

**Researching the Livelihood Strategies of Artisanal and Small-Scale Miners in India and Other Countries of South Asia:
Some Lessons From the Field**

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Abstract

This paper intends to address the methodological question of working with poor people engaged in artisanal and small-scale mining (ASM) in light of some of my recent experiences from the field. After a brief discussion of livelihood practices in ASM in South Asia, and the gender and development issues in the context of mining, this presentation stresses upon the roles, contributions and participation of women workers in the informal mines in South Asia. Not much official data is available on this area and data that does exist suffers from various kinds of bias. 'How to know' or in other words methodology thus becomes an important issue in researching the community in ASM. This paper elaborates how in a sphere of work with markedly different gender roles and oppression of women, livelihood strategies can be researched in a participatory manner. Although the particular focus of the paper is women, the 'poorest of the poor' segment of workers, it examines ASM in general as an absorber of a large portion of the rural unskilled migrant labour force, and describes the specific strategies that can effectively be used in exploring this area of work.

Introduction: ASM as a livelihood in South Asia

Artisanal and small-scale mining (ASM) provides a livelihood for millions of people in the various countries of South Asia. In this significant region that contains a large segment of the world's population, India, Sri Lanka and Pakistan are important mining countries with Nepal, Bhutan and Bangladesh playing small roles. This region has an extremely complex and fragile environment, huge mineral reserves, is marked by its enormous population size, stagnation in agriculture and sheer poverty in its rural areas leading to migration to overcrowded cities, but has also emerged in recent years as a region with tremendous economic potentialities. Above all, South Asia has provided to the world with some exemplary instances of participatory resource use. The countries of South Asia produce a large range of minerals in the ASM sector, for local, regional, national and international markets. The practices in the sector vary widely not only from mineral to mineral and location to location, but also according to the history of their extraction, local factors including developmental processes and communities involved in this extractive sector. Altogether, these of practices – beginning from alluvial panning, gravel digging from riverbeds, gemstone quarrying, to hard rock mining and quarrying from *khadars* (mines or quarries) of various sizes by hand or machines for local, regional and even international markets - provide the livelihoods for a very large number of people. Part of the ASM is legal and licensed, but some practices are either beyond the purview of the law, and hence non-legal. Yet others are illegal and clandestine affairs, often operated by organised mafia but also loosely controlled by local and/or immigrant labour themselves.

It is generally claimed that ASM brings about economic development to mineral-bearing tracts; however, very little of the benefits actually trickle down to the lowest level; the workers. Women, in particular, fail to receive sustainable livelihoods from small incomes generated by their work, which is often not directly covered by health and safety insurance. Whether ASM can benefit the common people in poor communities is therefore a major livelihood question in this area and indeed this question is being intensely explored at various levels. Consequently, I recently took up a project in the region with the objective, among others, of understanding the livelihood strategies adopted by women and men working in the mines and quarries in South Asian countries.

How to address the livelihoods and needs of the women and men working in ASM? If mining has to lead to a form of development that can be sustained, then there is no doubt that we must begin with the 'poor people first'. Clearly, a research process that is gender sensitive may lead to developmental interventions

with enormous impacts on improving the livelihoods of millions of people in this part of the world. While gender inequality is only one area; it continues to be most prevalent at the sphere of work in South Asia where the patriarchal society tends to obscure the various productive roles women play in ASM activities. Other areas that come up in common debates around livelihood are the issues of health and safety, minimum wage and non-payment, child labourers and issues of bonded labourers which raise important questions about the meanings of bondage. How to develop a strategy to understand this little explored area throws up a challenge to the field researcher.

The intention of my presentation is to outline some useful strategies that I developed whilst in the field to extract useful information. These are participatory, consultative and community-based approaches that help to initiate a process of not only mutual learning and dialogue, but one of changing the mindset of all stakeholders concerned. This set of methods has become significant in recent years in the field of social research as it emphasizes a 'bottom-up approach' (Whitfield and Strauss, 1998). The participatory approach is based on field visualization, interviewing and group discussions promoting interactive learning, shared knowledge and flexible yet structured analysis (IDS 1997). I have used some of these approaches before, and some have been used by others in different contexts in other third world countries.

However, these strategies tend to refocus attention on the livelihoods of women and men engaged in ASM in their productive capacities as miners, with a view of finding ways- through their own voices - to empower them and make them partners in the development process. While information from a participatory research process is valuable and useful, the process of gathering such information itself is priceless too (Guy, 1996). For each of us involved in the process, it was an enriching experience as new aspects of livelihoods emerged through the research. This is because such participatory processes:

- Help us to build up a greater understanding between the various stakeholders regarding each others' points of view;
- Allow members of the community to express their opinions and feelings regarding precisely defined issues, problems or opportunities;
- Help to determine how community women and men prioritise these issues, problems and opportunities in order of importance and urgency;
- Give a voice to local community members in determining policies, goals and priorities and determine their support levels for particular initiatives;
- Evaluate current laws, programs and policies, and above all,
- End speculations about 'what community members really want'? 'What are their perceptions'?

Poverty of data on livelihoods in ASM in South Asia

In researching the livelihood strategies of such poor people, the researcher finds herself in a difficult situation; reliable data from official sources such as the Surveys of Industries, Censuses, or even National Sample Surveys are hard to come by, and even in cases where there is some information, it suffers from inadequacies and blindness of different kinds. In most cases, the presence of trade unionism is rather insignificant among the mineworkers, although the quarry/mine owners are unionised through some sort of an association which act as a pressure group.

The reasons of the poverty of data are manifold and often overlapping: *first*, the concept of these mines and quarries being part of the 'unorganised sector' leading to only small amounts of capital accumulation dominates the official thinking. Consequently, the various practices and structures – of accumulation as well as of labour – remain unexplored. The nature of ASM is such that it is put under the 'unorganised sector' of the economy, although it has its own intricate structures that vary widely from context to context. Some areas of the practices remain illegal and hence outside of the purview of 'official' data collection processes. A greater amount of attention tends to be drawn towards the larger mines; often their importance is highlighted by the creation of a separate Ministerial body such as the Ministry of Coal in India. *Second*, the classification of minerals falls into different types; for example the Directorate General of Mines Safety data identifies coal and non-coal minerals whereas the Minerals Act classifies only 'major' and 'minor' minerals. The administrative responsibilities of these major and minor minerals then fall respectively upon the Central and State/Provincial governments, who see these quarries as a quick way of earning revenue. For example, to begin with, there is not yet a clear-cut definition of ASM in most

countries of South Asia and often amounts of production is taken as an indicator of the 'smallness' of the mine. *Third*, the conventional wisdom made popular by the mining engineers and related technocracy is that small-scale mines are also 'small' as a problematic - in their impacts; in their production; in the area they cover; and in terms of the 'national good'. This tends to keep ASM hidden from other major areas of natural resource management (such as land, water and forests) in which the livelihoods of poor people have come under great scrutiny and intervention in recent decades. *Fourth*, ASM, unlike agriculture or forestry occurs in a scattered and spread out form in remote locations that are difficult to access. *Fifth*, the strength of anti-mining movements in the South Asian countries have originated from their successful and constructive interventions on eradicating bonded and child labour and in protecting the physical environment. Whereas some of these movements are urban-based and funded by international agencies, they also have strong local ties and are intricately networked whose national and global presence cannot be ignored. *Finally*, over the years of complete neglect of social and environmental concerns during which environmental awareness has also risen to the fore, 'mining' in entire South Asia has come to be associated with the image of a 'dirty' industry, a highly polluting and inhumane process that needs to be stopped at all costs, for which alternatives do exist, and that hardly benefit the poor people.

As a combined result of all these factors, the information on the livelihoods of quarry workers is still rather scanty and incomplete, and often based on gross estimations arrived from localised studies or sample surveys. The researchers' personal training or subjective bias tends to come out rather clearly from these studies.

Clearly, livelihood research in ASM has to be contextual, and has to involve the various stakeholders or interest groups including the research community. It can be viewed as an entry point into a large thematic area of which little is available in the public domain. By looking at people as active agents in organising the system of resource use in practice, it provides a research in a timeframe that extends into the past, and reflects the raw material from which a more rational use of resources can emerge. This research has the ability to perform the social role of providing an input into the economic development process to serve as a vehicle for public participation in decision-making. At the same time, the process of understanding itself may be rewarding to the researcher.

How to know? Research methodologies for ASM

The field methods chosen for ASM research reflects the philosophical standpoint of the researcher. Since the 'self' (the researcher herself, with her own bias, beliefs and outlook) is the key tool in field surveys, how, in the social context, one sees the population: as objects (the 'universe') of study or subjects of research as different and 'other' than the 'self'? The conventional field surveys in ASM research presuppose the study population as 'other', based purely on difference, but do not address the basic issue of the human self constructing this 'other'. The notion of the other cannot lie only in difference; if so, there is really no difference in acknowledging the otherness of a rose plant or a zebra and that of a person and her/his livelihoods and needs (Sarukkai, 1997). We do, rightly, make a distinction between observing the behaviour patterns of a community of zebras and a community of people. If the field survey is to go beyond mere observation and categorisation, then the thematisation has to be put in an ethical domain.

The sampling-based questionnaire methods, adopted for quantitative surveys on the field emanate from the philosophy of positivism, building up an objective and rational epistemology in order to specify humans into things and deny any ethical relation between the self and the other. In ASM research, where the official data is often unreliable and some of the practices are covert, the use of questionnaire-based field methods may lead to ambivalent results that are inconsistent with ground realities.

The participatory methods I am suggesting thus are clearly opposed to the use of a set of pre-determined questionnaires. They originate from Chambers' various works (see for example his 1993) during 1990s leading to a dialogue instead of conflicts of interests among the various stakeholders.

What is the livelihoods approach?

'The idea of "livelihood strategies" concentrates on the process by which families construct portfolios of activities (Valdivia et al., 1996), and the social relations in order to improve their well-being (Kusterer, 1989), or cope with crises' (Valdivia and Gilles, 2001, P-7). The word 'livelihood' means the command an individual, family or other social group has over an income/or bundles of resources that can be used or exchanged to satisfy its needs. This may involve information, cultural knowledge, social networks, legal rights as well as tools, land or other physical resources. (Blakie *et al.*, 1994).

The difficulties of survival of ASM workers arise from poverty and hardship; the work itself as well as the extremely poor environmental conditions that offer little alternative resources for subsistence. Despite the poor environment and obvious vulnerability, all ASM workers have well established livelihood strategies that help them to survive. These livelihood strategies are characterised by highly diversified options for income-generation, work in the quarries are most often combined with farming, livestock, fishing, petty trading and working as agricultural labour. However, for the extreme poor, these strategies merely permit survival and do not enable them to accumulate sufficient assets to overcome their poverty (ISPAN, 1995; Elahi *et al.*, 1991).

Livelihood strategy is thus linked with diversification of income and assets (Datta and Hossain, 2003). The livelihood strategies of poor women and men are more complex if they have a lower level of capacity to maintain sustainable livelihood with a single source of income without much diversification. The situation gets worse in cases of exclusion from the mainstream services and infrastructure. Livelihoods of ASM workers are more secure when households have secure ownership of or access to resources and income-earning activities, including reserves and assets, enabling them to offset risks, ease shocks and meet contingencies such as a sudden loss of job.

Taking up a participatory research

Taking up a participatory learning/research program with women and men requires the upsetting of many existing myths and legends about gender codes (such as 'women should remain silent, 'it's the men's job to talk about what the future should be like for all of us' or 'why, doesn't taking care of the needs of the whole community automatically take women into consideration?' and even: 'huh, this is all western feminist stuff. Our women accept what we decide to be the best for them'). The project I took up challenges these notions by asking: 'what learning is accomplished by involving only men? What changes are envisaged/determined, by whom and who gets the benefits?'

There are many methods of obtaining information concerning community livelihoods. Some methods use pre-existing information about the general community and/or segments of the population. Other methods involve written or verbal responses to requests for information. The selection of a particular method (or methods) depends on the nature of the questions being asked, the availability of participants or existing information, the resources available to conduct the assessment, and the experience and skills of the personnel involved.

Besides collecting official data, I conducted my South Asian project primarily through the technique of Focus Group Discussion (FGD). This is also called the Nominal Group Method (NGM) since the members of the group are nominated in one way or another. For our purpose we shall call it FGD. This is actually a structured workshop in order to obtain the views of a wider range of participants (Krueger, 1988). The workshops in each mine site were in the nature of structured group settings, each composed of a small group of women and men with shared views regarding their lives, barriers to services, or needed programs.

In each location, I used the help of local organisations such as a local Community-Based Organisation (CBO), a local Non-Governmental Organisation (NGO), or Mineworkers' Union or Mine/Quarry Owners' Association.

This approach consists of a group responding to a series of pre-defined questions. All ideas and opinions were recorded, on the flip chart as well as on tape. We did not try to coalesce or combine problem statements, or interrupt the speaker at any point of time. On the other hand, we encouraged them to let

others complete their statements. The questions were more or less as follows and were circulated among the group members beforehand in English and in the local language. We also put them up on a flip chart during the discussion. However, we added/changed some of these questions as our conversations progressed. Overall, the idea was to first understand the division of labour between men and women, the sources of income, financial responsibilities in the household, access to and control of resources by men and women, and their participation in income generating activities.

In each group discussion, I followed the steps as given below:

- Getting involved through brief introductions;
- Acquiring profiles of those present;
- Achieving identity through opening up of the experiential worlds;
- Doing activities such as talking, making jokes and at the same time keeping the points of enquiry in mind;
- Experiencing the worlds as experienced by the others;
- Refining and reshaping the concepts as we moved forward in the research process;
- Finally, distancing myself and generalizing effectively from the mass of information gathered and analyzing and writing the report objectively.

Focus groups

I selected the focus group method after carefully evaluating its various positive and negative aspects. I chose this because the information we wanted from our participants would have been difficult, if not impossible, to obtain using other methodological procedures. As this method has evolved, it has been widely used in recent years in tapping human tendencies, attitudes and perceptions. Focus groups typically have five characteristics or features. These characteristics refer to the ingredients of a focus group: a). the people, who b). possess certain characteristics, c). provide data, d). of a qualitative nature, e). in a focused discussion. Focus groups are composed of people who are similar to each other. In our case, we selected the participants from nearby village clusters, that is, they all lived in the same area. However the groups varied by age, occupation, background, ethnicity and income levels. These groups produced data that is of interest to the audience here. We did not try to reach consensus or an agreeable plan in the discussions, but essentially engaged in brainstorming activities. The qualitative data these discussions produced provide insights into the attitudes, perceptions and opinions of participants. These results were made possible by our soliciting through open-ended questions where participants were able to choose the manner in which they responded. In the natural environment we created, participants are influenced by and influencing each other. I served several functions as a researcher in these group discussions: moderating, listening, observing, and eventually analysing using an inductive process. This process helps to build up an understanding gradually rather than confirming a preconceived hypothesis or theory. However, we tried to stay focused on the relevant questions and topics of discussion.

The focus group technique is robust and handy and can be used at different points of time, before, during or after the program begins. The crux of the qualitative research that it engages in, and its claim to validity, lies in the intense involvement between researcher and the participants, resulting in a more in-depth analysis than formal quantitative research can produce. Validity is the degree to which the procedure really measures what it proposes to measure. Do the results look valid? Are they confirmed by future behaviour, experiences or events? However, in most cases, the focus group results are trustworthy and can even be projected into the future to some extent.

Sensitization through research

The research I did can be described as a 'sensitizing concept' from the research participants' perspective, in using their languages or expressions, and sensitizes both the researcher and the participants. A sensitizing concept 'gives the user a general sense of reference and guidance in approaching empirical means...(and) merely suggest(s) directions along which to look' (Blumer, 1954, p. 7). The sensitizing concept is the meaning that arises among the people we take the research process to. The sensitizing concept allows us to see those meanings that people attach to the world around them. Such a concept allows the researchers, in this case the working group of the community empowerment department that

stayed with me throughout the discussions, to sensitize her/himself to a particular category of data about which little was known initially. The intention is to highlight the unique properties of those data. Sensitizing concepts are useful when we do not know enough about the social setting or group of people to 'identify relevant problems and hypotheses' (Becker, 1958, p.653). For many of the staff of the local NGOs as well as those in the mines, the research process was an educative or a sensitizing one; a starting point for thinking about the different livelihoods and needs of women and men in the community, and I hope the process of sensitisation would eventually lead to greater recognition of these needs in future programmes. Similarly, a sensitisation took place among the participants as well; many focus group members came back to me to record this point. Sensitizing concepts, unlike commonsense concepts, are always the foci of analysis and always treated as tentative. They are constructs gelled from the innumerable comments offered during the process of discussion.

One path in developing sensitizing concepts is the use of Focus Groups as tools. These groups are brought together by the research investigator to come up with ideas and solutions. The social landscapes are usually filled with artificially created stereotypes of gender roles that vary from person to person and also from culture to culture, and hence often it is imperative for us to sift through the shared experiences of everyday life and create the meanings that are necessary for analytical purposes (Hoonard, 1997, p. 26). Thus, at the end of each group discussion, I took it upon myself to construct the sensitizing concepts by finding similar or common elements among the various topics elaborated through the discussion process. They referred to the general, rather than the unique, and thus made cross-cultural understanding possible. It was thus a deliberate attempt, at the end of each group discussion, to move some distance away from the everyday world but also a distance from the subjective views of the world as expressed in the discussions by women.

Sample questions

Historical problem issue description: To help understand how the community became what it is today and to provide insight into the kinds of resources to collect and weed through, we asked about their past.

Questions included:

How long have you lived here?

Where did you live before?

How did you end up here?

What was your father's occupation?

Individual problem issue description:

What are your thoughts on this kind of work?

What are the biggest constraints in making this job easier?

How do you envisage that the conditions will change?

How do you think that the mining company can benefit you?

What schemes and projects did the Government offer to you for personal development?

Did they address your needs?

What specific projects do you want the company to take up for you?

Overall problem issue description:

What in your view are the strengths of the community?

What broadly are its weaknesses?

What are the general needs of you and your colleagues?

What in your view are women's specific needs in your community?

How are the current programs addressing women's needs?

Is there a gap that you would like to raise here?

In what ways do you think ASM and work in the quarries will benefit women?

What should these projects try to achieve?

Group problem issue description: Following the individual statements, the group was invited to clarify and elaborate on the issues presented. I often tried to merge similar issues, with permission from the persons who made the suggestions.

Selection and ranking

The group members were then asked to select 5-6 items that they feel are most important to them. For this, they needed some time to think the things over. This was usually an overnight time period during which all participants were encouraged to speak about the events in the FGD with their peers and friends in the neighbourhood. They were also asked to reflect upon what others pointed out besides these additional discussions before attending the next day's meeting.

We contemplated for a while the question of participation; who should be involved in these assessment FGDs? It was decided that all the women and men from the communities and villages were welcome, invited and encouraged to participate in the group discussions. The individuals from whom information was sourced were of course to be selected from the populations to whom the results will be applied. The coverage was as wide and large as possible. The most important rule was: 'Don't leave anyone out!' so we tried to ensure that news went out into the community; that the meetings were well-publicised and all were encouraged to attend. A broad representation of women including different ages, education levels, ethnic groupings and incomes - from the community was eventually obtained. This largely enhanced the credibility of the process undertaken and the results obtained.

In addition, I used some social indicators and the key informant methods. Both are relatively simple and inexpensive tools. The social indicators approach is based on descriptive statistics in public records and reports such as the census or welfare reports lying with the government or the mining company.

The key informant technique involves interaction with selected community leaders and agency representatives to estimate the needs of workers in the ASM community. This ensures the possibility of acceptance of any future worker-oriented programs that the Government or mining companies might offer by the community and potential popularity of them. The process of discussion and interaction with me also establishes and strengthens lines of communication with the company-owners and their personnel who are usually not in direct contact with the workers' lot. I made personal visits to talk with individual women and men about the key gender needs perceived as urgent by women of the villages surrounding the mining operation areas.

Information collection took place at two levels: group and individual. The groups consisted of about 10 women and a few men workers belonging to different ethnic/cultural/social/economic backgrounds from the same village cluster. This helped me identify the needs on a local basis. I meet with each group twice to be able to identify definite trends and patterns in perceptions.

At the individual level, I met up with local key persons or resource persons, both women and men, seeking their advice and opinions through intensive personalized discussions. Besides local women and men, I met up with the existing civil institutions and groups, again with similar questions. Analysis of the data, in this case, meant threading through the various opinions and thoughts that emerged and were recorded.

Conclusion

Researching ASM in South Asia poses a mammoth task to the researcher, because of the colossal size of the technocracy ready to provide their expert views on matters related to the technology of extraction, local geological conditions and the legal net provided for the safety and well-being of the workers. In reality, however, I saw that many of the currently held views have actually to be taken with a pinch of salt. This is because I took up a bottom up approach, rather than a top-down one. For example, the widely quoted opinion of Chakravarty (2002) that about 10 per cent women are engaged in ASM was easily displaced through my research as I found a much larger percentage of women present in the quarries in different gender roles.

I would like to conclude with another point touching on the livelihoods in ASM. If ASM has to be synonymous with economic development in mineral-bearing tracts, the benefits will have to actually trickle down to the lowest level to the workers, the women in particular, it must pay much closer attention to sustaining their livelihoods. The negligible incomes generated by their work, lack of health and safety, sexual harassments, and the ambiguities of legal instruments regarding women's work in the mines must

be removed. Then only, ASM would be able to yield benefits for the common people in poor communities in South Asia and elsewhere in the world.

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Bio-data

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