

Chapter Three

The Method

THIS CHAPTER DESCRIBES THE STUDY'S DESIGN AND THE RATIONALE FOR its methods. The philosophical foundation of the grounded theory approach is given followed by the considerations of project area, selection of the development projects, participant selection, gaining access, and data collection and data analysis. The chapter concludes examining the ethical issues and concerns related to the organizations selected and the research participants, and a consideration of trustworthiness.

RESEARCH DESIGN

This research study is exploratory and descriptive within a grounded theory framework of qualitative research that uncovers lived experience and creates meaning. As stated by Patton (1990, p. 61), however, "Qualitative inquiry designs cannot be completely specified in advance of fieldwork." The details of the design of this study, as Patton states, therefore emerge "as the study occurs" (p. 61).

Due to the lack of the program related data profile in the coastal regions of Bangladesh, the study began by conducting a short inventory of development projects in the regions. In relation to this, the following methods of data collection were used: (1) direct observation of the events, phenomena, and situations; (2) review of public documents; and (3) face-to-face, in-depth interviews with both groups of research participants (beneficiaries and functionaries of governmental, nongovernmental, and international organizations' development programs). A purposeful sampling technique was used to select three *thanas* from the eastern coastal regions, keeping in mind the limited time for data collection, the cost, and accessibility to distant locations. From each selected *thana* two groups of respondents, the functionaries, and the beneficiaries of the existing development programs were selected for this study.

RATIONALE FOR THE FORM OF INQUIRY

The research strategy is determined by the nature of the research question (Field and Morse, 1991). Denzin and Lincoln (1994) stated that:

. . . the qualitative strategy used in the study is largely determined by the purpose of the study, the nature of the research questions, and the skills and resources available

to the investigator. They also mentioned that a good researcher is not confined methodologically by being trained in and limited to a single strategy (for instance, "I only 'do' ethnography"). Such restriction limits the types of questions the researcher may ask and the types of results he or she can obtain, and restricts the strength of the research. (p. 223)

The choice of a strategy for this study began with a survey of the literature followed by a decision to use qualitative or quantitative methods. The use of qualitative methods such as interviewing, direct observation, and document analysis were deemed to be appropriate methods at this stage of investigation. Patton (1990) states that qualitative inquiry is highly appropriate in studying process because its depiction requires detailed description, the experience of people typically varies, process is fluid and dynamic, and participants' perceptions are a key consideration.

The study examined (1) the nature of the functionaries' and beneficiaries' participation in coastal development projects, (2) the perceptions of what their participation should be or have been, and (3) the similarities and differences between their perceptions of effective community participation. Participation in development activities is an individual experience. To explore and capture these experiences, qualitative methods were used, given the need for a detailed description of the concept of participation as it relates to development. Good quantitative studies should be done only when one has a good grasp of factors needing to be measured. Those factors cannot be decided prior to collecting comprehensive information on the type of situation and people to be studied.

The qualitative approach that was chosen for this study involved making choices between ethnographic, phenomenological, and grounded theory because they are exploratory with a descriptive focus. A phenomenological study describes the meaning of the lived experience for several individuals about a concept or a phenomenon (Creswell, 1998). In ethnography, the focus is to describe a cultural or social group or system that offers the researcher an opportunity to see culture at work. Although both ethnography and phenomenology focus, respectively, on the nature of the phenomenon and its meaning, and although they are interesting concepts, such a study would be more appropriate as a follow-up to the proposed methods. Creswell (1998) states that if a theory needs to be developed or modified to explain a concept the suitable approach is grounded theory. Denzin and Lincoln (1994) mention that if the question concerns an experience, the focus is to develop a theory grounded in field data. If the phenomenon in question is a process, as is the case here, the best study approach is grounded theory.

THE PHILOSOPHICAL UNDERPINNINGS OF THE APPROACH

The roots of grounded theory are philosophical in nature. The underpinning of this approach is embodied in its respect for the subjective meaning of experience. Although participation in development activities refers to group action, decisions

to participate in the groups are individual ones based on life experience of the individual (Chowdhury, 1996). Chowdhury further clarifies that this has to be dealt with in discussing and enabling them to imbibe concepts like decision making, class consciousness, conscientization, and motivation.

This study attempted to explore the perceptions of research participants and how they diverge from and converge on perspectives of beneficiaries and functionaries as to their participation in the development projects. As a way of knowing, the grounded theory becomes a potent means for generating culturally sensitive social work knowledge.

Grounded theory was developed as an approach of generating theory inductively from data in order to counter what its creators saw as “the embarrassing gap between theory and empirical research” (Glaser and Strauss, 1967, vii). In their original work, Glaser and Strauss discovered how categories of meaning related to dying emerged from the study of interviews with medical staff treating terminally ill patients. The concepts manifesting themselves were thus “grounded” in the data from the field, especially in the actions, interactions, and social process of people, rather than imposed by existing theory. Creswell (1998) contends that:

Although a phenomenological study emphasizes the meaning of an experience for a number of individuals, the intent of a grounded theory is to generate or discover a theory, an abstract analytical schema of a phenomenon that relates to a particular situation. This situation is one which individual interacts, takes actions, or engages in a process in response to a phenomenon. To study how people act and react to this phenomenon, the researcher collects primarily interview data, makes multiple visits to the field, develops and interrelates categories of information, and writes theoretical properties or hypotheses or presents a visual picture of the theory. (p. 55–56)

The centerpiece of grounded theory research is the development of a theory closely related to the context of phenomena being studied (Creswell, 1998). Grounded theory was developed as an approach that respects the subjective meaning of experience. Much of the material about coastal Bangladesh has been written, as I have indicated (1995), “by persons whose values and attitudes distance them from the people they write about.” The purpose of this study is to explore lived experience of coastal people, and discover if it differs significantly from the outsiders’ perceptions of what constitutes effective community participation in coastal development projects. This would ultimately help to design an effective need-based community participation model for coastal development projects.

Although a qualitative model, grounded theory is specific in method, employing “a systematic set of procedures to develop an inductively derived grounded theory about a phenomenon” (Strauss and Corbin, 1990, p. 24). The primary task of a grounded theorist is the exploration of “emerging structures” of meaning from data (Glaser and Strauss, 1967, p. 61), a task carried out in five steps: data collecting, categorizing, integrating the categories, memoing, and writing the theory

(Holman, 1996). Creswell (1998) mentions that in grounded theory research, the researcher typically conducts twenty to thirty interviews based on several visits to the field to collect interview data to saturate the categories. A category represents a unit of information composed of events, happenings, and instances (Strauss and Corbin, 1990).

In this study, I conducted twenty-four interviews, made several field visits, and kept a record of events, interactions, and other data by maintaining a field journal. The researcher also collected and analyzed observations and documents, and simultaneously began the analysis of data in the field. The emerging categories were noted in the journal's margin and collected comprehensive information related to the emerged categories. Obtaining detailed information about the categories ultimately assisted me in exploring similarities and differences between functionaries and beneficiaries as to their perception of effective community participation in the coastal development projects.

SELECTION OF THE RESEARCH PROJECT AREA

Qualitative research studies take place in natural or field settings. Tutty, Rothery, and Grinnell (1996) note that choosing a site is probably one of the hardest parts of doing any research study (quantitative or qualitative) since the site chosen must be willing for you to intrude on its territory. Marshall and Rossman (1995) note of the ideal site:

Where (1) entry is possible; (2) there is a high probability that a mix of the process, people, programs, interactions, and structures of interest are present; (3) the researcher is likely to be able to build trusting relations with the participants of the study; and (4) data quality and credibility of the study are reasonably assured. (p. 51)

The selection of eastern coastal region for this study was based on these guidelines. I was born and brought up in the eastern coastal region and my ancestral family lives there. Moreover, I have considerable experiences conducting qualitative and quantitative research projects in this region (see references cited).

Coastal areas of Bangladesh, about 710 km in length, extend along the Bay-of-Bengal from the mouth of Naf river in the southeast to the mouth of Raimangal river in the southwest and includes the regions of greater Chittagong, Noakhali, Barisal, Patuakhali, and Khulna (Nishat, n.d.). The area is broadly categorized into three regions based on its physiographic characteristics, such as eastern region, central region, and western region. Since I was born and brought up in the eastern region, gaining an entry to the region was easier and building a trusting relationship with the participants was less time-consuming. Two offshore islands named the Kutubdia and the Moheskhali, and a coastal *thana* named the Cox's Bazar from the eastern coastal region have been selected for this study.

As mentioned earlier, the cyclone of 1991 hit the eastern coastal region on

April 29, 1991, killing 138,000 people, leaving more than 10 million people homeless, and damaging properties worth two billion dollars. Within six years, another severe storm struck the region on May 19, 1997. Both cyclones ransacked coastal habitat and livelihood in this eastern region. Another reason for selection of the eastern region was to explore perceptions of community participation from the perspectives of functionaries and beneficiaries in development projects sponsored and conducted by national, private, and international organizations.

SELECTION OF COASTAL DEVELOPMENT PROJECTS

Upon arrival at Dhaka, the national capital of Bangladesh, I spent two weeks selecting the coastal development projects for this study. During this period, I visited different governmental, nongovernmental, and international organizations' head offices in Dhaka. Several key officials were contacted and interviewed in order to find out about their coastal development projects. The following is a list of development projects that existed in the region during the period of data collection from June 1997 to August 1998.

1. Shrimp farming projects
2. Salt growing projects
3. Coastal embankment rehabilitation projects
4. Cyclone preparedness program
5. The Greenbelt projects
6. Social forestry programs
7. Disaster management projects
8. Marine fishing
9. Land reclamation projects
10. Agricultural extension services
11. Health services and family planning
12. Rural development projects
13. Thana social services
14. Animal husbandry
15. Livestock and fisheries development
16. Cooperative and cooperative based development projects.
17. Disaster relief projects
18. Rural water supply and sanitation management
19. Rural credit projects

All of these projects are unique in their own way and they are carried out to ensure coastal development in the region. Indeed, it was a challenging task to select coastal development projects from such a variety of options. However, keeping in mind the objectives of the research project, I selected organizations that focused on community participation in their development projects. They represented three

sectors, such as the governmental, nongovernmental and international organizations. The following four projects at three levels were selected for this study:

International Organization's Project

1. Cyclone Preparedness Program (CPP), Bangladesh Red Crescent Society (BDRCS).

Government Organization's Project

2. The Coastal Greenbelt Project, Forest Department, Government of Bangladesh.
3. Coastal Embankment Rehabilitation Project (CERP), Forest Department, Government of Bangladesh.

Nongovernmental Organization's Project

4. Social Forestry program (SFP), Bangladesh Rural Advancement Committee (BRAC).

(For detailed information on the above selected development projects please refer to chapter 4, this volume).

RESEARCH PARTICIPANTS

The beneficiaries and functionaries of the governmental, nongovernmental, and international development projects were selected as the research participants of this study. According to Lincoln and Guba (1985), "all sampling is done with some purpose in mind" (p.199). I used purposeful sampling strategy to select research participants based on the following three situations.

First, this sampling technique allowed me to select unique cases that were information-rich for in-depth investigation. Information-rich cases yield a great deal about issues of central importance to the purpose of research (Patton, 1990). Second, this technique enabled me to select members of the difficult-to-reach-specialized population, such as the elite (functionaries) of the coastal regions and the development projects. Patton (1990) says the sampling strategy must be selected to fit the purpose of the study, the resources available, questions being asked, and constraints being faced. Another reason for purposeful sampling was convenience; for instance, visiting and interviewing respondents in distant locations, which was time-consuming and expensive. Costs were a major consideration for this study.

Sample size for the study was restricted to twelve beneficiaries and twelve functionaries, eight from each of three *thanas*. Given the limited number of officials, some local key informants such as educators, journalists, lawyers, and politicians,

who are members of the project committees, were also interviewed, but their total number was limited to four from each *thana*, for a total of twelve. Marshall and Rossman (1995) termed this technique as elite interviewing: “Elite individuals are considered to be the influential: the prominent and well-informed people in an organisation or community and are selected for interviews on the basis of their expertise in areas relevant to the research.” They have been considered as functionaries in this study. As a native of the region and a member of an established family, I had the advantage of access to the elite.

The functionaries were selected using purposeful criterion and snowball/chain sampling techniques. Purposeful technique was used to select functionaries who could provide detailed information about the project and assert his/her perception with regard to the effective community participation in the coastal development projects.

Criterion sampling technique was used because the functionaries selected for this study had to be a formal or informal official of the development projects selected for this study. In order to identify them, I often asked the attending interviewees whom they thought would also be suitable for interviews. This helped me identify information-rich cases, particularly from informal functionaries, since they do not attend the office on a regular basis.

Beneficiaries were selected from development programs in the region for a total of twelve, four from each *thana*. Purposeful criteria and snowball sampling strategies were used to select them. Criteria sampling technique was based on picking cases that meet certain criteria. Main criteria for selecting a beneficiary were: (1) a local resident and (2) associated with the development projects selected for this study.

Table 3.1 shows some of the selected sociodemographic characteristics of research participants. From a gender perspective, there were no women working as functionaries with any of the selected development projects during the period of data collection. Only four out of twelve beneficiaries were women, and of them, three were associated with an international development project and one with the government project, though she had a full-time job with CARE-Bangladesh.

Training makes a big difference in terms of ensuring participation in development projects. It was found that 79.17 percent of the participants were trained locally and 16.67 percent of functionaries received training abroad, whereas twenty five percent of the beneficiaries did not have training of any kind.

Participants received training in the following areas: disaster management; community development; first aid; banking and credit management; management development and planning; cyclone preparedness program; law and human rights; fisheries and agriculture; ecology and environment; research and survey; forestry, vegetable gardening, and horticulture; cooperative management; people’s awareness, social awareness education and social mobilization; range training; family

Table 3.1: Selected Socio-Demographic Characteristics of the Participants (N=24)

Attributes	Functionaries		Beneficiaries		Total	
	N	%	N	%	N	%
Gender						
Male	12	100.00	08	66.67	20	83.33
Female	—	—	04	33.33	04	16.67
Age						
15–29 yrs	03	25.00	06	50.00	09	37.50
30–44 yrs	06	50.00	04	33.33	10	41.67
45–59 yrs	03	25.00	02	16.67	05	20.83
Place of origin						
Local	02	16.67	11	91.67	13	54.17
Outsider	10	83.33	01	8.33	11	45.83
Education						
None	—	—	—	—	—	—
Primary	—	—	04	33.33	04	16.67
High	02	16.67	05	41.67	07	29.17
University	10	83.33	03	25.00	13	54.16
Work experience						
01–05 yrs	06	50.00	07	58.33	13	54.17
06–10 yrs	01	8.33	02	16.67	03	12.50
11–15 yrs	03	25.00	01	8.33	04	16.67
16–20 yrs	01	8.33	02	16.67	03	12.50
21 & Up	01	8.34	—	—	01	4.16
Training						
No Training	—	—	03	25.00	03	12.50
Local	10	83.33	09	75.00	19	79.17
Foreign	02	16.67	—	—	02	8.33

planning; wireless operation and cyclone signal; indigenous medicine; monitoring and evaluation; and training of trainers.

GAINING ACCESS TO THE COASTAL COMMUNITIES

The research was mostly undertaken in a natural setting. Gaining a favorable entry to this setting is a crucial task for the researcher. Marshall and Rossman (1995) note that “gaining access to sites receiving formal approval requires time, patience, and sensitivity to the rhythms and norms of a group.” According to Lincoln and Guba (1985), making an initial contact and gaining entry is the task of contacting appropriate individuals at the inquiry site. Gaining entry has both formal and informal aspects.

Initial Contacts

Upon arrival in Dhaka, the capital of Bangladesh, I developed a short inventory of development projects in the coastal regions. After a thorough and careful examination of the programs, four development projects conducted by three different governmental, nongovernmental, and international organizations were selected. The key officials of the selected three organizations were then contacted to get their approval for conducting interviews, collecting and reviewing of documents, and visiting their project sites. As a result of seeing the letter from my supervisor and the two consent letters, permission was granted to visit the projects at the different levels such as *thana*, district, and head offices. It is noteworthy to mention that since I was formerly a Bangladesh civil servant; the request made was granted rapidly. The process was also accelerated by my contacts within the organizations.

Contacts at the Local Levels

The research project was conducted in three different coastal *thanas*. Field activities began in my native *thana* Kutubdia, where I am popularly known as a friend of coastal people. I have many publications and had conducted several research projects on coastal regions. While contacting the local offices, I appreciated the fact that local officials in charge had already been informed by their head offices about the purpose of my visit.

I then made an explicit presentation about my research project, the terms and conditions of the consent letters such as procedure of participation, risks, costs, time requirements, confidentiality of information, and so on to the project officials as well as to the beneficiaries (during the interviews held with them). I was then granted permission to collect data.

I initially spent a few days talking to officials and some of the beneficiaries that came for their routine visits to the selected organizations. The purpose was to collect information about projects and identify appropriate participants for interviews. This process helped me build rapport with the project's officials. The same strategy was used in the other two locations. The officials of the Kutubdia *thana* contacted colleagues in the other two *thanas* to make accommodation arrangements and to help me explore pertinent information.

DATA COLLECTION METHODS

Creswell (1998) asserts that data collection in a grounded theory study is a “zigzag” process: out to the field to gather information, analyze the data, back to the field to gather more information, analyze the data, and so forth. The participants interviewed are theoretically chosen—in theoretical sampling—to help the researcher best form the theory. The data collection methods utilized were:

1. In-depth, face-to-face semi-structured/guided interviews with the beneficiaries and functionaries (including local key informants) of the selected development projects.
2. Direct observation of sites, events, situations, and phenomena to verify and collate data obtained during interviews.
3. Review of agency documents in the public purview such as minutes of the meetings, logs, formal policy statements, announcements, project proposals, program reports, letters, and memos.

In-depth Interviews

Rossmann and Rallis (1998) say that “In-depth interviewing is the hallmark of qualitative research. ‘Talk’ is essential for understanding how participants view their worlds. Often, deeper understanding is developed through the dialogue of long, in-depth interviews, as interviewer and participant ‘construct’ meaning.” Patton (1990) classified interviews into three categories: informal conversational interviews, standardized open-ended interviews, and the interview-guide approach. The interview guide approach was utilized in this research project. The prime focus of guided interviews is to elicit the participants’ worldview, and though the researcher develops categories or topics to explore, he or she remains open to pursuing topics that the participant brings up during the conversations (Rossmann and Rallis, 1998).

I developed two interview guides for the two categories of respondents: the functionaries and the beneficiaries. A Bengali language version of the guides was used because Bengali is the national language of Bangladesh and coastal people speak a dialect, an offshoot of the Bengali language. Each interview took approximately two hours and was conducted in Bengali, except two conducted in the regional dialect. I know the regional dialect and Bengali language because I was born and grew up in the coastal regions.

In line with the interview guide, during interviews with the functionaries and the beneficiaries, time was spent in general conversation about coastal life and environment. Frequently, other members were present during the interviews, and discussions were held with them as well. While questioning respondents, efforts were made to make certain that the questions asked were meaningful to the participants, and that replies accurately expressed their opinions. Questions were discussed in detail and respondents were asked what each question meant to them. The meaning of their answers was thoroughly explored. The intention was to eliminate any ambiguities in the questions, and to make certain that a question provided full scope for the respondent to give an accurate and meaningful reply. It was very important to stress this attempt to obtain meaningful and accurate replies because some of the findings reported in this study rely heavily on precise replies from the respondents.

Interview Questions

In part one of this study, certain criteria were set out as indicators for determining similarities and differences between functionaries and beneficiaries as to their perceptions of effective community participation in coastal development projects. These indicators were *participation in decision making, in implementation, in sharing, receiving the benefits, and in evaluations of projects*. The inquiry intended to answer certain questions concerning community participation:

1. Who takes part in the decision making process of the development projects at the grassroots level?
2. In what ways do coastal people in these projects participate and how are they selected?
3. How have income and services created through these projects been shared?
4. What kinds of evaluation take place and who is involved in evaluating the projects?

Part two was directed toward the level of understanding, definition, benefits, strengths, limitations, and identification of the potential elements of community participation. The key questions explored in this section are as follows:

1. In what ways have people benefited from participation in coastal development projects?
2. What should be the essential elements of effective community participation in coastal development projects?
3. What is their understanding of community participation in coastal development projects?
4. What factors motivate individuals to participate in coastal development projects?
5. What are some of the limitations that inhibit effective community participation in coastal development projects?
6. In what way does community participation accelerate or improve coastal development projects?

The interviews were tape-recorded. At the end of each interview session, the tape-recorded portion was rewound and then turned on for interviewee's listening. I observed that the participants were excited to listen to their recorded voices. They were asked to comment on the interview. In most cases, they added more information than was noted at the end of their sociodemographic data sheets. In some cases, a separate session for listening to the tapes was needed because of respondent's time commitments for other activities.

In some cases, initial interviews were used to reorganize and simplify some of the questions used in the interview guide after the first couple of interviews. I also

recorded nonverbal events such as gestures, pauses, nervous moments, laughter, and excitement that occurred during the interview sessions. Sociodemographic information regarding the respondents was obtained in a separate data sheet. A total of nine weeks were spent in the field, approximately three weeks in each *thana*.

Direct Observation

Observation means seeing with a purpose. It is a close look or view of situations with some definite purpose. It does not end with mere seeing but calls for the recording of data as noticed by the observer. Observation has three distinguishable components: (1) *sensation* that is gained through sensory organs, (2) *attention*, which is the investigator's ability to pursue the subject under study, and (3) *perception*, which comprises the interpretation of the sensory reports. Marshall and Rossman (1995) describe the process:

Observation entails the systematic noting and recording of events, behaviors, and artifacts in the social setting chosen for study . . . through observation, the researcher learns about behaviors and the meanings attached to those behaviors. Observation can range from highly structured, detailed notation of behavior guided by checklists to more holistic description of events and behavior. (p. 79)

I did extensive site visits to observe activities associated with development projects in the area. While talking to some local people, information gaps appeared to exist between the project's documents and the field reality of the development projects. These direct observations provided an opportunity to discover the reality of development projects for the lives and livelihood of coastal people. An observation checklist was used to record and log events, situations, and phenomena observed. Extensive field notes were also taken and a log/journal was kept while in the region. This direct observation of events, situations, and phenomena enabled me to compare and verify official records and field survival of the program activities.

Review of Documents

Another method to collect data for a qualitative study is the use of existing documents, which may be used along with other data gathering methods, such as interviews and observations (Franklin and Jordan in Grinnell, 1997). Reviewing documents is a necessity, particularly to assess the impact of development projects. Without the project proposal, annual progress report, minutes of the meetings, and so on, it is quite impossible to know what the project was supposed to accomplish and how far it has accomplished its goals. This review of documents also enabled me to collate, verify, and examine the figures, statistics, and statements made by the respondents during data collection.

In this research project, documents were collected both at the local and national levels. At the local level, messages, diaries, notebooks, pocket books, and posters related to community participation were collected. The project proposals,

annual reports, evaluation reports, and studies were acquired by contacting the head offices, and in some cases it took a few days to obtain them. To obtain government documents such as project proposals, annual reports, and progress reports, I contacted the Planning Commission of the Government of Bangladesh.

DATA ANALYSIS

In this qualitative research, the generated information was analyzed using an inductive data analysis method. Inductive analysis means that the patterns, themes, and categories of analysis come from the data; they emerge out of the data rather than being imposed on them prior to data collection and analysis (Patton, 1990). Analytic procedures in qualitative research fall into five modes: organizing the data; generating categories, themes, and patterns; testing the emergent hypothesis against the data; searching for alternative explanations of the data; and writing the report (Marshall and Rossman, 1995).

Inductive analysis begins with elucidation of key phrases or terms (indigenous concepts) used in the process; it is done through reading and rereading the data. People, events, and quotes sift constantly through the researcher's mind (Marshall and Rossman, 1995). Once the researcher has developed typologies for certain important features of the process, the second task of induction, then, is to look for patterns, categories, and themes for which a typology can be constructed to elucidate findings.

Patton (1990) warns that such constructions must be done with considerable care to avoid creating things not really in the data. As categories and patterns become apparent, the researcher begins the process of evaluating the plausibility of developing hypotheses and testing them through the data. The researcher must also search for other, plausible explanations for these data and linkages among them. Alternative explanations always exist; the researcher must search for, identify, and describe them, and then demonstrate how the explanation offered is the most plausible (Marshall and Rossman, 1995). Writing about data is a continuous process in qualitative research; it cannot be separated from the analytic process.

In this study, information was analyzed using the constant comparative method. Constant comparison is an iterative method of content analysis; each category is searched for in the entire data set and all instances are compared until no new categories can be identified (Glaser and Strauss, 1967). The authors also mentioned that this method takes place in four stages: (1) comparing incidents applicable to each category, (2) integrating categories and their properties, (3) delimiting the theory, and (4) writing the theory. These four stages are discussed elaborately in subsequent sections of this study on coding and analysis.

Transcribing

A word-for-word transcription was produced of each interview in the Bengali language. The transcriptions were enriched by additional information recorded in

the sociodemographic data sheet. The transcribed interviews were then translated into English. This process of translation was labor-intensive because I needed to be meticulous to ensure that pertinent meanings of the interviews were not lost.

Open Coding

The audiotape-recorded interviews were transcribed, coded, and organized into themes, categories, and patterns that evolved out of the generated materials in this study. At this stage, the researcher formed initial categories of information about the phenomenon being studied by segmenting information using the constant comparative approach of grounded theory. The categories covered a wide range of issues that were directly or indirectly related to the research questions. This open coding process consisted of thirty-seven categories, each of which was assigned a code.

Developing Categories

The process of developing the categories was made fully explicit. There was no supply of electricity in the coastal regions except for government offices, and only for a limited period of time. During the day the researcher was busy interviewing the participants and visiting the project sites for observation. On return to my residence in the evening after a long walk, it was hardly possible to transcribe data in the hurricane's dim light.

Under such conditions, I decided to listen to recorded interviews during the night as many times as possible, at least twice, and recorded the categories emerging from the interviews. The following day, further clarification was required; I solicited relevant information from the specific respondent. Respondent's remarks, views, and opinions were again recorded. Doing this was helpful because while clarifying issues rose, other substantial themes emerged.

The translated transcripts were read many times to verify accuracy of the English version. Using constant comparative method, I then attempted to saturate the categories to look for instances representing the categories. Constant comparative in grounded theory research refers to a researcher identifying incidents, events, and activities that constantly compares them to an emerging category to develop and saturate the category (Creswell, 1998, p. 240). At this level, the categories represented multiple perspectives, often referred to as subcategories. In order to look for the real meaning of the subcategories, they were dimensionalized separately both for beneficiaries and for functionaries. Ultimately, this process reduced a wide range of subcategories into a few categories, thus avoiding repetition and duplication. The saturated categories that emerged from the interviews with beneficiaries and functionaries are listed in tables 5.1 and 5.2, respectively.

Axial Coding

During open coding, many different categories were identified. Some of these pertain to specific phenomena such as ownership and control issues, needs assess-

ment, integrity, regular interaction, and community capacity building. Other categories emerged, though they were not very specific, and were found to be related to those categories. In axial coding, subcategories are related to their categories through the model (Strauss and Corbin, 1990). The authors also state that subcategories are linked to a category in a set of relationships denoting causal conditions, phenomena, context; intervening conditions, action/interactional strategies, and consequences in a grounded theory study.

The central categories of the community participation are identified at this stage. They were coded and classified in terms of similarities and differences (first research question) in relation to what is effective community participation in coastal development projects. In the process, sixteen categories (eight for differences and eight for similarities) emerged, each of them given a code.

Selective Coding

Strauss and Corbin (1990) defined selected coding as “the process of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development” (p. 116). The researcher identifies a story line and writes the story based on the core categories, systematically relating it to other categories that emerged from the data in axial coding.

Having identified sixteen categories (eight for similarities and eight for differences) at the axial coding stage, I then identified categories related to the core category of community participation. I used Microsoft Word to record the story line and to see the relationships between the core category and the emerged categories. Differences and similarities of perception about what constitutes effective community participation were presented from the perspectives of the beneficiaries and the functionaries in two separate tables (table 5.3 for similarities and table 5.4 for differences). This graphical presentation of the categories in tables helped me to visualize points of convergence and divergence between the beneficiaries and the functionaries as to concept perceptions of the community participation in development projects. I then began validating the similarities and differences by citing evidence, remarks, views, and opinions expressed by the respondents during interviews.

TRUSTWORTHINESS

In any qualitative inquiry, the importance of establishing the trustworthiness of data is crucial to credibility of the study. Methodological rigor is significant in a study using a qualitative design, and it is particularly important in this study because it is breaking ground by entering new territory to prepare the road for others to follow. Patton (1990) notes that qualitative research has an obligation to report sufficient details of data collection and the process of analysis to permit others to judge the quality of the resulting product.

Lincoln and Guba (1985) assert that:

... the basic issue in relation to trustworthiness is simple: How can an inquirer persuade his or her audiences (including oneself) that the findings of an inquiry are worth paying attention to, worth taking account of? The researcher needs to respond to the four elements with their corresponding terminologies in qualitative research: truth-value (credibility), applicability (transferability), consistency (dependability), and neutrality (confirmability). (p. 290)

Credibility

Credibility exists when a study presents recognizable descriptions or interpretations of human experience for people with shared experiences (Sandelowski, 1986). Lincoln and Guba (1985) describe this in two ways:

... first to carry out the inquiry in such a way that the probability that the findings will be found to be credible is enhanced and secondly, to allow the respondents the chance to look at and evaluate the findings of the study. (p. 296)

Important techniques used in order to enhance the credibility in this study included the following: prolonged engagement, persistent observation, triangulation, referential adequacy, and cross checks.

Prolonged Engagement

According to Lincoln and Guba (1985, p. 301) "prolonged engagement is the investment of sufficient time to achieve certain purposes: learning the 'culture,' testing for misinformation introduced by distortion either of the self or of the respondents, and building trust." My familiarity with the culture is particularly helpful in understanding the local dialect as well as gaining trust with and access to the community.

I had also conducted some other research projects in the same area over the past decade and published findings of some of them in the national dailies and weeklies. Furthermore, prior to coming to Canada, I worked as a consultant for different nongovernmental and international organizations. This wide range of past involvement with different organizations and publications helped me build sufficient trust with staff working at different levels with the selected organizations for this study.

Site visits, field observations, and talking to people in the field helped me verify issues the interviewees had raised. Since I was born and grew up in the coastal regions, I was very cautious against the danger of "going native." This was maintained by observing the rigorous procedure of qualitative research such as not being judgmental, and keeping and maintaining a journal of daily activities.

Persistent Observation

The purpose of persistent observation is to identify those characteristics and elements in the situation that are most relevant to the problem or issue being pursued and focusing on them in detail (Lincoln and Guba, 1985, p. 304). I did extensive

field visits in order to verify and check the information emerging from the interviews. This opportunity gave me a more contextual view of development projects, relationships between various development projects, and between and among the functionaries and beneficiaries.

Triangulation

Triangulation is another way of ensuring credibility and transferability. Patton (1990) notes that triangulation is a “process by which the researcher can guard against the accusation that a study’s findings are simply an artifact of a single method, a single source, or a single investigator’s biases” (p. 470). Denzin (1978) developed four types of triangulation: data sources, methods, investigator, and theory. Three types of triangulation—data sources, methods, and theory—were used to reduce biases in this study.

Data sources triangulation is the accessing of information from a variety of sources such as interviews, observation, focus groups, and document analysis. In this study, three different types of data collection techniques—interviewing, observation, and review of documents—provided effective cross checking of information. Another way for cross checking of information was to interview beneficiaries (local people) and functionaries (outsiders) of the development projects. A final cross check of information was ensured by selecting respondents from various levels of the community and officials of development organizations.

Data triangulation occurred because in-depth interviews, review of documents, and direct observation were used. In addition, data was collected from both beneficiaries and functionaries (elite) of the development projects. Also, reviewing public documents (such as project proposals, progress reports, and annual reports of the programs) are collected in this research, with the objective of verifying interview data. Another method used was direct observation of events, people, situations, and project sites.

Referential Adequacy

This technique includes visual aids to document the context of the research sites to confirm reliability of the collected data. I took pictures of development project sites, offices, and people who were interviewed to cross check and use for credibility of the documentation of the context and direct observations recorded.

Cross Checks

Cross checks of information provided by respondents was ensured by selecting beneficiaries and functionaries of the same development project. In some cases, cross checking of information was done even among the same group of respondents and that approach was possible in this study because I selected respondents from various levels, such as grassroots, *thana*, district, and headquarters of the same development project in each case.

Transferability

Transferability is achieved when the findings of the study fit into contexts outside the study situation and when its audience views its findings as meaningful and applicable in terms of their own experiences (Sandelowski, 1986). Lincoln and Guba (1985) note that transferability in qualitative research refers to the usefulness of utilizing the study process and its results in the context of another time and place. It is not the naturalist's task to provide an index of transferability; it is his or her responsibility to provide the database that makes transferability judgements possible on the part of potential appliers.

However, recent global disaster experiences indicate that communities' meaningful participation, irrespective of developed and developing societies, is a key factor in disaster relief and management projects. Some recent experiences from world devastating disasters that hit coastal regions are cited here for better understanding.

Light (2005) reports that actual movement toward preparedness at the local level is the real weakness in Hurricane Katrina- and Rita-affected areas in the Gulf Coast of the United States. It is evident from post-Katrina commentary that community rehabilitation and reorganization requires communities' active involvement and actions from all in the society. In the case of the tsunami that hit South Asian countries severely in 2004, huge casualties, even many deaths, occurred as a result of post-tsunami morbidity. This necessitates public education and awareness regarding disasters and preparedness on how to mitigate the consequences of disasters effectively. During Cyclone Sidr in 2007, survivors said many of the deaths could have been prevented had people heeded warning to move to higher ground as the storm approached them. During the international seminar on disaster planning, management, and relief held in St. Michael, Barbados in January 2007, Geoff Loane, Head of Delegation, North America and Canada of International Committee of the Red Cross, noted new responsibilities for social work education:

Bangladesh has the most exposed and vulnerable coastline to flooding with the largest population presence of anywhere in the world. On an annual basis, thousands of persons are displaced and lives destroyed through flooding. Anticipation of floods in Bangladesh is thus somewhat straightforward and because of this a greater emphasis can be placed on preparation and response. Again it is not surprising that the country has one of the best prepared local capacities for disaster response and for anyone trying to draw lessons in relation to coping mechanisms, this case study provides fascinating insight into how societies manage their disaster response mechanism. (Loane, 2007, p. 14)

Tropical Cyclone Sidr that hit low-lying coastal regions in November 2007 was the deadliest storm to strike Bangladesh in the last decade, killing more than 3,100 people. Credit goes to Bangladesh Red Crescent Society for an effective early warning system, and its volunteers who evacuated 3.5 million people to shelter houses before the storm strike.

Recently, in a seminar on long-term disaster preparedness held in Bangladesh, students of the Dhaka City's four high schools suggested regional cooperation in different parts of the country, side by side with coordinated efforts of both government and nongovernmental organizations to effectively tackle any kind of disaster by making the best use of community resources (*The News Today*, 2008, p. 3). All these evidences and citations validate a grassroots community-based effective model that can educate and prepare local residents to tackle not only the aftermath of disaster but to create awareness about disaster.

Dependability

The third construct is dependability, which attempts to account for changing conditions in the phenomenon chosen for study as well as changes in the design created by increasingly refined understanding of the setting (Marshall and Rossman, 1995, p. 145). Guba's (1981) concept of dependability implies traceable variability, that is, variability that can be ascribed to identified sources (Krefting, 1990). Tutty, Rothery, and Grinnell (1996) stated that a reasonable degree of consistency or dependability is required in a qualitative study. It was enhanced through triangulation to ensure that the weaknesses of one method of data collection were compensated by the use of alternative data gathering methods in this study.

The use of methodological experts (such as individuals on my supervisory committee) to check the research plan and implementation was another means of ensuring dependability (Krefting, 1990). On average, I had one meeting a month with the three members of the supervisory committee during the last two years. I presented explicit accounts of documents collected in the field, coding plan, emerged categories, data analysis plan, and significant findings of the study available to committee members. I sought their suggestions on materials presented. The committee also provided directions on how to proceed to subsequent phases of the study. Cross-checking information from different sources, such as between and among the beneficiaries and functionaries of the same project, contributed to the dependability of the study. Furthermore, throughout this study an accurate and detailed account of the process was observed and recorded.

Confirmability

Doing a confirmability audit enhances the final construct. Lincoln and Guba (1985) say that an inquiry audit cannot be conducted without a residue of records stemming from the inquiry. An "audit trail"—preliminary interview guides, checklists for direct observation, observer comments, journals, interview transcripts, and field notes and data analysis procedures—was recorded. The tape-recorded interviews, filled-in sociodemographic data sheets, signed consent forms, collected secondary documents, pictures, filed notes, and transcripts were stored in a locked cabinet at my residence. The code tracking and coding system, categories, dates,

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and places of interviews, overview of the significant findings, and maps are recorded in a journal and in this thesis. Checking of coding plan, data analysis plan, categories, and salient findings of the study by the supervisory committee members during monthly meetings enhanced credibility of the study.

These findings confirm those of other research efforts in the area of community participation and development. Furthermore, I avoided judgmental language. Cultural issues were appropriately researched and addressed. Sensitivity toward participants and the projects involved was of prime importance in this study.