professor of the Free University Berlin. This projects annually selects 200 publications of the field ecology and learning and presents them as a CD-ROM.

The publications of the project are no *"classical"* project-documentations, but are adapted to the needs of the target-group, in order to be interesting and manageable for the reader/ buyer. The Science Shop sells its publications via the internet and own publication-lists. As the Science Shop runs an own publishing house its publications are not only "grey-literature", but professional publications that are available in bookshops as well.

8.7.3 Public relations

The Science Shop Bonn attaches a lot of importance to public relation. Besides the usual media and information work (e.g. via the internet), they focus on the quality and the distribution of their publications, in order to transport the contents and at the same time to make the projects known.
Concerning the distribution, they use the *"snow-ball-effect"*: this self-enhancement-process is based an the multiplication-principle, i.e. try to spread information in different networks, where muliplicators throw the snow-ball into the next network and so on. For the foundation-project this means, that a lot of foundations, that are presented in the publications use the project-publications for their public relation as well. So they order a couple of books and disseminate them in their networks. Another aspect is to work continuously on one topic and become known as experts, as after a while, a lot of institutions and persons know the project and disseminate information in their media,

[8] http://www.oekobase.de/html/beol.htm

on request or by themselves. *"Things like this get built up, if one works on one topic for a longer time, like it is the case here."*
So, the public-relation strategy of the Science Shop Bonn doesn't rely on ad-hoc information- and media-campaigns, but on the long-term co-operation with other networks that function as information- and consulting-junctions and that spread information about the services of the Science Shop via their distribution-networks or give them to their clients. *"We then doesn't have to do this by ourselves, but feed our information into their newsletter, media, etc."* But the precondition is, that the Science Shop has a good contact to these institutions and is known for its expertise/ good standing.

8.8 Usage

8.8.1 Usage of the results/ publications

As it was said before, for the Science Shop the results/ the publications are used to work out a serious standing and to become known as reliable experts in the field. The published books are the most comprehensive ones in this special field in Germany so far. With this background, the Science Shop can help groups or persons to find possibilities of funding and/or to consult how to found a foundation by themselves.
Moreover the results are valuable information- and contact-sources for the own project-development and -funding, as the contacts with foundations, that were presented in the compendium and that participated in the conference, as well as the contacts with other funding-institutions like the Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit have been improved. So the opportunities of funding for the Science Shop have been improved as well. Additionally the contacts can be used to facilitate the work of the Science Shop (e.g. TB is asked to give a seminar on funding possibilities in Bavaria, as he has good contacts to foundations in this region as well, he can use them for the seminar).

8.8.2 Long-term-purpose for the organisation

The fact that the project/ the results could be used to become known as experts, to build up networks with foundations, to use the contacts to get funding by foundations and other institutions for other projects of the Science Shop of course strengthens the Science Shop.
According to TB, the impulse for an ongoing positive process with relevant partners was set. As they are known as experts and partners, it is likely that new projects will come up. The current one will be continued as well, as the field is so dynamic, that it is

desirable to include new foundations and new interested persons or groups in the existing network. There will be a follow-up-project (financed by the Environmental Agency/ Ministry as well), in order to attend and consult initiatives that are on the way to found an own foundation and an additional completion-project, in order to keep the compendium up to date. The project worked on a Germany-wide level so far, but as it relies on networking, the Science Shop aims to regionalise it. Of course the Science Shop is known best on a regional level and has the closest contacts on a regional level as well, so the follow-up-project will be on a regional, rather than a on Germany-wide level.
Last but not least, the Science Shop Bonn plans to found a foundation in the long run by themselves, so they can profit from the knowledge in this respect as well.

8.8.3 Evaluation of the Project

TB's special interest in the project was twofold: on the one hand, he wanted to provide a profound basis of information. On the other hand, he wanted to give an impulse for processes of "self-enhancement": foundations as sources of money or a form of organisation have to become more important in the area environment and sustainability. There are only about 5% of the existing foundations that refer to environmental protection and nature conservation. So this is a small but growing sector. TB's goal was not only to observe but to enforce this process.

The most positive aspect of the project for TB was the fact, that the project managed to develop a comprehensive source of information that obviously reaches the target-group and might be therefore of use to them. Another aspect is the fact, that the project depicts a step-stone for the future work in this field and will be continued.

There were no serious problems, but aspects that have been proven as being difficult. On the one hand, as mentioned before, the field is very dynamic, as new foundations are established every day. So the compendium cannot be complete and has to be updated from time to time. A difficult aspect here is, that there is no register for foundations provided by the state, so it is not easy to "discover" new or even existing foundations. But the Science Shop is aware of the fact that its publication is the most comprehensive one, that has been published so far. Additionally they will continue to work in the field in the follow-up-project, so they will deal with new (qualitative and quantitative) developments anyway.
The other difficulty refers to the fact that foundations need a high amount of foundation-capital to be capable of acting, as a (successful) foundation has to exist from or work with the interests out of the capital (that should remain untouched!). So there is a pretty high structural obstacle to get over: especially for small agenda-foundations, that

doesn't have rich backers in the background and aim to work on a co-operative level (a lot of people invest smaller amounts of money in the foundation), it is a long and hard process to collect the necessary amount of money. TB was hopeful that this process of "capital-mobilisation" would be easier and quicker, but he had to learn that this is long and hard work. But the follow-up-project allows to support initiatives that are on the way to establish a foundation, so this difficulty can be taken up here.

8.9 Policy Issue

8.9.1 Science shop collaboration with NGOs

The project had a strong relation to the philosophy of the Science Shop, as it focused on the (financial) support of smaller initiatives or NGOs. The Science Shop not only provides information, but as well the opportunity to get material resources. So this part of the Science Shop activities emphasises the material empowerment of initiatives and NGOs in the field environment, sustainable development/ Local Agenda 21, that pretty often cannot realise their goals because of a lack of money. With this project, possibilities of financial self-help are presented that allow a quicker and less bureaucratic access to topics (and money) than public backers would be able to provide. So there lies a societal reform- and innovation-potential in the project.
Another relation to the Science Shop-philosophy "empowerment" is networking: the project established new networks and "bridges" between financial backers (like foundations and ministries) and initiatives, as well as amongst initiatives that are interested in founding a foundation. So the Science Shop functions as an intermediary.

8.9.2 Co-operation: request- vs. service-orientation

In contrast to the Science Shop kubus in Berlin, the Science Shop Bonn is an independent association, that is financially independent as well. *"That's where our strength comes from."* But the other side of the medal is, that the Science Shop can only work on projects, where a funding can be organised, and can't offer (all of) their services for free.
As there is no publicly funded staff, the contact- and co-operative work with universities and NGOs isn't that much developed as it could be. So, co-operation with universities and NGOs is project-based, whenever the project allows it.
As a consequence the Science Shop Bonn works mainly on a service level (like the foundation-project, the measurement- and consulting-service for electric smog), as they mostly cannot pick up requests from initiatives or NGOs and design a project out of it, because first of all the funding has to be guaranteed.

So the structural difference between kubus and the Science Shop Bonn has consequences for their ways of work, but as TB puts it, the Science Shop Bonn can fulfil its objectives anyway: *"We have the pressure to design projects that have the potential to get a funding, but we try to incorporate the requests in our projects despite of it. So, like it happened with the foundation-project, we don't say, "Let's make a project.", but say as well, "We know that there is an interest from citizen-side, we are interested ourselves and so we realise both interests and can offer something. But we cannot consult and inform without a material service in return, at least not that broad and intensive. So it would be helpful, if we had one or two positions, that are securely financed, as these could realise exactly these functions."*

For the same reason, it is not that easy to involve students in their projects, as there are only shorter project-based co-operations with universities. However the Science Shop aims to build up a closer co-operation with universities by future projects, in order to be present at universities as well. But according to TB, this is only promising if the Science Shop has a good standing in a field/ subject, as it is not enough to work only as a formal "nodal point" or intermediary, but as an expert.

8.10 Policy Evaluation

8.10.1 Co-operation with Science Shops

KW is one of the chairmen of the Förderverein Lokale Agenda 21 Treptow/ Köpenick and employee at the Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit. To guarantee a financial basis, the Förderverein plans to found an agenda-foundation in the near future. The process is driven by KW, so that this is where his interest in the Science Shop project came from. The NGO seeks support in their process towards a foundation-founding, as they don't have the necessary experience and knowledge by themselves.

Of course the Science Shop cannot give money to initiatives and NGOs, as they have to finance themselves, but what they can do is, to transfer information on which foundations exist and which one is the best to contact according to the thematic specialisation. On this basis the NGO already co-operated with two foundations to get a funding for certain projects (e.g. the Deutsche Bundesstiftung Umwelt (German Federal Foundation for Environment) financed a project, that dealt with the question, how results developed in other projects of the foundation can be used for agenda-processes). So the Science Shop can help to find the appropriate foundation for a certain topic.

Apart from this the Förderverein has no other co-operations with Science Shops.

Apart from the support for his NGO, KW's interest in the project was professional as well. As an employee of the Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit he was interested in the project, as he is of the opinion, that the foundation-idea has to become well known, as foundations will be an important alternative funding-source. It will be more and more difficult to get money from public backers, so this alternative has to find its way into the consciousness of the society. Especially in the context environment and sustainability, as foundations in this field are still the smallest ones in Germany. The Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, that financed the foundation-project of the Science Shop Bonn, profits from the project-results, because of the information coming from the publications. Now, KW as a ministry-employee responsible for funding, can show alternative funding sources to initiatives, the ministry couldn't finance. He can send parts of the compendium to them and encourage them to search for the fitting foundation. *"This way is the right one. We already had success with it!"*

8.10.2 Evaluation of the project

KW evaluated the project from the perspective of his ministry: *"The whole project was a success! There's nothing that should have been completed."* There was a permanent adjustment between the ministry and the Science Shop, so that everything was done in a way, that the Science Shop has received an excellent evaluation for the project. The publications are exactly like the ministry wanted them and can be used for the described purpose (show alternative sources of funding and make the idea of foundations well known). Moreover KW attended two workshops of the Science Shop and was enthusiastic about the enormous knowledge-base of the Science Shop and about the excellent workshop methods. There were a lot of participants, that were motivated and that attended the whole workshop. As a consequence the ministry is of the opinion, that the Science Shop Bonn deserved the funding. *"I don't know many people that work that professional concerning the preparation, conduction and post-processing of a project."*

8.10.3 About Science Shops

KW hasn't dealt with Science Shops before. He came across an invitation for a conference concerning foundations by the Science Shop Bonn and attended it as an staff member of the Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, as the topic was interesting for the ministry. He doesn't know other Science Shops or even the other fields the Science Shop Bonn is dealing with. *"I have used a very special part of the Science Shop Bonn for a very targeted purpose: to help us to found a foundation."*

He hasn't heard anything about the Science Shop kubus either, but read the material he got for the preparation for the INTERACTS-interview and was enthusiastic about the possibilities, a co-operation with kubus could imply. So apart from the foundation-project, he sees a need for consulting concerning project-management and -development on NGO-side. Small initiatives and NGOs mostly doesn't have the capacities here, so projects fail or are not even started, because of lacking competencies concerning project-management. Science Shops could make a valuable contribution here to support the agenda-process. But according to KW, this services have to be for free. If not, small NGOs wouldn't be able to afford the consulting. So KW sees a lot of potential in a Science Shop like kubus, that is financed by the university, as kubus can afford to offer (at least) some services for free.

8.10.4 Science Shop services/ opportunities

Concerning kubus, KW was especially interested in the opportunity to organise diploma-thesis through kubus and to get contacts with small and medium enterprises (SME).

As KW is interested in the organisation and structure of agenda-processes, he would like to deal with the topic "Management for Sustainability", i.e. he would like to have somebody writing his diploma-thesis on this topic. This topic covers questions like 'How to organise the agenda-process? Which structure, forms of organisations are necessary? Which resources are needed (e.g. office, employees)?' To build up a system, that is capable of acting, is to his mind the precondition for a sustainable and holistic agenda-work that reaches the public (citizens, economy and politics). To work only project-based with no structured organisation in the background can only be short-term. A management-system is needed that works as professional as companies, of course with a different goal: sustainability instead of profit. The problem is, that everybody wants to start with projects and not with the establishment of an organisation. So the raised questions are to his opinion still unanswered.

The other function of Science Shops could be to carry new ideas of sustainable management into business enterprises, as Science Shops have contact especially to small and medium enterprises (SME) and universities. So they can provide knowledge-transfer. The crucial point for KW is here, that institutions are needed for this task, that are not 100% profit-orientated, but can afford to deal with new ideas regardless of their economic value. Science Shops like kubus could, to his mind, take over this role. It is his wish that Science Shops and businesses work on a sustainable basis, that means to him, that profit is of course important as well, but that social and environmental issues are much more important. *"We need new economic solutions. With pure economic approaches, sustainability won't be important anymore."*

As a summary, KW defines Science Shops as institutions that are “knowledge-intermediaries” in the field foundations and management for NGOs, as well as institutions that can carry new sustainable ideas into companies and other institutions.
But to his mind, the problem is, that Science Shops are not well known, so the potential partners doesn’t know each other. NGOs often don’t know anything about the opportunities Science Shops offer, and Science Shops obviously not always contact potential clients as well. As a consequence Science Shops should be in a position, that they can afford to do at least 20% non-profit work, so that, as TB of the Science Shop Bonn already said, they can afford to spend resources on pure contact-work.

8.11 Reflective Part

8.11.1 Project Initiation

The Science Shop Bonn is financially independent and so the organisation has to organise funding for projects by itself. As a consequence, the work of the Science Shop Bonn is rather “service-orientated” than of “request-orientated”. But of course, to design successful projects, which are interesting for the “target-group”, the Science Shops aims to incorporate the needs of potential clients as well. Therefore, the Science Shop designs projects that are interesting for the clients and for the Science Shop as well.
So the Science Shop Bonn works according to the Science Shop philosophy, but has to guarantee its existence by successful project management and funding work. The goals of the projects are therefore always twofold:
meet the needs of the clients/ fulfil the function of a Science Shop
guarantee the existence of the Science Shop

But as a consequence the Science Shop mostly cannot pick up requests from initiatives or NGOs and design a project out of it, because first of all the funding has to be guaranteed. For the same reason, the Science Shop Bonn cannot offer diploma-theses.

8.11.2 Science Shop function

Despite of its “service-orientation” the Science Shop Bonn fulfils the Science Shops goals, as it can be seen in this project:
-(material) empowerment of initiatives and NGOs with the focus of “help for self-help”: the Science Shop points to opportunities to get money, but doesn’t provide money by itself,

-function as a network for contacts and support for the build-up of networks: the Science Shop provides contacts to foundations and to other groups that are interested in the build-up of a foundation; moreover they supported the establishment of a network of interested groups and initiatives,
-support for societal processes on social and environmental issues: the Science Shop supports the agenda-process by making the potential of foundations available for the process.

8.11.3 Professionalisation

A striking aspect of all interviews in this case is the question of professionalisation.
The workshop-participant (NGO-level), the hired lecturer for the workshop (research level) and even the representative of the Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (policy level) evaluated the project as extremely professional. They even regard the level of professionalisation as being extra-ordinary.
The following aspects were mentioned by the interviewees in this context:
-the profound knowledge-base of the Science Shop staff was emphasised,
-the organisational frame of the workshops was excellent,
-the workshop methods made the workshops interesting and lively,
-the co-operation/ communication with the Science Shop was frictionless (arrangements were kept, invitations were sent, …),
-the publications were designed professionally and have been the most comprehensive ones in Germany in this field.

From Science Shop's perspective the most important aspect of professionalisation was to become known as reliable experts and partners and to build up a professional standing in the region. So professionalisation is a strategy to guarantee the existence of the Science Shop and to strengthen the organisation.
Especially the fact, that the Science Shop seems to have found a niche with this topic (as there obviously is no other organisation that is dealing with foundations in the field environment and sustainable development to the same extend) and therefore managed to become known as experts in this field, helps to gain new contacts and new projects.
Anyway, for this project, the Science Shop has been successful, as there will be a follow-up-project, financed by the Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit again.

8.11.4 Public Relation

Another interesting aspect of this case is the professional public relation-strategy of the Science Shop Bonn.

Worth to mention are the professional publications: as the Science Shop has an own publishing house, the publications can be ordered in a bookshop and are no grey-literature or project-documentations, but professionally designed books. As a consequence they can be used for professional public relation as well.
Another interesting aspect is the "snow-ball-strategy", that partly bases on the publications. For this project, several foundations use the Science-Shop-publications to make themselves known. Even the Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit uses the publications to show alternative funding-sources to initiatives that were denied for funding by the same ministry. So these institutions advertise for the project and therefore for the Science Shop indirectly. Additionally this strategy strengthens the long-term co-operation with these institutions.
So the long-term co-operation with other networks that function as information- and consulting-junctions is a crucial aspect of the PR strategy, as these networks can spread information about the services of the Science Shop via their distribution-networks or can inform their clients.
But the precondition is of course, that the Science Shop has a good contact to these institutions and is known for its expertise/ good standing.

8.11.5 Publicity of Science Shops: Regional work and Information- and Contact work

As it was the case in the other case studies, Science Shops as institutions were not familiar for the interviewees. They all had an interest in this certain project, neither did they know much more about Science Shops in general, nor about the other services of the Science Shop Bonn (apart from WS, who knows the Science-Shop-publication "Job Market"). They all got to know the Science Shop Bonn because of its offers concerning fundraising and foundations.

Regional work

One reason might be the regional work of the Science Shop Bonn. As Science Shops rely on contacts and networks, it is easier, but sometimes crucial to maintain and extend them on a regional level. Other offers of the Science Shop Bonn have to be regional anyway, as they refer to the regional given facts. As a lot of funding-sources are regional as well, the according projects have to regional anyway. For the agenda-work, the citation of WS is striking: *"The Local Agenda is a local business."* The foundation-project worked Germany-wide, but the follow-up one will be regional again, as it is easier and makes more sense to support regional groups.
So it is not astonishing, that participants from Berlin didn't know much about the other regional services of the Science Shop Bonn, but it shows the need of a Germany-wide

distribution of Science Shops, as one Science Shop can only partly work on a Germany-wide level.

Information- and Contact work

Another reason for the lacking publicity is the obviously non-sufficient information- and contact-work of Science Shops. As a consequence Science Shops should be in a position, that they can afford to spend resources on pure contact and information work.

8.11.6 Science Shop Services for NGOs

Although the interviewees didn't know much about Science Shops, the interviewees on NGO-level expressed clear opportunities for Science Shops to support NGOs:

Science Shops could organise seminars and lectures, organise media-campaigns on special topics, in order to inform the public about sustainability and to make the Local Agenda 21 known, as they have the contacts to potential experts and participants and know how to organise events.

Science Shops could offer consulting for NGOs on the topics project-management/-development and foundations.

Science Shops can organise diploma-theses on topics like "Management-Structures for Sustainability" and "Basic Organisational Structures for Agenda-Initiatives".

Science Shops can provide knowledge-transfer from universities to business enterprises to promote the idea of sustainable businesses/ management.

9 Conclusions

In the following conclusions, common and differentiating main-features of the three cases (Tiergarten-Tunnel, Kreativkomitee, Stiftungen für Umweltschutz und Lokale Agenda 21) are contrasted, with special focus on the two involved organisations: the Science Shop kubus in Berlin and the Science Shop WiLa Bonn in Bonn. Moreover consequences for the work of the Science Shops are drawn from the results and finally recommendations and implications for the development of the Science Shop idea are derived.

9.1 The case studies

In the case studies, three different cases were examined: one on the ecological impacts of tunnel construction measures (case 1), one on co-operation and conflicts among NGOs (case 2), and another one on foundation-founding and fundraising through foundations (case 3).

9.1.1 Common features of the case studies

Although the cases were of different topics and were even conducted by different Science Shops, they all clearly pursue the same goal: make (scientific) knowledge available for the civil society, in order to support societal processes on social and environmental issues.
This goal can be regarded as the ‘common vision of Science Shops’ and can be found in differentiated facets in all of the cases, i.e. it is expressed in the following sub-goal:
empowerment of initiatives and NGOs with the focus on “help for self-help” *by*
-the provision/ the mediation of relevant contacts and knowledge,
-the support for the building-up of networks, e.g. by bringing people together,
-the provision of organisational frames and experts for workshops and other events.

9.1.2 Differentiating aspects

9.1.2.1 ... of the cases

However, the cases differ in the way the projects were initiated and organised:
Case 1, Tiergarten-Tunnel: the Science Shop kubus was contacted by a NGO and built up a close co-operation with researchers from the university and members of the involved NGO to organise the project.
Case 2, Kreativkomitee: the Science Shop kubus initiated the project, but it was planned and conducted in close co-operation with NGO-members and researchers.
Case 3, Stiftungsgründungen: the Science Shop Bonn initiated, planned and conducted the project and worked together with hired experts and invited participants and foundations.

As can be seen by comparing the projects, the Science Shop kubus in Berlin works on a 'co-operative offer and request basis', i.e. projects are designed because of requests from NGOs or as an offer by the Science Shop for NGOs. But in both kubus-cases, the project is planned and conducted in close co-operation with NGOs and the university. Whereas the Science Shop Bonn seems to work rather in a 'service-oriented' mode, so it designs and conducts projects as an offer for NGOs, the NGOs are rather seen as clients than as co-operation partners.
The way of working of both Science Shops is different, although they pursue the same goals. It is obvious that these differences originate from the different backgrounds of the two Science Shops.

9.1.2.2 ... of the organisations involved

Organisational status and structure
The Science Shop kubus
Since 1986 the Science Shop kubus is an institution of the Technical University Berlin (TUB), starting as a pilot project. After the evaluation it is part of the Zentraleinrichtung Kooperation (ZEK) – Centre for Co-operation. The Science Shop is therefore committed to the goals of the ZEK: networking of the TUB with its societal environment, especially with civic action groups, (environmental) NGOs and associations, small and medium enterprises (SME) and public institutions and administration.
Three part-time researchers, one part-time secretary and two students work with kubus.

The Science Shop Bonn
The Science Shop Bonn is a registered self-governing association and is therefore only committed to its own goals: build a bridge between science and advice-seeking citizens.
About 25 employees are working at the Science Shop Bonn (partly on temporary contracts).

Financial situation
The Science Shop kubus
Kubus is financed by the Technical University Berlin, but applies for third-party funds for projects as well. So the institution is dependent on the financial situation of the university, which has been a quite stable financial basis so far, but could in future also be object of public budget cuts. The services of kubus are for free.

The Science Shop Bonn
The Science Shop is financially independent and works on the basis of project-funding. As a non-profit organisation, the Science Shop offers its services on a cost-covering-bases. So the Science Shop is dependent on successful fundraising and the application for third-party-funds.

9.2 Two types of Science Shops

It is obvious that these structural differences are reflected in the way of work of the two organisations. In fact the cases seem to exemplify more than just differences, but different concepts of Science Shops. So they dispute the assumption that there is one shared Science Shop-concept in Germany. At the European level this matter was analysed within the SCIPAS project by Gnaiger and Martin (2001).
Out of these case studies, it can be derived, that both involved Science Shops represent two different concepts or ‘types’ of Science Shops, that can be and should be differentiated:
-the Science Shop kubus stands for the type “Knowledge Mediation”,
-the Science Shop Bonn represents the type “Knowledge Offering”.

Although at first sight, the differences between ‘mediation’ and ‘offering’ seem to be marginal, it will be obvious that this is exactly an important differentiation, dealing with the role of expertise or knowledge-production vs. knowledge-mediation. These empirical types will be described according to the features of the two compared Science Shops. The typology should be further verified by contrasting it with other Science Shops within the Interacts project.

9.2.1 Knowledge Mediation

The type “knowledge mediation”, that is represented by the Science Shop kubus in Berlin, is characterised by the role as an intermediary of knowledge, which gets produced by the university. So they work according to the superordinate goal of their umbrella-institution ZEK. The researchers of the Science Shop kubus see themselves as ‘generalists’, that can reply on requests concerning a wide variety of (environmental) topics, as they are experts for knowledge transfer and have access to an immense pool of contacts and knowledge of the university. But this transfer is designed to be two-sided: out of the university into the society and back into the university. The Science Shop doesn’t aim to produce new knowledge, but to make the potential of ‘idle-lying’ scientific knowledge available for the civil society by knowledge transfer. Additionally it aims to mediate the needs and interests of the society into the university.
Moreover the work of the Science Shop is participative, as the clients (NGO-members, researchers) are involved in the design of projects.
Another characterising feature is, that the Science Shop is free to adjust its projects to the needs of the clients, because of the special financial situation. It can afford to pick up requests and design projects which would have a low chance of getting an external funding, or where the volume of the funding is very small. Additionally the Science Shop can afford to offer services for free.

As a consequence, the work of kubus is very ‘basis-orientated’, i.e. the work of kubus is closely related to the citizens, or in other words “community-oriented”, as it can pick up the needs of small initiatives and NGOs or even individuals. Moreover, the institution has the potential to carry scientific knowledge out of the university and make it usable for the civil society. This is an almost inestimable and unused potential, since the “pure research” of the academic system still produces most of its knowledge only for feeding it back in its own system – without getting even close to application in community practice.
The problem, these types of Science Shops might have, is the fact, that in our society, topic-related expertise is much more esteemed than mediation-expertise. Combined with the ‘basis-orientation’ or the dealing with small-projects, it is not that easy to establish a serious standing.

9.2.2 Knowledge Offering

The type “knowledge offering”, represented by the Science Shop Bonn, is characterised by a service-orientated kind of work. The Science Shop is specialised on certain (though a wide range of) topics, where it can offer a profound knowledge basis and professional services.

As there is no close co-operation with a university, the Science Shop produces and assembles new knowledge, or in other words, builds up expertise on certain topics, partly by the hiring of external experts. So it provides knowledge as well, but on a service-level, where Science Shop-expertise (self-produced or hired) is transferred into society.
Although the Science Shop responds to external requests, its focus is on clear certain services, that can be purchased by the clients on a cost-covering basis.
Because of the financial situation the Science Shop works rather market-orientated. So it offers projects or services according to the questions: What is interesting for our clients? What would they use? What kind of projects have a chance to get an external funding?
So the crucial point here is the establishment of expertise (at best the occupation of a market-niche), to be able to offer profound knowledge and services on a professional basis.
As a consequence, the Science Shop Bonn managed to develop a serious standing as professional experts, but cannot respond to requests of smaller NGOs or single citizens and design projects out of these so easily.

9.3 Consequences for the project work

In order to specify the different assumed types of Science Shops, the following section deals with the question, what the reported differences between the two Science Shops mean for their modes of work, where they differ and where they work similarly. The single aspects are presented along the project phases.

9.3.1 Project initiation and project start

9.3.1.1 Co-operation

As already mentioned, the Science Shops differ in the way, projects are initiated:
the *Science Shop kubus in Berlin* works on a ‘co-operative offer and request basis’, i.e. the participants are involved in the project-planning, conduction and post-processing. So co-operation is understood as a common project-design and organisation.
Whereas the *Science Shop Bonn* works more on a ‘service-level’, and designs and conducts projects, for which the funding is already organised, as an offer for NGOs and other initiatives or individuals. Co-operation in this context is more or less understood as participating in the project, as being part of the network of the Science Shop, or as being hired as an external expert.

9.3.1.2 Goal Setting

As a consequence, the process of goal-setting, that is crucial for the success of a project is different as well:
With the Science Shop kubus this process is co-operative, so kubus' task is to guarantee, that the goals of the project are shared by all involved members. The usual method here is to moderate the project meetings.
For the Science Shop Bonn, this part of the project seems to be no common external process, as the Science Shop offers a project with a certain goal that is developed by the Science Shop itself. The case study doesn't provide information on the internal goal-setting-process, so no statement can be made here.

9.3.1.3 Project-acquisition

Concerning the acquisition of project-funds, participants or partners of both Science Shops make use of their networks, personal as well as professional ones.
Especially for the Science Shop kubus, it is striking for the acquisition of co-operative partners (not for the acquisition of funding!), that the Science Shop managed to perform professional networking on personal contacts.
For the Science Shop Bonn the contacts seem to be more professional than personal, as for the Science Shop Bonn it is a clearly-expressed goal to become known as professional partners, but as the case-study doesn't provide clear data here, no definite comparison can be made.
Other aspects of networking will be analysed later on.

9.3.2 Project phase

9.3.2.1 Workshop methods

Concerning the conduction of the project, especially in case 2 and 3, moderated workshops were a crucial aspect of the projects. Both Science Shops showed that they work on a professional methodological level (using metaplan-techniques, small working-groups, professional moderation, hiring external moderators and lecturers). It should be mentioned here, that this high level of methodological expertise cannot and should not be taken for granted, especially not for university-researchers and NGOs.
Additionally both Science Shops provided a professional organisational frame for the events.

9.3.3 Project end

9.3.3.1 Publications

The project publications of both Science Shops differ in the usage and level of professionalisation:
For the Science Shop kubus the publications, published by kubus via the TU mostly as “grey literature”, are project documentations, showing the process of the projects and the results. They can be purchased via kubus and are sometimes distributed through the NGO-partners.
The publications of the Science Shop Bonn are published by the Science Shop`s own publishing house and can be ordered via book-trade. They are more designed as textbooks or compendia, providing expertise-knowledge.
Both institutions use their publications as public relation material.

9.3.3.2 Public relation

For both Science Shops personal and professional networks play a crucial role in the dissemination of the project results and therefore in their public relations and marketing. However, the impression is given, that the Science Shop Bonn has worked out a more holistic marketing strategy.
Their strategy is built up on existing networks and expertise, called “snow-ball-strategy”: they build up co-operations with other networks that function as information- and consulting-junctions, so these networks can spread information about the services of the Science Shop via their distribution-networks or can inform their clients. An important aspect here is, that institutions advertise for themselves with the project-publications of the Science Shop (like foundations that were mentioned in the compendium) and so indirectly advertise for the Science Shop as well.
Concerning kubus, first steps toward the snow-ball-strategy are visible (e.g. an NGO of case 2 used the project documentation to advertise for themselves), but it seems that at that time there was no holistic marketing strategy, but a reliance on personal networks.

9.3.3.3 Fostering of contacts and networks

Like the goal-setting, another crucial point in every project is the post-processing, or the fostering of contacts and networks. As it can be seen in the case studies, both Science Shops ascribe a high meaning to this aspect.
In case 1 the Science Shop kubus successfully fostered the developed networks and initiated follow up projects, in order to use the potential for a continuity of the

established co-operations. In case 2 however, there were no follow up-activities, and the project finished without continuing activities, but this was criticised by the Science Shop researcher himself. On the other hand he emphasised the valuable expertise which is used within ongoing and future projects.
For the Science Shop Bonn these post-processing activities seems to be of high importance as well: they invited former participants to knew projects and managed as well to organise a follow up-project.

9.3.4 Project goals

As it was said before, both Science Shops more or less followed the same superordinate goals: provision of contacts and knowledge in order to empower NGOs.

9.3.4.1 Networking

The aspect of networking here is critical, as it can be shown for both Science Shops, that (personal and professional) networking is not only a goal (provide networks and contacts for the clients), but a precondition for successful projects in general: networks are crucial for the acquisition of project partners, for the dissemination of the results, and therefore for the marketing.
Especially for kubus, the role of personal networks is important. So it seems that even for an intermediary Science Shop that has the task to professionally organise co-operations, the personal “old boys’ and girls’ networks” (Dienel, 2001) are crucial.
As was said before, a couple of questions result from this observation. An interesting question for further research would be to differentiate and further analyse the two different ways of initiation of a co-operation: personal contact versus professional networking. Further: how can personal links of the involved actors be more effectively used and integrated in the co-operative process?

9.3.4.2 Empowerment of NGOs

As it can be seen in the case-studies, both types of Science Shops can play a crucial role in the empowerment of small initiatives and NGOs:
-they can support the capability for social protest by the mediation of scientific knowledge (case 1),
-they can support their work by improving co-operation and conflict-management among and within NGOs (case 2),
-they can support their work by showing opportunities of funding (case 3).

Moreover, they can provide networks and contacts for NGOs and an organisational and methodological frame for meetings and workshops.
So these three cases exemplify the wide range of opportunities, Science Shops can offer in accordance with their superordinate goals (refer to 4.1.1).

Regarding the expressed expectations of NGO-members concerning the question what Science Shops can do to support their work, it is an interesting aspect, that Science Shops already offer exactly the services, NGOs obviously want and need. The interviewed NGO-members expressed the following expectations:
Case 1: co-operation with scientific institutions to widen the political coalition and to produce public acceptance for political goals by scientific grounding.
Case 2: networking with other environmental groups, get to know techniques to moderate meetings/ seminars and conducting seminars, dealing with conflicts and co-operation in the NGO-sector.
Case 3: organisation of seminars and lectures on sustainability, to produce public acceptance for their goals; consulting on project-management and funding/ foundations; knowledge transfer on sustainable management; supply and transfer of diploma-theses.

Although the Science Shops managed to fulfil the expectations of the NGOS, it is striking, that the interviewed NGO-members didn't know more about Science Shops and their services in general, but had only project-related knowledge of the Science Shop.

9.3.5 Impacts of the projects

9.3.5.1 ... on the university/ transdisciplinary research

As the Science Shop Bonn doesn't co-operate much with universities, no impact was expected from this project (case 3).

But for the Science Shop kubus, which is a university institution, the impacts cannot be regarded as being very high either. As the interviewee on the policy level reported (refer to case 1 and 2), the university is more interested in big projects with a high amount of third-party-volume and in contacts with big companies or other relevant institutions, than in small NGO-related projects.
However, the projects of kubus make a valuable contribution to the provision of practical experiences for students. Not only because of the mediation of diploma-theses, but because of the involvement of students in their projects. So, for example, students have the possibility to gather experiences concerning the moderation of

workshops and meetings. According to the university professor HL a crucial competency, that is not covered by the regular curriculum.

Another aspect here is the transdisciplinary team-work in the cases 1 and 2. In the knowledge based society, research and other societal systems – like environmental policy – become closer and more interlinked. Transdisciplinary research is a resulting need. Science Shops have a great potential for the mediation between theory and practice, especially a university-based one like kubus. The Science Shop kubus made a step towards transdisciplinary work by assembling transdisciplinary teams. This could be the beginning of a transdisciplinary knowledge-production and appliance.

9.3.5.2 ... on NGOs

As was shown before, NGOs see a great potential in the existence of Science Shops and already benefit from these institutions. But that potential should be used to a greater extend by a lively exchange between the two partners.

9.3.6 Securing the existence of Science Shops

9.3.6.1 Professionalisation and Profiling

It has become clear, that the two different types ‘knowledge mediation’ and ‘knowledge offering’ are two different strategies of securing the existence of the organisation:
For the Science Shop kubus, it is essential to survive as a university institution by fulfilling the role of an intermediary, i.e. transferring knowledge from the university into society and reverse, as this it the superordinate goal of their umbrella-institution.
For the Science Shop Bonn, the strategy to survive is the establishment of professional expertise and professional partnerships with relevant institution, so that new projects will come up.

However, both institutions rely on a professional reputation of their work, but the term should be regarded differently for both institutions.
The Science Shop Bonn demonstrated a highly professional attitude concerning the organisation and conduction of the workshops, the invited experts, the knowledge-base of the Science Shop, client-orientation, the publication, and the marketing. So their work was praised by all involved partners.
For the Science Shop kubus, the question of professionalisation is seen ambiguously. This is mostly due to its engagement in small scale and sometimes grassroots activities, which are not appropriate for gaining a professional reputation. Does professionalisation for example imply that no student-projects should take place

anymore, as they are not professional? That requests should be only accepted, if they fulfil certain quality criteria? Additionally especially smaller NGOs might be attracted by the ‘familial’ image of Science Shops and possibly deterred otherwise, like they often are by universities that are sometimes regarded as ‘non-accessible ivory towers’.
Of course it is not questioned here, that every type of Science Shop should work professionally according to certain quality criteria, in order to develop a professional reputation or standing in the public. But it seems to be more a question of the profiling (of the work) of Science Shops according to the needs of the ‘target-group’, than of professionalisation alone. Very often intermediaries have to deal not only with one kind of ‘target-group’, but with clients of different forms of organisations (researchers, public departments, small to big NGOs) or even contradictory interests (e.g. within the Agenda 21 process). That’s why quality criteria (as well as the marketing strategy) have to be adapted to the target-groups and should consider the wide variety of themes and clients.

9.3.6.2 Marketing

It has become clear, that the Science Shop idea has to become more widely known, regardless of the type of Science Shop. The Science Shop Bonn managed to make themselves known for certain services and even developed a standing as being unique experts for Local Agenda-foundations. But in this case as well, the interviewees reported not to be familiar with the Science Shop-idea or with the other services of the Science Shop Bonn (apart from the foundation project).
So what is crucial for a marketing-strategy is a professional reputation, a clear profile of the organisation and functioning personal and professional networks, that are actively used to spread the information on the Science Shops and their services.
Personal networks and contacts have proven to be a very efficient marketing instrument, it will be a challenge to build up a holistic marketing strategy for Science Shops.

9.4 Policy recommendations and implications

The results of the case studies made clear, that Science Shops are valuable, but still rare and little-known institutions, that can contribute to the establishment of the civil society by making the potential of scientific knowledge available for citizens, NGOs and initiatives.
In case study 2 the question was raised, if researchers can take over the Science Shop function, or if personal networks can provide the same benefits. The three case-studies showed, that systematic transfer should be taken seriously as a valuable business, that

should be systemised by commissioning institutions with this tasks rather than left by chance, or by the resources of researchers.

To support the Science Shop idea a range of things can and should be done:
The regional covering with Science Shops should be improved, as it was shown, that the work of Science Shops can only be in part Germany-wide. The establishment and fostering of networks is more promising on a regional level, a lot of funds are regional and a lot of offers have to be regional because of the given facts. Additionally the idea of Science Shops, that they are open for the public and close to the citizens, implies an even regional spreading of Science Shops.
Although the Science Shop Bonn works on an independent financial level very successfully, a basic funding would be helpful here as well, as this guarantees the dealing with small projects that are close to the citizens.
Science Shops should build up or extend their marketing-strategy, so that potential clients and partners have a chance to co-operate.
Universities should take the role of small intermediary institutions much more seriously and should much more use the potential for themselves, as the transfer of scientific knowledge into the society is still dissatisfactory in Germany. Germany should learn a lesson from the Netherlands, where it is taken for granted, that universities have a Science Shop that deals with knowledge transfer.

Concerning the two contrasted types of Science Shops, further research is to be done, in order to derive a general typology of existing Science Shop-concepts in Germany. As it should have become clear, both types have advantages and disadvantages, so there's no need to prefer one model to the other. The most important thing here is that the existing Science Shops in Germany gain strength together and support each other rather than get into competition. A crucial step in this direction is the network "Arbeitsgemeinschaft Wissenschaftsläden e.V." (AWILA e.V. – Working-group Science Shops) , a registered association of Science Shop in Germany and Austria. The aims of AWILA are to promote the Science Shop-idea by co-ordinating public relation, as well as common activities and projects. Moreover there is a regular exchange on seminars and conferences.

Science Shops certainly have a great potential for providing the dialogue between science and society. It seems though, that their standing is very much dependent on societal priorities and science policy. So far the fostering of the interaction between science and civil society is mainly taken place on a discourse level. By putting its work more into the public and by increasing efforts in presenting its goals to policy makers, Science Shops can play a crucial role in putting this discourse into practice.

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11 Annex: interview questionnaire (English & German)

1st level Participants in Project

Q	NGO key respondent	Researcher / Supervisor	Science Shop
	BACKGROUND		
1	Können Sie uns kurz ihre Organisation beschreiben. Briefly describe your organisation	Briefly describe the programme of study and institution (student or supervisor) Können Sie uns kurz ihre Organisation beschreiben. Briefly describe your organisation (research worker)	Können Sie uns kurz ihre Organisation beschreiben. Briefly describe your organisation
2	Gibt es schriftliche Informationen über ihre Organisation, die Sie uns geben könnten? Is there any written information on your organisation you can let me have?	Do you know where I could find written information on your course of study?	Gibt es schriftliche Informationen über ihre Organisation, die Sie uns geben könnten? Is there any written information on your organisation you can let me have?
3	Können Sie uns bitte Ihre Rolle/Position in der Organisation beschreiben? Describe your own role in the organisation	(student / researcher) In welchem Zusammenhang stand das Projekt mit ihrem Studium? / mit ihrer Rolle im Institut. Describe how the research fitted in to your degree / role at the institution Können Sie bitte ihre Rolle als Leiter des Projektes genauer beschreiben (supervisor) Describe your own role as supervisor for the research. .	Können Sie bitte ihre Rolle in der Organisation beschreiben. Describe your own role in the organisation
	PROJECT DESCRIPTION		
4	Wie würden Sie das Projekt kurz beschreiben? How would you (briefly) describe the research project?	Wie würden Sie das Projekt kurz beschreiben? How would you (briefly) describe the research project?	Wie würden Sie das Projekt kurz beschreiben? How would you (briefly) describe the research project?
5	Was war die Hauptfrage/ das Hauptanliegen	Was war die Hauptfrage/ das Hauptanliegen	Was war die Hauptfrage/ das Hauptanliegen

	What was/were the main research question(s)?	What was/were the main research question(s)?	What was/were the main research question(s)?
6	Waren sie bei der Ausarbeitung der verwendeten Methoden involviert Wenn ja, inwiefern? Did you have an input into the research methods used? If so, what input?	Was haben sie zur Ausarbeitung/Auswahl der verwendeten Methoden beigetragen? What was your input into the research methods used?	Waren sie bei der Ausarbeitung der verwendeten Methoden involviert? Wenn ja, inwiefern? Did you have an input into the research methods used? If so, what input?
7	Was waren die Hauptergebnisse? What were the main findings?	Was waren die Hauptergebnisse? What were the main findings?	Was waren die Hauptergebnisse? What were the main findings?
8	Was waren die Hauptempfehlungen? What were the main recommendations?	Was waren die Hauptempfehlungen? What were the main recommendations?	Was waren die Hauptempfehlungen? What were the main recommendations?
	ORGANISATION OF THE PROJECT		
9	Wer initiierte das Projekt Who initiated the project?	Wer initiierte das Projekt Who initiated the project?	Wer initiierte das Projekt Who initiated the project?
10	Baute das Projekt auf vorhergehende Aktivitäten auf?(Warum wurde das Projekt durchgeführt?) Did the project build on previous activities of your organisation? (Why did the project need to be done?)	Baute das Projekt auf vorhergehende Aktivitäten auf?(Warum wurde das Projekt durchgeführt?) Did the project build on previous activities of your organisation? (Why did the project need to be done?)	Baute das Projekt auf vorhergehende Aktivitäten auf?(Warum wurde das Projekt durchgeführt?) Did the project build on previous activities of your organisation? (Why did the project need to be done?)
11	Wie wurde das Projekt geplant? Wie sind die Projektverhandlungen gelaufen? How was the project planned or negotiated?	Wie wurde das Projekt geplant? Wie sind die Projektverhandlungen gelaufen? How was the project planned or negotiated?	Wie wurde das Projekt geplant? Wie sind die Projektverhandlungen gelaufen? How was the project planned or negotiated?
12	Welche Hauptmerkmale der Verhandlung, Planung sind Ihnen in Erinnerung geblieben? Wer es schwer zu einer Einigung zu kommen? What are the main features you remember of the negotiations/ planning? (Was it difficult to reach agreement?)	Welche Hauptmerkmale der Verhandlung, Planung sind Ihnen in Erinnerung geblieben? Wer es schwer zu einer Einigung zu kommen? What are the main features you remember of the negotiations / planning? (Was it difficult to reach agreement?)	Welche Hauptmerkmale der Verhandlung, Planung sind Ihnen in Erinnerung geblieben? Wer es schwer zu einer Einigung zu kommen? What are the main features you remember of the negotiations / planning? (Was it difficult to reach agreement?)
13	Auf welchen zeitliche Rahmen hatten sie sich geeinigt. Gab es Zwischenergebnisse? What time-frame did you agree on? (Any intermediate milestones?)	Auf welchen zeitliche Rahmen hatten sie sich geeinigt. Gab es Zwischenergebnisse? What time-frame did you agree on? (Any intermediate milestones?)	Auf welchen zeitliche Rahmen hatten sie sich geeinigt. Gab es Zwischenergebnisse? What time-frame did you agree on? (Any intermediate milestones?)
14	Wie hoch war das Projektbudget? Wer war für die Finanzierung verantwortlich? What was the budget of the project? (Who was finally responsible for the funding?)	Wie hoch war das Projektbudget? Wer war für die Finanzierung verantwortlich? What was the budget of the project? (Who was finally responsible for the funding?)	Wie hoch war das Projektbudget? Wer war für die Finanzierung verantwortlich? What was the budget of the project? (Who was finally responsible for the funding?)
15	Welche Kommunikationsmittel wurden verwendet? (	Welche Kommunikationsmittel wurden verwendet? (	Welche Kommunikationsmittel wurden verwendet? (

	Treffen, Telfon, e-mail…) What channels of communication were used? (meetings / phone / email)	Treffen, Telfon, e-mail…) What channels of communication were used? (meetings / phone / email)	Treffen, Telfon,e-mail…) What channels of communication were used? (meetings / phone / email)
16	Wie regelmäßig war die Kommunikation? War es einfach oder schwierig zu kommunizieren? How regular was the communication? (How easy or difficult was the communication?)	Wie regelmäßig war die Kommunikation? War es einfach oder schwierig zu kommunizieren? How regular was the communication? (How easy or difficult was the communication?)	Wie regelmäßig war die Kommunikation? War es einfach oder schwierig zu kommunizieren? How regular was the communication? (How easy or difficult was the communication?)
17	Was the project to be open-ended and exploratory, or structured and focused? (How did it turn out?)	Was the project to be open-ended and exploratory, or structured and focused? (How did it turn out?)	Was the project to be open-ended and exploratory, or structured and focused? (How did it turn out?)
18	Was hat Sie speziell am Projekt interessiert und was haben sie erwartet? What were your specific interests and expectations for the project?	Was hat Sie speziell am Projekt interessiert und was haben sie erwartet? What were your specific interests and expectations for the project?	Was hat Sie speziell am Projekt interessiert und was haben sie erwartet? What were your specific interests and expectations for the project?
19	Wie haben die einzelnen Partner ihr Wissen und Ihre Erfahrungen ins Projekt eingebracht? How did the knowledge and experience of the different participants contribute to the project? (NGO members / public, student / researcher, supervisor, Science Shop)	Wie haben die einzelnen Partner ihr Wissen und Ihre Erfahrungen ins Projekt eingebracht? How did the knowledge and experience of the different participants contribute to the project? (NGO members / public, student / researcher, supervisor, Science Shop)	Wie haben die einzelnen Partner ihr Wissen und Ihre Erfahrungen ins Projekt eingebracht? How did the knowledge and experience of the different participants contribute to the project? (NGO members / public, student / researcher, supervisor, Science Shop)
	PROJECT OUTCOMES		
20	Inwieweit hat das Projekt die von ihrer Organisation gesetzten ursprünglichen Ziele erfüllt? To what extent did the research actually fulfil the original objectives set by your organisation?	Inwieweit hat das Projekt die von ihrer Organisation gesetzten ursprünglichen Ziele erfüllt? To what extent did the research actually fulfil the original objectives set by your organisation?	Inwieweit hat das Projekt die von ihrer Organisation gesetzten ursprünglichen Ziele erfüllt? To what extent did the research actually fulfil the original objectives set by your organisation?
21	Gibt es Fragen, die im Rahmen des Projektes nicht beantwortet wurden? Were there any questions that did not get answered by the research?	Gibt es Fragen, die im Rahmen des Projektes nicht beantwortet wurden? Were there any questions that did not get answered by the research?	Gibt es Fragen, die im Rahmen des Projektes nicht beantwortet wurden? Were there any questions that did not get answered by the research?
22	Wie wurden die Ergebnisse präsentiert? (Bericht, Vortrag, Presse…) Für wen sind die Ergebnisse zugänglich? How did the results get presented? (reports / oral presentations / press etc.) Who now has access to the results?	Wie wurden die Ergebnisse präsentiert? (Bericht, Vortrag, Presse…) Für wen sind die Ergebnisse zugänglich? How did the results get presented? (reports / oral presentations / press etc.) Who now has access to the results?	Wie wurden die Ergebnisse präsentiert? (Bericht, Vortrag, Presse…) Für wen sind die Ergebnisse zugänglich? How did the results get presented? (reports / oral presentations / press etc.) Who now has access to the results?

23	Sind die Ergebnisse für die Öffentlichkeit verfügbar? (Wissen Sie , wo ich eine Kopie davon bekommen kann / Details über die Publikation erhalten kann?) Are the findings available to the public? (Do you know where I can get hold of a copy / publication details?)	Sind die Ergebnisse für die Öffentlichkeit verfügbar? (Wissen Sie , wo ich eine Kopie davon bekommen kann / Details über die Publikation erhalten kann?) Are the findings available to the public? (Do you know where I can get hold of a copy / publication details?)	Sind die Ergebnisse für die Öffentlichkeit verfügbar? (Wissen Sie , wo ich eine Kopie davon bekommen kann / Details über die Publikation erhalten kann?) Are the findings available to the public? (Do you know where I can get hold of a copy / publication details?)
24	Haben Sie die Forschungsergebnisse verwendet, oder werden Sie sie verwenden? (Spezifizieren Sie: intern - innerhalb der Organisation, extern – direkt, indirekt) zum Beispiel: zur Verbesserung des Serviceangebots, als Beweis für Ergebnisse für eigene Ansuchen, zur Bewußtseinsbildung generell, um eine spezielle Frage zu beantworten, um andere Stellen unter Druck zu setzen. Have you used, or will you be using, the research? (specify, internal to the organisation, external, direct, indirect) e.g. improve service provision, as evidence of outcomes for own funding, raise awareness generally, answer specific questions, put pressure on other agencies	Haben Sie die Forschungsergebnisse verwendet, oder werden Sie sie verwenden? Zum Beispiel: Für ihre Karriere, für eine Veröffentlichung, für einen akademischen Grad, für die Entwicklung des Lehrplanes Have you used, or will you be using, the research? e.g. career, publication, degree, curriculum development	Haben Sie die Forschungsergebnisse verwendet, oder werden Sie sie verwenden? (Spezifizieren Sie: intern - innerhalb der Organisation, extern – direkt, indirekt) zum Beispiel: um für Science Shops zu werben, um ein Anliegen öffentlich Bewußt zu machen, um andere Projekte zu bekommen, als Beweis für Ergebnisse für eigene Ansuchen Have you used, or will you be using, the research? (specify, internal to the organisation, external, direct, indirect) e.g. promote science shop, raise public awareness of an issue, get other projects, as evidence of outcomes for own funding
25	Wie erfolgreich waren sie mit der Anwendung der Ergebnisse? How successful has this use been?	Wie erfolgreich waren sie mit der Anwendung der Ergebnisse? How successful has this use been?	Wie erfolgreich waren sie mit der Anwendung der Ergebnisse? How successful has this use been?
26	Was war verantwortlich für den Erfolg? (Was hinderte Sie am erfolgreich sein?) What accounted for the success? (What hindered you achieving success?)	Was war verantwortlich für den Erfolg? (Was hinderte Sie am erfolgreich sein?) What accounted for the success? (What hindered you achieving success?)	Was war verantwortlich für den Erfolg? (Was hinderte Sie am erfolgreich sein?) What accounted for the success? (What hindered you achieving success?)
	POLICY		
27	War dieses Projekt von einem langfristigen Nutzen für Ihre Organisation? (Wie konnte dieser langfristige Nutzen erreicht werden?) Has there been any long term benefit from the project for your organisation? (How was this long term benefit achieved?)	War dieses Projekt von einem langfristigen Nutzen für ihre Karriere/ für ihre Forschungsinteressen? Wie konnte dieser langfristige Nutzen erreicht werden? Has there been any long term benefit from the project for your career / research interests? (How was this long term benefit achieved?)	War dieses Projekt von einem langfristigen Nutzen für ihre Karriere/ für ihre Forschungsinteressen? Wie konnte dieser langfristige Nutzen erreicht werden? Has there been any long term benefit from the project for your organisation / research interests? (How was this long term benefit achieved?)
28	Wie bezieht sich das Projekt auf die breiteren Ziele Ihrer Organisation? How does the project relate to the wider objectives of your	Wie bezieht sich das Projekt auf die breiteren Ziele Ihrer Organisation? How does the project relate to the wider objectives of	Wie bezieht sich das Projekt auf die breiteren Ziele Ihrer Organisation? How does the project relate to the wider objectives of

	organisation?	your organisation?	your organisation?
29	Führte dieses Projekt zu weiteren Projekten mit Science Shops oder ähnlichen Einrichtungen? Has this project led to further projects with Science Shops or related agencies?	(Wissenschaftliche/r BetreuerIn / ForscherIn.) Führte dieses Projekt zu weiteren Projekten mit dieser oder ähnlichen Einrichtungen? (supervisor / research worker) Has this project led to further projects with the same or similar organisations?	Führte dieses Projekt zu weiteren Projekten mit dieser oder ähnlichen Einrichtungen? Has this project led to further projects with the same or similar organisations?
30	Was sind die Vorteile oder Nachteile, wenn jemandem außerhalb ihrer Einrichtung die von ihnen aufgeworfenen Frage/ Angelegenheit untersucht? What are the advantages and disadvantages of having someone from outside the organisation investigating the issue you have raised?	Was sind die Vorteile oder Nachteile wenn jemandem außerhalb ihrer Einrichtung die von ihnen aufgeworfenen Frage/ Angelegenheit untersucht? What are the advantages and disadvantages of having someone from outside the organisation investigating the issue you have raised?	Was sind die Vorteile oder Nachteile wenn jemandem außerhalb ihrer Einrichtung, die von ihnen aufgeworfenen Frage/ Angelegenheit untersucht? What are the advantages and disadvantages of having someone from outside the organisation investigating the issue you have raised?
31	Was war für Sie der zusätzliche Wert der Kooperation mit einem Science Shop oder einer ähnlichen Einrichtung, im Vergleich zur direkten Kooperation mit einer Universität oder Forschungseinrichtung. What, if anything, was the added value from cooperation with a science shop / intermediary agency rather than directly with a university or research organisation?	Was war für Sie der zusätzliche Wert der Kooperation mit einem Science Shop oder einer ähnlichen Einrichtung, im Vergleich zur direkten Kooperation mit einer Universität oder Forschungseinrichtung. What, if anything, was the added value from cooperation with a science shop / intermediary agency rather than directly with a university or research organisation?	Was war für Sie der zusätzliche Wert der Kooperation mit einem Science Shop oder einer ähnlichen Einrichtung, im Vergleich zur direkten Kooperation mit einer Universität oder Forschungseinrichtung. What, if anything, was the added value from cooperation with a science shop / intermediary agency rather than directly with a university or research organisation?
	SUMMARY		
32	Können sie die positivsten Aspekte des Projektes kurz zusammenfassen. Can you summarise the most positive aspects of the project	Können sie die positivsten Aspekte des Projektes kurz zusammenfassen. Can you summarise the most positive aspects of the project	Können sie die positivsten Aspekte des Projektes kurz zusammenfassen. Can you summarise the most positive aspects of the project
33	Können Sie Probleme, oder Barrieren, auf die Sie gestoßen sind, ausführlich darstellen? (zum Beispiel: Konflikte, Unsicherheiten, Beziehungen..) Can you detail any problems or barriers which were encountered (e.g. conflicts, uncertainties, relationships)	Können Sie Probleme, oder Barrieren, auf die Sie gestoßen sind, ausführlich darstellen? (zum Beispiel: Konflikte, Unsicherheiten, Beziehungen..) Can you detail any problems or barriers which were encountered (e.g. conflicts, uncertainties, relationships)	Können Sie Probleme, oder Barrieren, auf die Sie gestoßen sind, ausführlich darstellen? (zum Beispiel: Konflikte, Unsicherheiten, Beziehungen..) Can you detail any problems or barriers which were encountered (e.g. conflicts, uncertainties, relationships)
34	(Falls Probleme erwähnt werden) Wie gingen Sie mit dem Problem um? (If problem mentioned) How did you deal with the problem?	(Falls Probleme erwähnt werden) Wie gingen Sie mit dem Problem um? (If problem mentioned) How did you deal with the problem?	(Falls Probleme erwähnt werden) Wie gingen Sie mit dem Problem um? (If problem mentioned) How did you deal with the problem?
35	Wenn Sie das Projekt noch einmal machen könnten,	Wenn Sie das Projekt noch einmal machen könnten,	Wenn Sie das Projekt noch einmal machen könnten,

	würden sie es gleich oder anders machen? If you could do it again, would you do the project the same way or differently?	würden sie es gleich oder anders machen? If you could do it again, would you do the project the same way or differently?	würden sie es gleich oder anders machen? If you could do it again, would you do the project the same way or differently?
36	Was sehen Sie als die Vorteile oder Nachteile (sozialer) wissenschaftlicher Forschung, die angewandt wird, um gesellschaftliche Anliegen aufzugreifen? (oder: angewandter (sozial) wissenschaftlicher Forschung, die gesellschaftliche Anliegen aufgreift?) What do you see as the advantages or disadvantages of (social) scientific research being applied to tackle issues in the community?	Was sehen Sie als die Vorteile oder Nachteile (sozialer) wissenschaftlicher Forschung, die angewandt wird, um gesellschaftliche Anliegen aufzugreifen? (oder: angewandter (sozial) wissenschaftlicher Forschung, die gesellschaftliche Anliegen aufgreift?) What do you see as the advantages or disadvantages of (social) scientific research being applied to tackle issues in the community?	Was sehen Sie als die Vorteile oder Nachteile (sozialer) wissenschaftlicher Forschung, die angewandt wird, um gesellschaftliche Anliegen aufzugreifen? (oder: angewandter (sozial) wissenschaftlicher Forschung, die gesellschaftliche Anliegen aufgreift?) What do you see as the advantages or disadvantages of (social) scientific research being applied to tackle issues in the community?
	Thank you very much for your cooperation.		

2nd level Participants in Project

Q	NGO (consortium) Manager	University Dean of Research/Teaching	Science Shop Manager
	BACKGROUND		
1	Können Sie uns bitte Ihre Rolle/Position in der Organisation beschreiben? Please describe your own role in the organisation	Können Sie uns bitte Ihre Rolle/Position in der Organisation beschreiben? Please describe your own role in the organisation	Können Sie uns bitte Ihre Rolle/Position in der Organisation beschreiben? Please describe your own role in the organisation
2	Wie viele kooperative Projekte mit Science Shops werden in ihrer Organisation / in ihrem Konsortium durchgeführt How much collaborative research with Science Shops goes on in your organisation / consortium?	Wie viele kooperative Projekte mit lokalen NGO´s und Science Shop werden an der Universität durchgeführt? How much collaborative research with local NGOs goes on with Science Shops in your university?	Wie viele kooperative Projekte mit NGO´s und Science Shops werden an Ihrer Universität/ in ihrer Stadt durchgeführt? How much collaborative research with local NGOs goes on in your university / city with Science Shops?
3	Wie viele kooperative Projekte werden ohne Science Shops durchgeführt? And how much collaborative research with universities not involving Science Shops?	Wie viele kooperative Projekte mit NGO´s werden ohne Science Shops durchgeführt? And how much collaborative research with NGOs not involving Science Shops?	Wie viele kooperative Projekte mit NGO´s werden ohne Science Shops durchgeführt? And how much collaborative research with NGOs not involving Science Shops?
4	Können Sie mir ein Beispiel für Science Shop Forschung nennen? Can you give me an example of Science Shop research?	Können Sie mir ein Beispiel für Science Shop Forschung nennen? Can you give me an example of Science Shop research?	Können Sie mir ein Beispiel für Science Shop Forschung nennen? Can you give me an example of Science Shop research?
5	Können Sie mir ein Beispiel ohne Beteiligung eines Science Shop nennen? Can you give me an example that did not involve a Science Shop?	Können Sie mir ein Beispiel ohne Beteiligung eines Science Shop nennen? Can you give me an example that did not involve a Science Shop?	Können Sie mir ein Beispiel ohne Beteiligung eines Science Shop nennen? Can you give me an example that did not involve a Science Shop?
6	Welche Vergleiche würden Sie zwischen Science Shop-Forschung und Nicht-Science Shop-Forschung ziehen? What comparisons would you draw between Science Shop and non-Science Shop research?	Welche Vergleiche würden Sie zwischen Science Shop-Forschung und Nicht-Science Shop-Forschung ziehen? What comparisons would you draw between Science Shop and non-Science Shop research?	Welche Vergleiche würden Sie zwischen Science Shop-Forschung und Nicht-Science Shop-Forschung ziehen? What comparisons would you draw between Science Shop and non-Science Shop research?
7	Haben Sie von diesem Projekt schon gehört? Wenn ja, was halten Sie davon? (positive Ergebnisse,. Probleme oder negative Ergebnisse?) Have you heard of the (case study project)? If so, what do you think of it?	Haben Sie von diesem Projekt schon gehört? Wenn ja, was halten Sie davon? (positive Ergebnisse,. Probleme oder negative Ergebnisse?) Have you heard of the (case study project)? If so, what do you think of it?	Haben Sie von diesem Projekt schon gehört? Wenn ja, was halten Sie davon? (positive Ergebnisse,. Probleme oder negative Ergebnisse?) Have you heard of the (case study project)? If so, what do you think of it?

	(positive outcomes? problems or negative outcomes?)	(positive outcomes? problems or negative outcomes?)	(positive outcomes? problems or negative outcomes?)
	SCIENCE SHOPS		
8	Wieviel wissen sie über Science Shops hier und in anderen Ländern? How much do you know about Science Shops, here and in other countries?	Wieviel wissen sie über Science Shops hier und in anderen Ländern? How much do you know about Science Shops, here and in other countries?	Wieviel wissen sie über Science Shops hier und in anderen Ländern? How much do you know about Science Shops, here and in other countries?
9	Was betrachten Sie als die wichtigsten Merkmale der Science Shop -Forschung? What do you see as the most important features of Science Shop research?	Was betrachten Sie als die wichtigsten Merkmale der Science Shop -Forschung? What do you see as the most important features of Science Shop research?	Was betrachten Sie als die wichtigsten Merkmale der Science Shop -Forschung? What do you see as the most important features of Science Shop research?
10	Gibt es für Sie negative Merkmale der Science Shop-Forschung? Are there any negative features for you of Science Shop research?	Gibt es für Sie negative Merkmale der Science Shop-Forschung? Are there any negative features for you of Science Shop research?	Gibt es für sie negative Merkmale der Science Shop-Forschung? Are there any negative features for you of Science Shop research?
	SCIENCE SHOPS EVALUATION		
11	Wie wichtig ist die Science Shop Aktivität/ die gesellschaftsbezogene Forschung für ihre Organisation? How important is Science Shop activity / community based research for your organisation?	Wie wichtig ist die Science Shop Aktivität/ die gesellschaftsbezogene Forschung für ihre Universität? How important is Science Shop activity / community based research for your university?	Wie wichtig ist die Science Shop Aktivität/ die gesellschaftsbezogene Forschung für ihre Universität/ Stadt? How important is Science Shop activity / community based research for your university / city?
12	Wie wichtig sind die Science Shop Aktivitäten für die Verbesserung des öffentlichen Verständnisses für wissenschaftliches Wissen (oder: für die Wissenschaften) (einschließlich der Sozialwissenschaften) How important is Science Shop activity / community based research for improving the public understanding of scientific knowledge (including social science)?	Wie wichtig sind die Science Shop Aktivitäten für die Verbesserung des öffentlichen Verständnisses für wissenschaftliches Wissen (oder: für die Wissenschaften) (einschließlich der Sozialwissenschaften) How important is Science Shop activity / community based research for improving the public understanding of scientific knowledge (including social science)?	Wie wichtig sind die Science Shop Aktivitäten für die Verbesserung des öffentlichen Verständnisses für wissenschaftliches Wissen (oder: für die Wissenschaften) (einschließlich der Sozialwissenschaften) How important is Science Shop activity / community based research for improving the public understanding of scientific knowledge (including social science)?
13	Welche andere Vermittlungsverfahren denken sie sind wichtig, um das öffentliche Verständnis für wissenschaftliches Wissen (für die Wissenschaften) zu fördern? What other mediation procedures do you think are important for improving the public understanding of scientific knowledge?	Welche andere Vermittlungsverfahren denken sie sind wichtig, um das öffentliche Verständnis für wissenschaftliches Wissen (für die Wissenschaften) zu fördern? What other mediation procedures do you think are important for improving the public understanding of scientific knowledge?	Welche andere Vermittlungsverfahren denken sie sind wichtig, um das öffentliche Verständnis für wissenschaftliches Wissen (für die Wissenschaften) zu fördern? What other mediation procedures do you think are important for improving the public understanding of scientific knowledge?
14	Wie wichtig sind die Science Shop Aktivitäten/ ist die	Wie wichtig sind die Science Shop Aktivitäten/ ist die	Wie wichtig sind die Science Shop Aktivitäten/ ist die

	gesellschaftsbezogene Forschung für die Entwicklung der nationalen Wissenschaftspolitik? How important is Science Shop activity / community based research for the development of national science policy (including social science policy)?	gesellschaftsbezogene Forschung für die Entwicklung der nationalen Wissenschaftspolitik? How important is Science Shop activity / community based research for the development of national science policy (including social science policy)?	gesellschaftsbezogene Forschung für die Entwicklung der nationalen Wissenschaftspolitik? How important is Science Shop activity / community based research for the development of national science policy (including social science policy)?
15	Welche andere Vermittlungsverfahren, die öffentliche Beitrage für die Entwicklung der nationalen Wissenschaftspolitik berücksichtigen, glauben Sie, sind wichtig (Oder: Welche andere Vermittlungsverfahren sind wichtig, damit öffentliche Beiträge (Alltagswissen) in die Entwicklung der nationalen Wissenschaftspolitik Eingang finden.) What other mediation procedures do you think are important for allowing public input into the development of national science policy? Von welchen anderen Vermittlungsverfahren denken Sie, daß sie dafür wichtig sind, öffentlicher Zufuhr in die Entwicklung nationaler Wissenschaftspolitik zu erlauben?	Welche andere Vermittlungsverfahren, die öffentliche Beitrage für die Entwicklung der nationalen Wissenschaftspolitik berücksichtigen, glauben Sie, sind wichtig (Oder: Welche andere Vermittlungsverfahren sind wichtig, damit öffentliche Beiträge (Alltagswissen) in die Entwicklung der nationalen Wissenschaftspolitik Eingang finden.) What other mediation procedures do you think are important for allowing public input into the development of national science policy?	Welche andere Vermittlungsverfahren, die öffentliche Beitrage für die Entwicklung der nationalen Wissenschaftspolitik berücksichtigen, glauben Sie, sind wichtig (Oder: Welche andere Vermittlungsverfahren sind wichtig, damit öffentliche Beiträge (Alltagswissen) in die Entwicklung der nationalen Wissenschaftspolitik Eingang finden.) What other mediation procedures do you think are important for allowing public input into the development of national science policy?

16	Wie wichtig sind die Science Shop Aktivitäten/ die gesellschaftsbezogenen Forschung, für den Aufbau von Kapazitäten in der Gesellschaft und für die Stärkung/Ermächtigung von NGO´s. How important is Science Shop activity / community based research for building capacity in civil society / empowering NGOs?	Wie wichtig sind die Science Shop Aktivitäten/ die gesellschaftsbezogenen Forschung, für den Aufbau von Kapazitäten in der Gesellschaft und für die Stärkung/Ermächtigung von NGO´s. How important is Science Shop activity / community based research for the building of capacity in / empowering NGOs?	Wie wichtig sind die Science Shop Aktivitäten/ die gesellschaftsbezogenen Forschung, für den Aufbau von Kapazitäten in der Gesellschaft und für die Stärkung/Ermächtigung von NGO´s. How important is Science Shop activity / community based research for the building of capacity in / empowering NGOs?
17	Welche andere Vermittlungsverfahren, glauben Sie, sind wichtig für den Aufbau von Kapazitäten (Fähigkeiten) in der Gesellschaft / für die Stärkung/ Ermächtigung der NGO´s? What other mediation procedures do you think are important for building capacity in civil society / empowering NGOs?	Welche andere Vermittlungsverfahren, glauben Sie, sind wichtig für den Aufbau von Kapazitäten (Fähigkeiten) in der Gesellschaft / für die Stärkung/ Ermächtigung der NGO´s? What other mediation procedures do you think are important for building capacity in civil society / empowering NGOs?	Welche andere Vermittlungsverfahren, glauben Sie, sind wichtig für den Aufbau von Kapazitäten (Fähigkeiten) in der Gesellschaft / für die Stärkung/ Ermächtigung der NGO´s? What other mediation procedures do you think are important for building capacity in civil society / empowering NGOs?
18	Wie wichtig sind die Science Shop Aktivitäten / ist die gesellschaftsbezogenen Forschung für die Entwicklung der Beziehung Universität – Gesellschaft? How important is Science Shop activity / community based research for developing relations between	Wie wichtig sind die Science Shop Aktivitäten / ist die gesellschaftsbezogenen Forschung für die Entwicklung der Beziehung Universität – Gesellschaft? How important is Science Shop activity / community based research for developing relations between	Wie wichtig sind die Science Shop Aktivitäten / ist die gesellschaftsbezogenen Forschung für die Entwicklung der Beziehung Universität – Gesellschaft? How important is Science Shop activity / community based research for developing relations between

	universities and the community?	universities and the community?	universities and the community?
19	Welche andere Vermittlungsverfahren, glauben sie, sind wichtig für die Entwicklung der Beziehung Universität - Gesellschaft? What other mediation procedures do you think are important for developing relations between universities and the community?	Welche andere Vermittlungsverfahren, glauben sie, sind wichtig für die Entwicklung der Beziehung Universität - Gesellschaft? What other mediation procedures do you think are important for developing relations between universities and the community?	Welche andere Vermittlungsverfahren, glauben sie, sind wichtig für die Entwicklung der Beziehung Universität - Gesellschaft? What other mediation procedures do you think are important for developing relations between universities and the community?
	FUTURE OF SCIENCE SHOPS		
20	Sollte die Arbeit der Science Shops weiter entwickelt werden, Wenn ja, wie? Should Science Shop work be developed further? How do you think this work could be developed?	Sollte die Arbeit der Science Shops weiter entwickelt werden, Wenn ja, wie Should Science Shop work be developed further? How do you think this work could be developed?	Sollte die Arbeit der Science Shops weiter entwickelt werden, Wenn ja, wie Should Science Shop work be developed further? How do you think this work could be developed?
21	Was sind die Probleme oder Barrieren für die Weiterentwicklung? (spezifieren Sie: bei den NGO´s, den Universitäten, den Science Shops, finanzieller Art, administrativ, politisch...) What are the problems or barriers to its development? (specify: in NGOs, universities, science shops, financial, administrative, political etc.)	Was sind die Probleme oder Barrieren für die Weiterentwicklung? (spezifieren Sie: bei den NGO´s, den Universitäten, den Science Shops, finanzieller Art, administrativ, politisch...) What are the problems or barriers to its development? (specify: in NGOs, universities, science shops, financial, administrative, political etc.)	Was sind die Probleme oder Barrieren für die Weiterentwicklung? (spezifieren Sie: bei den NGO´s, den Universitäten, den Science Shops, finanzieller Art, administrativ, politisch...) What are the problems or barriers to its development? (specify: in NGOs, universities, science shops, financial, administrative, political etc.)
22	Welche Änderungen wären notwendig, um mehr Organisationen zu ermutigen sich an Science Shop Aktivitäten / gesellschaftsbezogener Forschung zu beteiligen? What changes would be necessary to encourage more organisations to take part in Science Shop activity / community based research?	Welche Änderungen wären notwendig, um mehr Organisationen zu ermutigen sich an Science Shop Aktivitäten / gesellschaftsbezogener Forschung zu beteiligen? What changes would be necessary to encourage more universities to take part in Science Shop activity / community based research?	Welche Änderungen wären notwendig, um mehr Organisationen zu ermutigen sich an Science Shop Aktivitäten / gesellschaftsbezogener Forschung zu beteiligen? What changes would be necessary to encourage more NGOs and universities to take part in Science Shop activity / community based research?
23	Wie sehen sie die Science Shop Aktivitäten in Bezug auf die Wissenschafts- und Technologie- Politik in Deutschland/ Österreich? Und in Europa? How do you see Science Shop activity / community based research relating to Research and Technology policy in this country? And in Europe as a whole?	Wie sehen sie die Science Shop Aktivitäten in Bezug auf die Wissenschafts- und Technologie- Politik in Deutschland/ Österreich? Und in Europa? How do you see Science Shop activity / community based research relating to Research and Technology policy in this country? And in Europe as a whole?	Wie sehen sie die Science Shop Aktivitäten in Bezug auf die Wissenschafts- und Technologie- Politik in Deutschland/ Österreich? Und in Europa? How do you see Science Shop activity / community based research relating to Research and Technology policy in this country? And in Europe as a whole?
24	Haben sie andere Vorschläge, wie die Anliegen der Gesellschaft in die Wissenschafts- und Technologie-Politik eingebracht werden könnten? Do you have any other suggestions about how the concerns of civil society could be reflected in Research and Technology policy?	Haben sie andere Vorschläge, wie die Anliegen der Gesellschaft in die Wissenschafts- und Technologie-Politik eingebracht werden könnten? Do you have any other suggestions about how the concerns of civil society could be reflected in Research and Technology policy?	Haben sie andere Vorschläge, wie die Anliegen der Gesellschaft in die Wissenschafts- und Technologie-Politik eingebracht werden könnten? Do you have any other suggestions about how the concerns of civil society could be reflected in Research and Technology policy?
25	Glauben Sie, daß die Science Shop Aktivitäten für andere	Glauben Sie, daß die Science Shop Aktivitäten für	Glauben Sie, daß die Science Shop Aktivitäten für

	gegenwärtige politische Strömungen, die den NGO´s Sektor beeinflussen, relevant ist? Do you think Science Shop activity is relevant to any other current policies affecting the NGO sector?	andere gegenwärtige politische Strömungen, die die Universitäten beeinflussen, relevant ist? Do you think Science Shop activity is relevant to any other current policies affecting universities?	andere gegenwärtige politische Strömungen, die den NGO´s Sektor oder die Universitäten beeinflussen, relevant ist? Do you think Science Shop activity is relevant to any other current policies affecting the NGO sector or universities?
	FINALE		
26	Möchten Sie weiterhin über die Entwicklung des Projekts INTERACTS informiert werden und in der einen oder anderen Weise involviert sein? Would you like to be kept informed about the INTERACTS project as it develops, and to be involved further in any way?	Möchten Sie weiterhin über die Entwicklung des Projekts INTERACTS informiert werden und in der einen oder anderen Weise involviert sein? Would you like to be kept informed about the INTERACTS project as it develops, and to be involved further in any way?	Möchten Sie weiterhin über die Entwicklung des Projekts INTERACTS informiert werden und in der einen oder anderen Weise involviert sein? Would you like to be kept informed about the INTERACTS project as it develops, and to be involved further in any way?
	Thank you very much for your cooperation.		