Methodology

Introduction

This section describes how the research was conducted, including the practical aspects, and also contains reflections from the research team. The Sustainable Livelihoods concept is the basic source from which the methodology for this action-research has been derived. The most prominent aspect of this approach is the commitment to achieving solutions which are 'do-able' as well as sustainable. Furthermore the resources required for implementation and maintenance should where possible be extracted from within the community or context of the problem itself rather than being imported, in order to enable future replication and more comprehensive and longer lasting self-sufficiency for the people. The sustainable livelihoods approach was introduced briefly in the introduction.

The local partners were involved in the development of the research proposal and hence there was less time consumed in establishing the research work plan.

The field team began its work by discussing the issues with different actors to help develop concepts and to operationally define the concepts within the context of research. The UK team adopted an enabling role, while the Karachi team drove the process. Through various participatory discussions, key actors were identified, key issues were identified, and relevant checklists were prepared for conducting a literature search, interviews, and forums. The preparatory work began even before the contract was finalized with the client. The work can be categorized into:

1. **Planning:**
   a. identification of the research locations
   b. development of a working hypothesis
   c. determination of a working methodology
   d. making a list of the tasks expected to be involved

2. **Process:**
   a. literature and secondary data review
   b. action research, fieldwork, interviews, surveys, forums
   c. documentation and analysis of data collected (from both of the above-mentioned sources)
   d. formulation of final recommendations and conclusion
   e. writing of report and presentation
   f. dissemination of the findings

It is intended to feed the lessons learned in this phase into Phase 2 of the project.

Both these categories of work are being documented and presented here including certain reflective points. A separate Guidelines is also included at the end to help anyone else to use the same methodology in future.

Basic approach

The basic approach of the project was decided upon as the first step of the planning of the research exercise.

Objectives

The objectives were to identify and explore critical issues in the provision of transport services for the urban poor in Karachi and, in so doing, to develop policy proposals for key stakeholders to improve the existing services.

In the course of the research process, to develop a methodology to help stakeholders to understand better how to improve transport provision. This methodology is intended to be potentially useful to policymakers, donor agencies, and practitioners seeking improved services in a number of other Southern cities.

Policy considerations

- To explore the multiple ways in which transport provision (or lack of it) impacts on the lives of the poor.
- To help indirectly in dealing with issues such as settlement planning, transport planning, and transport pricing.
- To help integrate the multiple transport services to better address the needs of the urban poor for transport. In addition to other factors, it looked briefly

at the interface between the private, formal, and informal and public sectors.

- To develop a better understanding of the actual and potential roles of different actors, and thus a guide to policy improvements.
- To explore the viability of the Sustainable Livelihoods approach.

Practical considerations

- To contribute to developing a better understanding of the urban poor's need for effective and efficient transport services in order to access their places of work, education, and leisure.
- To explore the implications of transport on the livelihood strategies of the poor and differential impact of existing transport services on women, children, and the elderly.
- To identify the environmental and health-related problems experienced by the urban poor which are related to transport services.

Working hypothesis

It is useful to focus the inquiry by using a working hypothesis. The assumption of this research project is that transport services make significant contributions to the livelihood strategies of the urban poor. These contributions (both positive and negative), include access to employment and income-generation opportunities, education, health, and social networks (such as extended families which can help in securing incomes and necessary goods and services). Variables that affect users include the cost and accessibility of transport services, reliability, safety getting onto and off of the vehicles and during the journey, levels of comfort during the journey, and the location and quality of pick-up and drop-off points. Transport services have a further potential impact the on environmental and health aspects of life in low-income settlements through noise and air pollution and traffic accidents. The objectives were formulated with this understanding.

Objectives (detailed)

The following details about the objectives were decided and planned.

Description of the objectives:

- Investigate existing community-based, commercial, NGO, and institutional roles and responsibilities for the provision of transport services in urban poor communities in Karachi and, in so doing, better understand the impact of such services on the well-being of the urban poor.

- Identify improvements that can be undertaken, and establish a process which develops a momentum for the implementation of these improvements.
- Develop a framework for use elsewhere in order to improve transport services for the urban poor.

The project sought primarily to understand the different perspectives of the urban poor with respect to transport, in order to identify service improvements, and also to achieve a better understanding of the perspectives of providers of transport services. The research process was designed to bring together these perspectives in order to increase the possibility of securing improvements. The research was expected to generate, as a result of participatory research methodology, very rich primary qualitative data, which would add to the existing database available locally and internationally. The local researchers were expected to gain training and orientation in research methodology, while being closely monitored by the project team to ensure high quality data (and also at the same time provide the contextual understanding necessary to maintain the quality of the outputs).

Anticipated outputs

The following outputs were envisioned at the outset of the study exercise:

Short booklet

Short draft booklet containing review, situation analysis, and policy conclusions to be available locally and internationally.

Electronic conference on draft booklet

This will open the debate to wider audience. Invited participants will be drawn primarily from those interested in transport issues. A range of perspectives will be sought, hence we will invite both those interested in transport and poverty, and transport and the global environment, to participate. The suggestions and comment will guide further work.

Workshops at city and settlement level

The forums will be held to consolidate and validate the data collected and share the information with the key actors. Trained researchers will facilitate the forums.

Methodology to be developed, explored, and documented

A methodology for process analysis, participatory research, and advocacy will be developed to address the transport problems of the urban poor.

Anticipated risks

The link between research, policy, and practice is a difficult one. In particular, the acceptance of research often requires careful timing to ensure that the relevant institutions are receptive to the emerging knowledge. These risks were minimized in this programme because of the integral involvement of key stakeholders in the research process and the investment of the Urban Resource Centre.

Whilst the danger of non-participation of the key officials was considered, the research project benefited from the existing reputation of the Urban Resource Centre within the city. Drawing on past experiences, it was ensured that the policymakers attended the forums and were willing to be involved in this study.

Benefits / beneficiaries

Identification of the benefits and beneficiaries was outlined in the following manner:

The likely beneficiaries are the urban poor. Through improved services and the increased financial viability of transport services, private sector transport providers may also benefit. Indirect beneficiaries are likely to be both higher income users and employers.

The research methodology was developed with a view to being translated into policy and practice through:

- the involvement of key stakeholders (drawn from the public, private, and civil society sectors) in determining the priority needs for information, and the meeting of these needs;
- capacity building and the involvement of the Urban Resource Centre, one of the important local civil society actors in transport provision;
- the direct involvement of both public and private actors in the research process through individual and joint stakeholder meetings; and, through the latter, joint dialogue on agreed issues that need to be addressed;
- community- and city-level cases to be studied with the longer term view of scaling up the activities to improve the sustainable livelihoods of poor urban communities. It was hoped that the active involvement of community groups in the research process, together with appropriate and meaningful data collection and analysis, will lead to on-going pressure on public and private sector groups to address the transport needs of the poor.

A summary of research activites

The planning stage also involved elaborate technical details to develop a research framework. Core principles of the sustainable livelihoods approach weres used to identify the likely direction of enquiry. The process is briefly described in this section:

The project purpose was taken as the focal point in developing the research framework. The project purpose was:

To identify, explore, and document critical issues in the provision of transport services for and in low-income settlements in a study city (Karachi) with a view to developing methodology, addressing policy and operational issues, and applying these in other cities in a subsequent phase of the research.

Modes of transport

After discussion with the researchers and the key informants, it was decided that the modes of transports that are most relevant are:

Motorized

- bus
- mini-bus
- coach
- contract carrier
- autorickshaw
- taxi
- Suzuki van
- boats

Non-motorized

- animal-drawn carriages (such as tongas and victorias)
- cycles

Major components of the studyIt was decided after discussions and initial review that the main components of the study could be divided into:

- Part I: Historic perspective of transport issues in Karachi
- Part II: Situational analysis of current issues
- Part III: Issues and recommendation
- Part IV: Methodology

It was thought that an early focus on different components would enable the team to run the activities in parallel. The section on historical section was intended not only to provide the case study with a rich historical context but also provide a link between micro and macro variables.

Key perspectives

After initial review and discussion it was evident that the perspective of the users in the debate about public transport is lacking. It was recognized that the key actors are:

- users
- providers/operators
- regulatory agencies

Major activities

In light of the focus of the project and after identification of the gaps and the key actors a working research framework was developed to undertake research.

Collection of secondary information

The main activities identified were literature reviews and development of references and bibliography, sorting of information, and synthesis.

Collection of primary information

The main activities were:

City forums

- users
- operators
- regulators

Wider information collection

Information was collected from the key actors:

Users

- To select four or five low-income settlements and get 100 to 150 interviews. Appendix 5 provides an example of how the selection of low-income settlements was made. Appendix 1 provides an example of the considerations given in selecting the case settlements.
- Interviews will also include perspectives from women, children, senior citizens, and people with disabilities.

- Interviews with people at destination points such as:
  - bus-stops
  - hospital/schools
  - railway stations
  - inter-city bus terminals

Users involved in an accidents (one or two interviews from each settlement from people who were directly involved in accidents)

A brief profile of the users is given in the Appendix.

Providers or operators

It was aimed to cover the following key informants:

- 5-6 interviews with owners of transport vehicles
- 8-10 profiles of the transporters associations
- 8-10 profiles of transport workers of (drivers and conductors)
- 2 interviews of insurance companies to find out various possibilities of motor vehicle insurance

Regulatory/government

The key organizations were identified on the basis of the existing information and reviews. The organizations were:

- Traffic Engineering Bureau (TEB)
- DIG (Deputy Inspector General) Traffic
- Regional Transport Authority (RTA)
- Karachi Metropolitan Corporation (KMC)

Two interviews with key informants from each of the following regulatory agencies was aimed for.

Miscellaneous information

Route map

No reliable route map was available, so the local research team took the initiative and developed a route map of the existing transport system.

Records of traffic violations

To find out the nature of traffic violations and involvement of buses and mini-buses and other vehicles the following information was thought to be useful:

- Route violation and fitness test

Citizens initiatives to manage traffic

Information in the press and interviews were undertaken with the key actors.

Development of relevant checklists

Relevant checklists of the issues to be explored were developed (see Appendix). The lists were not rigid and necessary changes were made during research. Any new issue was welcomed. The livelihood issues were implicit in many of the issues, and livelihood principles were used in identifying the potential key issues. The developed checklist of the issues was then pilot-tested during the initial phase of the research.

Planning of the data collection activity

The case study approach used various methods of collecting evidence. Elaborate planning was done prior to the data collection exercise. Details about decisions taken on how the primary and secondary data was to be collected are being presented here, along with the decisions about conducting the forums.

Primary data collection

Case study information was collected through a literature review including unpublished local reports and semi-structured interviews with key informants in four or five low-income settlements. In total some 20 interviews were undertaken in each of the case study settlements, all with users of the services. Additional interviews — a further 10 in each settlement — were undertaken with selected individuals travelling to and from these settlements at nodal points. These settlements were selected from the Urban Resource Centre's existing database. Care was taken to achieve an adequate representation of gender and age groups within these interviews. The interviews were based on the developed checklist around the identified issues. The issues were triangulated by key informants and literature review.

Details of the strategy were decided during the planning stages in the following way:

Options

There were two major alternatives which might be used: an in-depth ethnographic study of the experience in one or more low-income settlements, or a more quantitative study with a structured questionnaire for statistical analysis.

Criteria

The criteria selected for choosing a research method is summarized as:

- Generalizability: logical replication rather than statistical replication was aimed for. The breadth of experience means that it is more likely to produce generalizable results that are valid across the city whilst, for the same cost, a household-level study would focus on a smaller area.
- Involvement of key stakeholders: the emphasis placed on the interaction of important transport-providing and transport-regulating groups are to ensure that the findings address their needs and influence the dynamics within the transport sector. It is hoped that this will assist in the introduction of improved services.
- Understanding experiences: An exploratory study is required to better understand the experiences of the urban poor when using the transport system. We are anxious to identify a range of needs, possible problems, and their consequences for the livelihood strategies of differentiated groups within the urban poor.

Strengths and constraints

It is believed that the most significant strengths of the chosen methodology are that it will:

- produce a rich understanding of local perspectives differentiated by groups within the urban poor
- engage key groups in the research process
- provide a new source of information for stakeholder groups to consider to enable recommendations for improvements to emerge from, and be considered within, the research process.

There are some areas, however, which with due care can improve the effectiveness of the methodology.

- Accuracy of information about settlements: We have concerns over the representativeness of the case study settlements. The sample chosen can be criticized for not being sufficiently large to give an accurate representation

of the experience of the urban poor in Karachi. Care was taken to examine the existing documentation of low-income settlements in the city, however, to ensure that the areas for this research do not have anomalous characteristics.

- Representativity of key informants: City-based stakeholder groups are not necessarily representative. Not all the perspectives within each group may be represented at the meetings and there may be some groups that are not strong enough to participate through such forums.

To address the first problem, care was taken to interview both the main office bearers of any stakeholder group and dissenting groups or individuals, in order to present a variety of views. To address the second problem, care was taken to interview more widely within groups which have weak representative lobbies (for example, drivers of private transport services) and a number of additional workshops for such groups will be held.

- Limited vision of what is possible: Whilst the research process has gained a comprehensive and detailed understanding of the transport-related problems faced by the urban poor, solutions are likely to be limited to those that existing stakeholders believe are possible. The disadvantage of a single city study is that insights gained in other cities cannot be used to challenge assumptions about what is possible. In the short term, this problem will be addressed through a rigorous process, which inputs alternative ideas into the city forums. In the longer term, it is hoped that the key actors in Karachi will also be drawn into the second phase of the research.

Triangulation of information

Verification was primarily through triangulation, with four sources of data being cross-checked to ensure reliability, including:

- individual interviews;
- discussions with communities and stakeholder groups;
- existing data on transport and the urban poor; and
- interviews with key informants.

The lists of issues for the semi-structured interviews were developed from an analysis of existing community case studies and then piloted with individuals prior to being finalized.

Discussions/forums/workshops

The checklists of issues and the issues raised in the semi-structured interviews were the basis of the forums/workshops. Care was taken in planning the

forums so that a spread of age, ethnicity, and gender was reasonably maintained. The forums were not only used to learn about the problems and proposals of the urban poor in Karachi, but also were used for validation of information collected. The other role of the forums was the concurrent dissemination of the research information. The findings were presented to a wider group of leaders from urban poor communities throughout the city. Using forums, the information emerging from the interviews and analysed by the local research team was explored. The forums provided the means by which stakeholders become involved in the research process. Each stakeholder forum briefly involves the following five steps:

1. Identify issues through semi-structured interviews.
2. Identify further respondnets/actors through the same interviews.
3. Ask one of the interviewees to be a resource person presenting a perspective to a group of others from the same stakeholder group. The chosen individual is one who has an insightful view of the issues.
4. Have a stakeholder forum at which the perspective of the individual is further discussed and explored. At this stage, the local researchers use the analysed results of the interviews to provoke the discussion, presenting key problems and issues before them.
5. Following the forum, the researchers draft a summary note and circulate this to participants.

Once such a forum has been held for each of the stakeholder groups, a larger group of up to 60 people is then convened to explore issues between the different stakeholders. It should be stressed that the purpose of such a forum is not to secure agreement but rather to allow the perspectives of the different stakeholders to be reviewed by a wider group.

Analysis

To analyse the transport issues for groups working across the city, semi-structured interviews were held with public, private, and civil society representatives. Focus group discussions were also held with the private sector providers — especially the drivers of the vehicles as strong city-based organizations do not exist for this group — including trade associations. These private sector providers are primarily rickshaws, taxis, buses, and mini-buses. The semi-structured interviews were analysed by the local research team with support from the UK-based team. The results were further explored through the discussions in city forums.

The analysis of data was undertaken in the following ways:

- Information from the semi-structured interviews was compared across the case study communities with similarities and discrepancies being highlighted. Comparative analysis (pattern matching) was undertaken by user groups and by transport groups. The differences between user groups, transport groups, and settlements were identified and further explored through the forums.
- Numeric information was tabulated where possible.
- The analysis of information from the interviews was summarized prior to the focus group discussions. The focus group discussions within the low-income settlements were structured to allow for comparative analysis.
- The preliminary conclusions arising from the data analysis was explored through the forums.

Secondary data collection

Sources for secondary data were also discussed while planning the methodology.

Secondary data is available on some of the issues and professional agencies like the Traffic Engineering Bureau and the Engineering Department at the university were very useful. While data from such sources is considered to be reasonably reliable, it is limited. In particular, there is no good information on the cost of transport, nor on the perspectives of different groups of users.

A strategy for data collection was formed during the planning stage which would included literature review and synthesis of secondary data and contain an historical analysis of transport provision in Karachi, a review of existing user studies, and existing studies of transport providers. The database of the project includes international studies as well was other research activities.

Workplan and activities

It is important to draw a work plan for activities in consultation with the local partners. The plan should have the flexibility to accommodate changes such as local holidays and celebrations, which may effect the work plan. The following work plan was chalked out.

Schedule of activities

1. **Preparatory phase** During the preparatory phase the researchers:

- draw together the secondary literature in a report,
- identify the case study settlements and key city-level informants; and
- prepare the research tools.

During this phase, a UK-based team member visited Karachi and worked with the URC to develop the research methodology and tools and to analyse the secondary data. (For example see Appendix)

2. Primary research phase During the primary research phase the researchers:

- collect the settlement and city level information (individual interviews, focus groups and key informant interviews);
- undertake preliminary analysis of this information;
- prepare the initial findings; and
- conduct the city-level forums.

3. Completion phase During this phase the researchers complete the research and report on the initial findings and review these findings through city-wide discussions;

- share the findings more widely through an electronic conference;
- finalize the city and international publications;
  disseminate the findings through a number of different means of communication; and
- a UK-based team membervisited Karachi to help the URC with the analysis, review of the findings, and the development of the conclusion.

The law and order situation in Karachi and political changes in Pakistan have affected some of the activities for a short period of temporarily. While the law and order situation in Karachi might be perceived to be a major risk, it should be recognized that the main reason why transport is currently targeted during disturbances (as is the case at present) is the high level of frustration with existing services. The process of the research will hopefully offer transport providers insights into how, both individually and collectively, they can improve the services that they offer.

Responsibilities in the research process

The following decisions were taken regarding the roles and responsibilities of the research teams from the beginning.

- Overall management of the research project was clearly assigned. The tasks for primary and secondary data collection and the analysis of the data were clearly defined. Procedures were developed with the local members for documenting the processes, collecting and indexing data, choosing retrieval mechanisms, and investigating possibilities for automatic data retrieval.

- Channels of communication within local partners and among the UK-based partners was clearly defined. The main contact point in the UK and in Karachi was established.
- Specialist inputs were clearly defined and managed in a way that the local partners get the full benefits of such inputs without any interference in their research process.
- The local team was organized and capacity building sessions modelled around the actual job were organised. These discussions included the topics such as research methodology, techniques, and analytical framework. The team was lean and the members were selected to complement the skills and not to duplicate, though there were some areas of overlap. Both male and female researchers were involved in the research process.
- Time for deliberate interim reflections and frequent meetings was built into the research programme. The research process was developed into a very organic process.
- Logistics requirements were estimated right from the beginning and efficient support was maintained throughout the research.

Process

Research in action

Highlights of the actual proceedings of the practical work undertaken are presented here, along with reflections from the local team. It is hoped that the documentation of the research process and the reflection will help in undertaking similar research activities.

During the research process some reporting and monitoring tools were developed by the local team to improve the research monitoring. The team developed a simple weekly progress-monitoring format (a copy is included in Appendices 7,8 and 9). Copies of two schedules which were prepared are also included.

The research activities were categorized as follows:

- settlement visits / interviews
- documentation of the interviews
- collection of secondary data / sources
- compilation of secondary data collected

- analysis of interviews
- compilation of data obtained from interviews
- presentation of compiled data into a report format
- conducting forums / workshops
- formulation of recommendations
- documentation of process / methodology

Upon reflection the team feels that there were certain parts of the process which could have taken place simultaneously, and thereby the overall time taken for the study could have been used more effectively. These lessons could only have been learned by the team after going through the whole exercise, so it was a capacity building and lesson learning process. The documentation of the process can guide future work of similar nature, by this team or another. The categories of work listed above do not necessarily correspond to the order in which they were undertaken. Certain points on the sequencing of work will be presented later.

Settlement visits/interviews

Reflections on the dialogues undertaken with the communities in the settlements are presented here in the form of brief notes:

- Existing links and contacts in the community are very useful when working in low-income settlements. These links can be crucial in dealing with the women and children.
- An initial visit to the community, even a short one, is helpful in being accepted in the communities. An introduction to the research can be provided during these initial visits.
- An early link with community activists can be useful in identifying names of the people who regularly use public transport.
- Before starting an interview, it is always beneficial to explain the project objectives, and to start with a an informed discussion on the subject of transport.
- After the interview, it is always useful to leave the contact address and number in case the interviewee wants to add some more information.
- Interviews were held mainly on Saturdays and Sundays. Urban poor people are very busy and the researcher should respect their activities. It is out of kindness that the poor have accommodated our research in their schedule.
- The researchers conducted interviews with women inside the houses. Usually female researchers interviewed the women.
- During interviews group discussions were also encouraged.
- At settlement level, people usually believe that transport is not an immediate/internal problem which they can/should solve by themselves, but after applying the sustainable livelihoods principles they started to appreciate the links.

Documentation of the interviews

- Notes were taken during the interviews, which were later re-written in a fair manner, then they were typed (in Urdu).
- Interviews were documented as soon as they were completed.
- Initially an effort was made to record the interviews, but it soon became evident that the people were reluctant to speak in front of the taperecorder, so notes were taken by hand.

A copy of a general questionnaire prepared for the interviews with the some key informants is presented in the Appendix.

Medium of communication

The respondents feel more comfortable communicating in their local language. This has created additional translation work for the research team. In some cases non-text-based mediums like photographs and charts were used to communicate with the respondents.

Processing the information from the interviews

The following steps were taken to process the information:

- Copies of interview transcripts were made.
- The interviews were typed up in the local language.
- Concurrently, the issues mentioned in the checklists were highlighted through the process of group discussion among the researchers.
- The paragraphs and sentences were then coded according to the discussion of the issues. First the portions were coloured with highlighters, then they were cut out with scissors, and then they were pasted onto separate issue sheets. This exercise became the basis for the analysis of the types of comments recorded on each issue.

Upon reflection, the team felt that a better coding system might have been more efficient. Instead of cutting and pasting paper, it could have been done on computer as the interviews were proceeding. The use of software for qualitative data analysis can also be considered for future work.

The analysis process involved the following major steps:

- Some of the interviews were analysed. The team members reflected on the findings in a group discussion and then more interviews were analysed. The process was iterative.
- It was realized after the work began that important information can be sorted out during the data collection phase, there is no need to wait for all the interviews to be completed.
- It was learnt that a proper format for documenting the interviews has helped to speed-up the analysis.
- The involvement of field researchers in the analysis was helpful. They could link a number of aspects, which were not explicitly noted in the documentation, or which would have been difficult to extract.
- Because semi-structured and unstructured interviews were used the analysis process became more time consuming. Therefore it was learned that the entire team of researchers must understand clearly the overall implications

for selection of the research methods from the beginning.

- After compilation of all interviews a final analysis of the interviews was performed.

Compilation of data obtained from interviews

After the completion of the analysis sheets, as described above, broad categories for tabulating the findings were decided and the number and list of comments obtained were listed/counted accordingly. These lists were then translated and presented by issue in narrative form in the report. The research teams learned that:

- A systematic scheme to sort information from the early stages of the data-collection activity is essential.
- Each interviewer should not only document the interview but also process the information as soon as possible.
- A good documentation process helps to sort out the information easily.

Collection of secondary data sources

The availability of reliable data was the main constraint. Some of the basic information which is generally assumed to be available was lacking, such as the maps of the bus routes. The time consumed in locating sources, obtaining the information, and then verifying the facts was far more than expected. It is still hard to quantify such efforts. Some comments are as follows:

- It was generally found the libraries are poorly maintained, i.e. no proper catalogue was available, and books and reports were missing. The listing and collection of the material was, therefore, a difficult process.

A filing system for storing the information was developed. Initially some notes were made and filed but the source information was not recorded properly. Later on, at the stage when footnotes for the report were being planned, it was realized that to re-check the source information for each statement being used amounted to locating the material all over again. Afterwards a format was established for noting source information, and all the facts and statements collected from that point onwards were filed only when their source was noted down completely in the format agreed.

A copy of one of the table formats developed for noting down information about modes and infrastructure is presented in the Appendices.

Compilation of the secondary data collected

The books, papers, reports, and unpublished reports were collected and reviewed. The process of recording the collected data involved the following steps:

1. Developing categories of information.
2. Sorting the information into different categories.
3. Developing a bibliography and references.
4. Developing abstracts of the plans and related information.
5. Immediate computer feeding of the sorted material to develop a database.

Presentation format and report writing

A format consisting of charts and issue essays was considered but later, in order to maintain the report-like character of the presentation, a more straightforward and simple chronological style of presentation was chosen. The scanning and sizing of photographs took an extensive amount of time, until it was learned to do this more efficiently.

Conducting forums/workshops

Forums were advertised using notices through the existing networks to invite the participants. Transparencies and charts were prepared for a brief presentation before each Forum (see Appendix).

The following are some of the steps involved in conducting the forums:

- Meetings were held before the Forums, to explain the objectives.
- Dates and time were fixed according to the participants' convenience.
- Venues were selected within the respective settlements for the Users Forums.
- Community groups and/or activists were given the tasks of inviting all the participants.
- Proper invitations were issued for the Forums.
- A reminder was sent before the Forum.
- All proceedings were recorded and transcribed.
- A brief introduction of the participants facilitates discussions.
- A brief presentation of the key findings from the key actors also proved to be useful to stimulate the discussion.

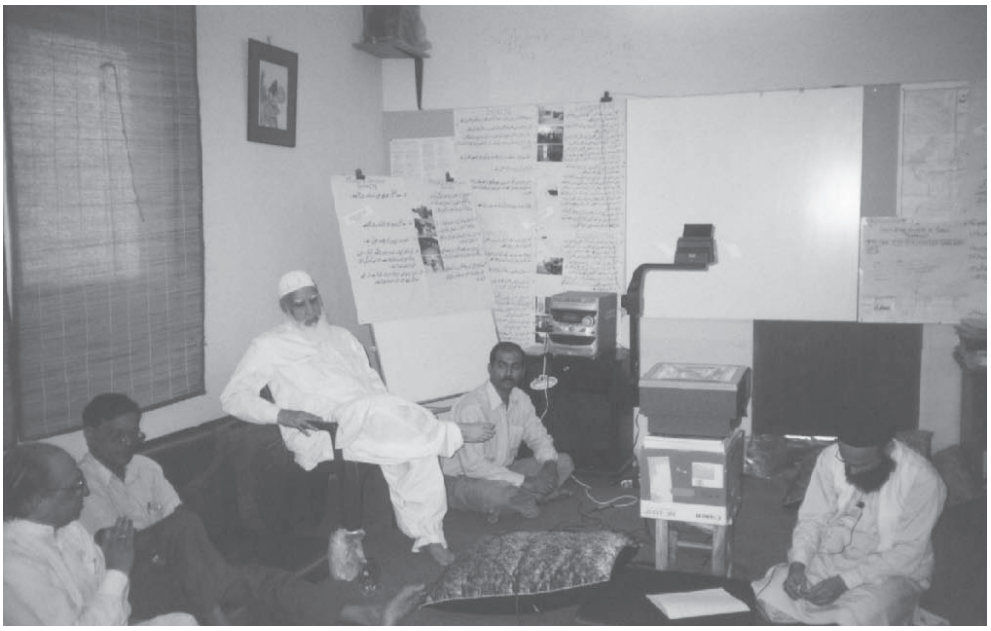
- More time was felt to be required for the discussions.
- No rigid format was used, only a tentative programme used for planning purposes.
- Participants were encouraged to speak openly but care was taken that the forum was not 'hijacked' by the most vocal participants.
- Women were allocated a separate slot and were prompted to speak during the discussions.
- The sharing of experiences and contact details among the participants was also encouraged.

Formulation of recommendations

Regular meetings were held to discuss the analysis and recommendations of the research. Not only specialists were involved but also some key informants were also consulted on regular basis.

Photographic documentation of the process

Photographs have been taken of all meetings and process work. Minutes of all the meetings have also been recorded, and the complete record is in the research database. Also three meetings were held, one each for the researchers, key informants, and specialists, to compile the guidelines, note relevant points about the process, and also to reflect on what the team had achieved and learned from this project.



Guidelines

This section presents some guidance notes based on what was learned while conducting this research. The intention is not to duplicate the information available in the standard texts on research methods, but the following notes will be useful for anyone trying to replicate similar research methodology in a different case study.

Overall Research

- A specific and clear focus for the research should be identified at an early stage. Developing questions around the project purpose could facilitate this.
- Before starting, the scope of the research should be defined within the available time and resources.
- The processes and the stakeholders to be explored should be identified as soon as possible. Preparation of lists of kinds of information required and its sources can help.
- The roles and responsibilities of different partners should be clear. Developing an outline of the outputs and how those will be used in future can help to focus on the topic during research.
- The research approach should be made operational by clearly developing operational definitions of the concepts using simple terms.

Research team

The members of the research team should bring complementary skills and capacities. They must respect each other's views. Their vision about the research topic must be clear and they should all have an equal understanding of the issue. Co-ordination among partners is crucial in conducting this type of research. Defining a clear chain of communication facilitates this. The responsibilities of different partners should be distributed on the basis of the capacities of the team members. Team members should be aware of the difficulties each other will face, and should help each other as much as possible.

Preparation of checklist

From the main research questions and the operational definition of the concepts in the context of research approach, key issues can be listed and a checklist developed. The purpose of the checklist is to ensure that all the intended issues are covered during fieldwork. Checklists should be reviewed from time to time and new questions may be added. The categories of the interviewees should be defined earlier, and separate checklists should be prepared for each stakeholder.

Preparation of fieldwork and distribution of responsibilities

Before starting the fieldwork, logistical arrangements must be made, including securing the use of cameras, cassette recorders, cassette tapes, notebooks and pens/pencils. If these responsibilities are distributed among the team members it will help. The tasks of recording the interview, taking notes, observing, facilitating and co-facilitating should be clearly assigned to team members. This practice will help to save a lot of time and other resources.

Conducting interviews

To conduct the interviews in the settlements, identify the resource person from each settlement and explain to him/her the purpose of the visit. That resource person will be very helpful when the team is ready to conduct interviews and forums in the future.

The interviewer must be sure about the purpose of the interview. He/she must know the topics on the checklist in order to avoid repetition. The interviewer must observe the interviewee and her/his environment during the interview. Sometimes interviewees hide some facts, and if the interviewer is observing and is sensitive to what is being said, the hidden facts can be explored. This practice will also help in analysing the information. The interviewer should know the art of extracting information tactfully without going into unnecessary detail and without ignoring what the interviewee wants to say. Good listening skills are important. In some instances, it is better to explore the sensitive issues without asking direct questions.

Additional questions, arising from the discussion, must be noted during the interview and should be asked after the interviewee completes his/her discourse. These supplementary questions can become the part of the checklist later on.

Feedback of interviews within the team

After conducting an interview the team members should review their notes and share the experience. They should analyse this sample and critically evaluate their performance in order to improve their efficiency.

Writing up interviews

Information gathered through interviews must be written up without delay. The notes should include not only what was said but also what was observed in terms of the gestures of the interviewee and the environment around him/her. If the interviews are not recorded quickly such observations may be lost.

At this time the observations should be explained, which will help in analysing the information later. At the end of each interview personal reflections and observations about the interview should be written.

Analysis of the interviews

The observations and information must be analysed using the sustainability framework. The information must be triangulated to improve its reliability and validity.

Conducting forums

A forum or series of forums can be conducted with different stakeholders such as regulators, operators, and users. The outcomes and other relevant issues which have emerged during the process of research should be presented to the forum. Keeping in mind the role of different stakeholders, they can be encourgaed to share the responsibility of solving some of the issues themselves. A new partnership comprising different stakeholders can thus be created to solve a particular issue.