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Exploring the potential for primary environmental care: Rapid Appraisal in squatter communities in Salvador da Bahia (Brazil)

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• Introduction

This paper discusses the methods of collecting information in a field-study carried out in the summer-fall 1990 in Salvador da Bahia (Brazil). The study was developed in the health district of Pau da Lima (municipality of Salvador) within a cooperation agreement among the Brazilian authorities, the Coordination of Italian Health Cooperation in Brazil and the 'International Course for Primary Health Care Managers at District Level in Developing Countries' (ICHM)¹ based in Rome (Italy). A group of postgraduate ICHM students (a Brazilian nurse, a Palestinian M.D. and an Italian M.D.) carried out the study with the support of an ICHM staff and several local advisors. The study was meant to provide a learning experience for the students and material for their final dissertation (de Colombani, Irshaid and de Melo, 1990) as well as to explore the local potential for Primary Environmental Care (DGCS, 1990; Borrini, 1991; WCSP, 1991) and produce a number of recommendations of interest to local bodies.

The study investigated possible actors, conditions, means and resources to promote Primary Environmental Care (PEC) within the Pau da Lima district. PEC is defined as a process by which local communities - with varying degrees of external support - organise themselves and strengthen, enrich and apply their own means and capacities (know-how, technologies and practices) for the care of their environment while simultaneously satisfying

their needs. In short, PEC is about the integration of three components: empowering communities, protecting the environment, meeting needs. In short, PEC is about the integration of three components: empowering communities, protecting the environment, meeting needs. The ICHM team was particularly interested in identifying *ways by which the local health district could support squatter communities engaged in PEC.*

The first step of the field-study was a preliminary identification of present and future potential actors in PEC in the Pau da Lima district. By definition, the actors of PEC are local community members, as individuals, in extemporaneous groups or in community organisations. They can, however, be effectively supported by a variety of external bodies, such as governmental services, non-governmental organisations (NGOs) and private organisations, groups and individuals who have a stake on environmental care at district level (stakeholders). Among those, our interest focused on - but was not limited to - the local health services at district level (DSPL) and other health-oriented bodies. In all, we identified ten stakeholders and assessed them in terms of interests, current and past work, possible future contributions and conditions to support community-based PEC activities.

A Rapid Appraisal (Chambers, 1981; Scrimshaw and Hurtado, 1987; McCracken et al, 1988; Chambers, 1990) was carried out in three squatter communities within the district. We chose to study squatter communities because in urban areas they are the ones most seriously affected by environmental problems and related health and social problems

¹ICHM is a collaborating Centre for Training and Research in District Health Systems of the World Health Organisation.

(Harpham et al, 1988; Hardoy and Satterthwaite, 1989; Tabidzadeh et al, 1989; Hardoy et al, 1990). According to local informants, the most salient differences among local squatter communities relate to length of settlement, a factor we tried to account for by selecting three communities ('Cristo e Vida', 'Dereito de Morar' and 'Baixa da Bica') who settled at different times (March 1990, February 1989 and early 1975). The focus of the Rapid Appraisal (RA) was on felt problems, interests and priorities in PEC, forms and conditions of community organisation, and instances and conditions of community-based action. We prepared a basic checklist on the physical and social environment (PEC checklist, table 1) and used it while collecting data with various RA methods. We will now list and briefly discuss those methods.

- **Rapid appraisal**

Review of secondary data

We obtained data about the health district and the 'PEC problems' of the basic checklist from district statistics, reports, academic dissertations (University of Salvador) and local media (television and radio programs, newspapers). Among these sources, academic dissertations from different faculties of the local university proved to be particularly interesting and useful to offer multisectoral views. During our field-study, the Salvador media were very active in describing environmental and social problems in the city because an electoral campaign for the state governmental elections was under way. Without any pretence of collecting 'objective' information, we believe that following the media was a good RA exercise.

Informal discussions with informants

Whenever possible, we held informal discussions on the matter of the study with a variety of people in the district. Notes were taken in log-books after the discussions, and then used to triangulate information or help in the interpretation of data collected with other methods.

Direct observations

We carried out observation walks in each of the three communities. We noted results following the PEC checklist and took pictures of salient environmental features whenever possible. During the first contacts, our team was introduced to the communities and accompanied by members of local NGOs. Without their help, collecting information in squatter settlements may have proven much more difficult.

Laboratory analysis of samples

During the observation walks, we took samples from the main sources of water used by residents in the squatter communities. The Bacteriological Department of the Secretaria de Saude do Estado da Bahia performed drinking quality analyses.

Life history interviews

We collected a number of brief life histories among the people living in the squatter settlements, to gather clues on mechanisms by which people get to become and remain squatters. The people who provided us with information were identified in the focus groups meetings (see later) or during the observation walks. Our selection was not guided by specific criteria except length of residence in the squatter community at stake and willingness to talk. During the interviews people were stimulated with an introductory question and then with a few other questions if necessary. At the beginning, the aim of our study was explained and they were invited to speak freely. We collected information in writing and with the help of a tape recorder.

Focus groups including a ranking exercise

We held three focus groups meetings (one with women, one with men, one with youth of both sexes under 20 years of age), including ranking exercises, in each squatter community. The ideal number of participants in the meetings was set to be between 6 and 12 and session time to be one and a half hours. In practice, we worked with a minimum of 5 and a maximum of 13 people, and at times the meeting lasted more than 2 hours. The

meetings were planned well in advance, but it always proved difficult to gather the people on time. The meeting place was chosen as close as possible to the area of settlement and neutral (e.g. a school rather than a church) to facilitate participation and prevent 'conditioning' the discussion. We offered refreshments at the end of each meeting. The Brazilian member of the ICHM team always played the role of facilitator, to arouse people's confidence and ease communication. A local collaborator, fluent in Portuguese, took notes of the issues raised in the meetings, following a prepared guideline. The other two members of the ICHM team took notes on group dynamics and on the results of the ranking exercises.

The focus group meeting began with an introduction and explanation of reasons for the meeting (collecting data for a dissertation study). The community spontaneous point of view on what constituted an 'environmental concern' was then explored by asking a simple question ("what are the positive aspects and problems in your environment?"). Answers were noted down. A number of specific questions were then raised by the facilitator, following the PEC checklist. These 'less spontaneous' answers were also - separately - noted down. We listed the major problems on a billboard or on large sheets of paper, and discussed them openly. We then asked: "Between problem A and problem B, which one is more important to solve first? And why do you believe that A (or B) is more important than B (or A)?" The criteria expressed by the group were noted (possibly maintaining the exact wording of the speakers) and taken as indicative of the interests underlying a felt problem. A list of priorities among the problems was then drawn by asking each individual group member to tally the five most important problems, and then counting the total number of tallies attached to each problem. Whenever time allowed, the people in the focus group were asked to draw a 'risk map' of their community on which they would geographically locate the problems mentioned in the discussion.

In the second part of the meeting we explored community organisation and action in PEC by posing questions that raised general discussion. This subject proved to be

particularly difficult to develop because of semantic and perhaps also conceptual reasons (what is a 'community organisation'? what is a 'community action'?). The fact that an electoral campaign was under way complicated our task considerably. It may have even introduced a bias in the results, in so far as people seemed to be most interested in describing vindications to political authorities (preferred activities in a pre-electoral period) rather than autonomously-run actions to solve particular problems.

Meeting in focus groups was the main method we used to identify felt problems in PEC and assess interests and motivations for community action. Discussion in a group produced a shared 'responsibility' for the answers and was a motivating factor. Moreover we could record several opinions, thus enriching and diversifying our information basis. In urban squatter settlements - where different micro-environments can be distinguished in the same area, e.g. on hill sides and at the bottom of valleys - it is very important to collect views from various sources. About community organisation and action, the focus groups provided us with limited information (compared, for instance, with what we obtained by interviewing key-informants), but allowed us to identify interesting differences in points of view. Women, for instance, seemed to have less information about community organisation and action than men, but stronger determination to be involved in the future and often made many good suggestions for possible actions. Observations such as these confirmed to us that it was right to gather focus groups with people of different gender and age, possibly interested in different kinds of PEC activities to carry out in the future. It seemed to us that different focus groups, for instance with people belonging to different socio-economic levels within a same squatter settlement, would have been less informative. Finally, discussion in a group seemed always to raise new consciousness about the resources available within the community. This gave to our study a taste of 'action-research' and we hope to have facilitated even in a minimal way a process of local organisation for self-reliance.

We encountered several difficulties in organising and managing the focus group meetings. Some local people had prejudices against us because of prior poor experiences with people from outside the community. Men and young people were often far from the settlements for most of the time, and it was extremely laborious to get them to gather at a fixed time schedule. Existing shelters were overcrowded, and the lack of community organisations often meant lack of communal meeting places as well. On top of this, social conflicts and disagreements among participants prevented us - at least on one specific occasion - to meet in some private houses. Women groups were difficult to manage because many women wanted to speak at once, and crying babies were omnipresent. Commonly, participants seemed tired after one hour of discussion. As mentioned before, the proximity of political elections influenced people to stress the need for vindications to political authorities rather than the need to organise and work together within the community, and probably influenced as well the expression of priorities (political opportunity may have overshadowed felt need or likelihood of achievement).

The ranking exercise was the core of the focus groups. Unforeseen criteria for priority came from the two-way comparison. Criteria were interpreted by us as expressions of the interests of participants and of their willingness to be involved in PEC activities. In this sense, we believe it was much more informative to ask an indirect question (such as "Why A rather than B?") rather than a direct question ("Why A?"). At times, it seemed to us that people conveyed their priorities on the hypothesis that some external help would be available to them. If specific activities would have to follow the RA, new priority matrices would have to be constructed in collaboration with whoever could and would be willing to offer concrete support to the organised communities (this process has been referred to as Microplanning, see later).

Semi-structured interviews with key informants

The same issues raised in the focus group meetings were investigated by interviewing at least 2 key-informants in each squatter

community. In addition, the informants helped us to understand the historical development of each settlement. Informants were identified during the observation walks and following visits, according to criteria such as length of residence in the community (the longer the better) and relevance of their role inside the community (e.g. past member of a local commission). The Brazilian member of our group interviewed the informants with the aid of a checklist of questions and a tape recorder. The subject raised in the interviews included items about which information had already been collected by direct observation and in the focus groups (triangulation). These key-informant interviews are considered a basic method of data collection in urban areas (Annet and Rifkin, 1989). Yet only with regard to the issues of community organisation and action, did they provide us with somehow richer information than the focus groups.

Institutions

Ten institutions interested and competent on environmental activities in the district (stakeholders in Primary Environmental Care) were selected among the potential many in the city or in the district and interviewed following a checklist of questions. A few (the district management, the Italian NGO locally involved in health cooperation) were included because of the particular interest of the study in the integration of PEC and Primary health care at district level. For the others, the main criteria of choice were; experience in environmental action and experience in working with communities. Among the ones selected were a local environmental association, an official organisation of the Catholic Church, a Lawyers' group and a federation of local resident associations. Besides general information on the stakeholder, we explored the type of activities carried out jointly with local communities and other work partners, the respective roles in those activities, the results accomplished, the means of communication used in relating with local communities, the willingness to be involved in future PEC activities. It was always laborious to set up and actually achieve a meeting with busy officials, but we generally experienced an excellent degree of collaboration from them.

Theoretically, the great part of environmental stakeholders in the district are municipal institutions. We interviewed only two representatives of these institutions because of the proximity of political elections. In fact, on the one hand the representatives of most institutions were going to change after five months, and, on the other, in the electoral context the likelihood of obtaining reliable and meaningful information from some of them was deemed quite poor. At times, we were able to 'triangulate' with one stakeholder the information collected from another one.

Feed-back meeting

All members of the three communities and, in particular, the people involved in previous data collection, were invited to a common feed-back meeting on the study's preliminary results. The meeting, in which representatives of the health district management and the coordination of Italian health cooperation in Brazil also participated, was widely attended. A unified gathering for the three communities proved to be a good occasion to share experiences and facilitate the process of building self-confidence among not homogeneous and often divided groups such as squatter settlers. The Brazilian member of the ICHM team acted as facilitator and presented the historical profiles, positive environmental aspects, PEC problems, PEC priorities and forms of organisation and action expressed by the three squatter communities in the RA. While information summarised in lists or other 'verbal' formats was easily accepted and understood, the squatters had difficulties with the graphic representations (e.g. transects and maps) we had prepared. Topographic symbols for ground levels and vertical cuts such as the transects had to be illustrated repeatedly.

A lively discussion developed on the results of the study and on a number of possibilities for community action. It was very rewarding for us to notice that the process of Rapid Appraisal had fired a great interest in environmental issues among the locals. However, despite our prior straightforwardness about the limited

objectives of our RA, the district communities seemed to expect that some concrete help would follow it. These expectations, coupled with the imminence of political election, may have affected our results in ways difficult to assess.

The analysis and presentation of data

Information obtained with the methods illustrated above was summarised with the use of historical profiles (example in Figure 1), transects (Figure 2), maps (example in Figure 3) and conceptually clustered matrixes (examples in Figure 4 and 5). Matrixes were structured (Miles and Huberman, 1989) according to both the questions made during data collection and the study objectives. As much as possible we set into the matrices only information 'triangulated' from different sources. We must stress that much of our interpretation of the data was carried out in this process of constructing the matrices and fitting information in particular rows and columns. It was a laborious task that required several iterative steps.

A suggestion that may be of some value to people involved in similar activities is to prepare a matrix of 'desired' rows and columns *before* preparing the tools and collecting data. No doubt this will be changed later on, but it may be an important way to clarify what is needed from the initial perspective of the study investigators. This suggestion is not valid in all cases. For instance, it is not valid for the matrix that grouped the criteria raised during the two-way comparison of the PEC problems, since its columns are ad hoc categories (see Table 2) identified on the basis of information collected in the focus groups. It was quite unexpected for us to find that squatters were interested in environmental improvements not only for the sake of preventing diseases or for economic advantages, but also to improve quality of life and social status, and because environmental improvements are linked with the solution of other problems. Clearly, these categories were better identified after and not before the collection of information.

Figure 1. Historical profile of Direito de Morar

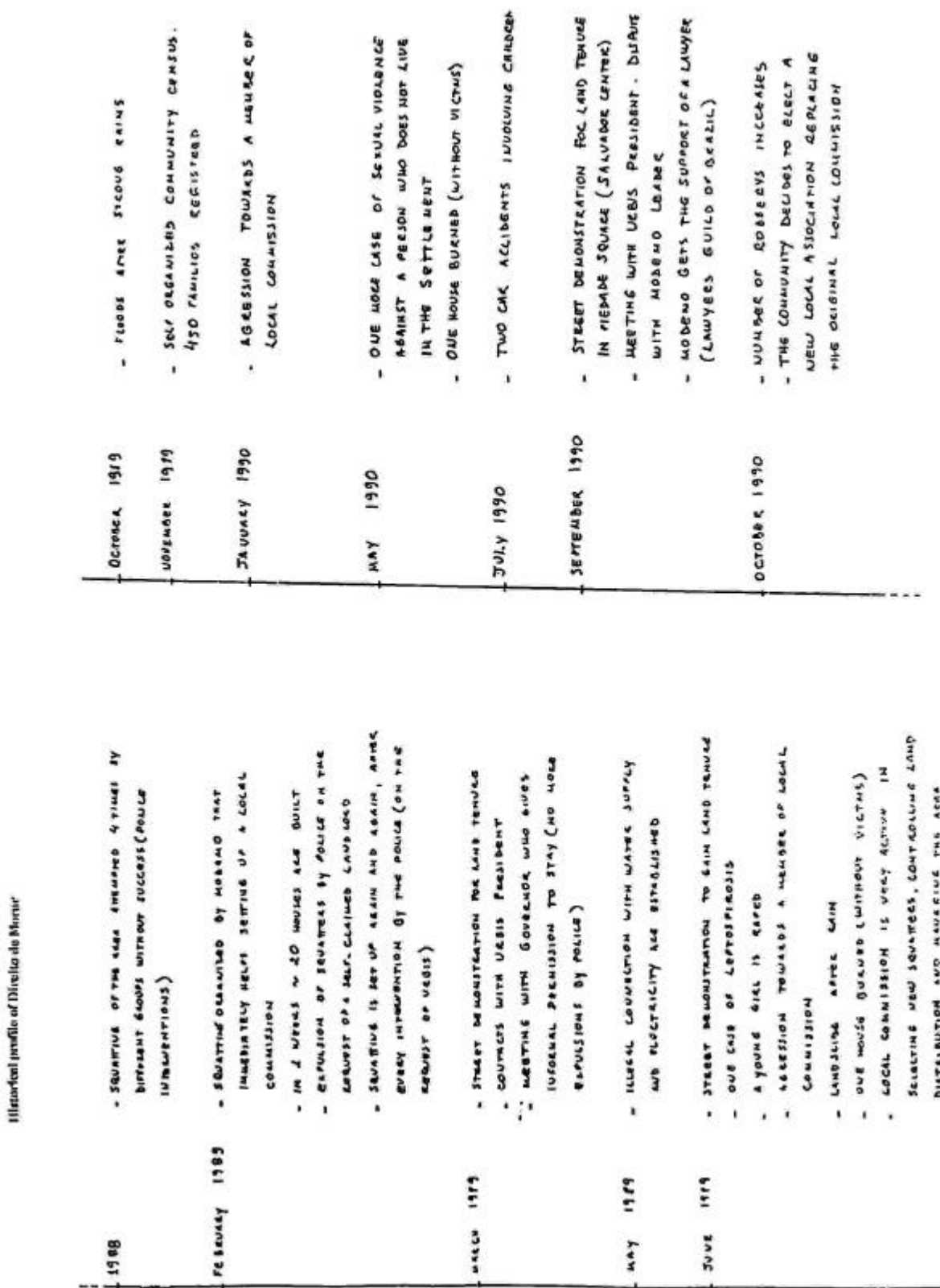


Figure 2. Transect of Direito de Morar

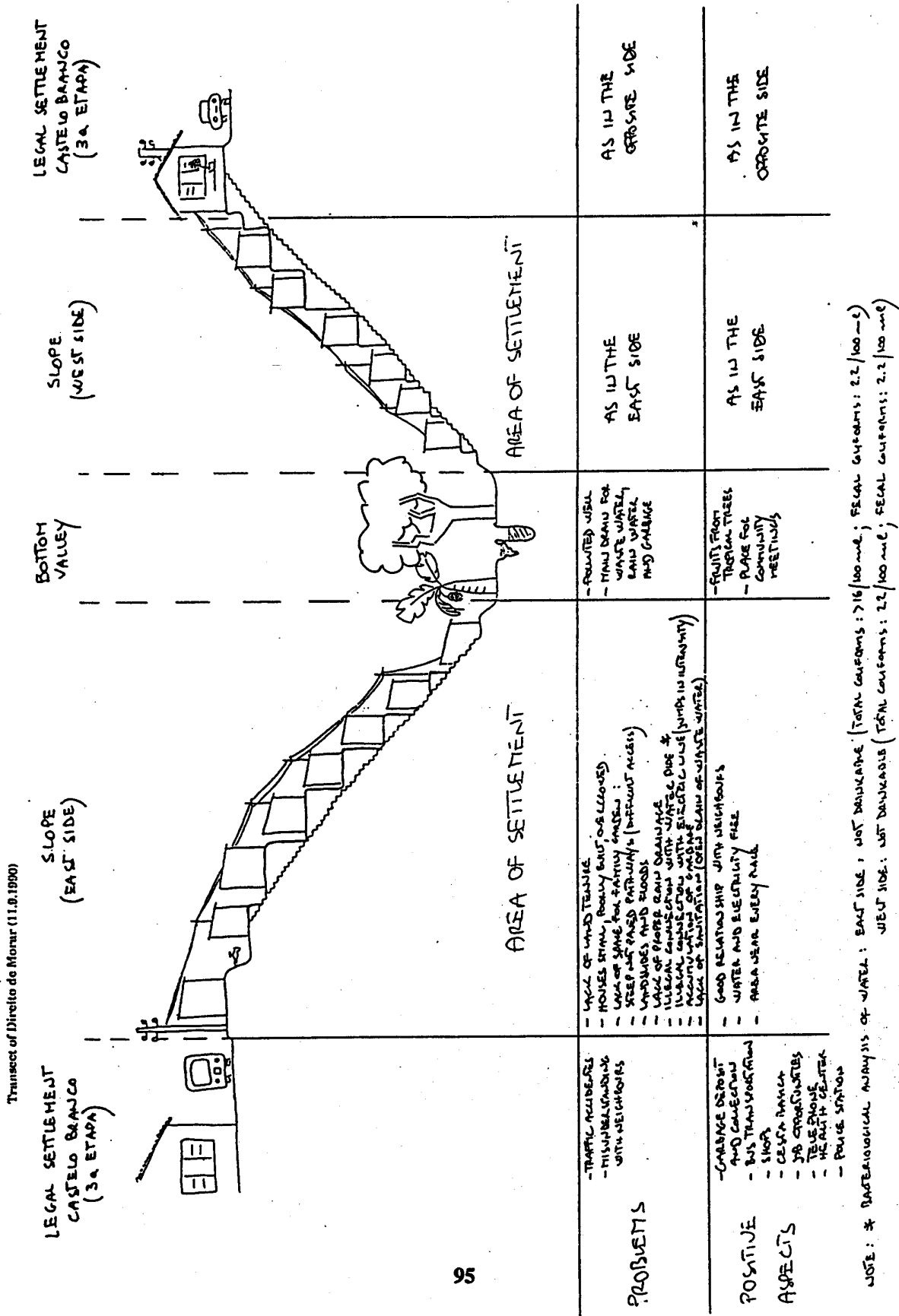


Figure 3. Sketch map of Direito de Morar

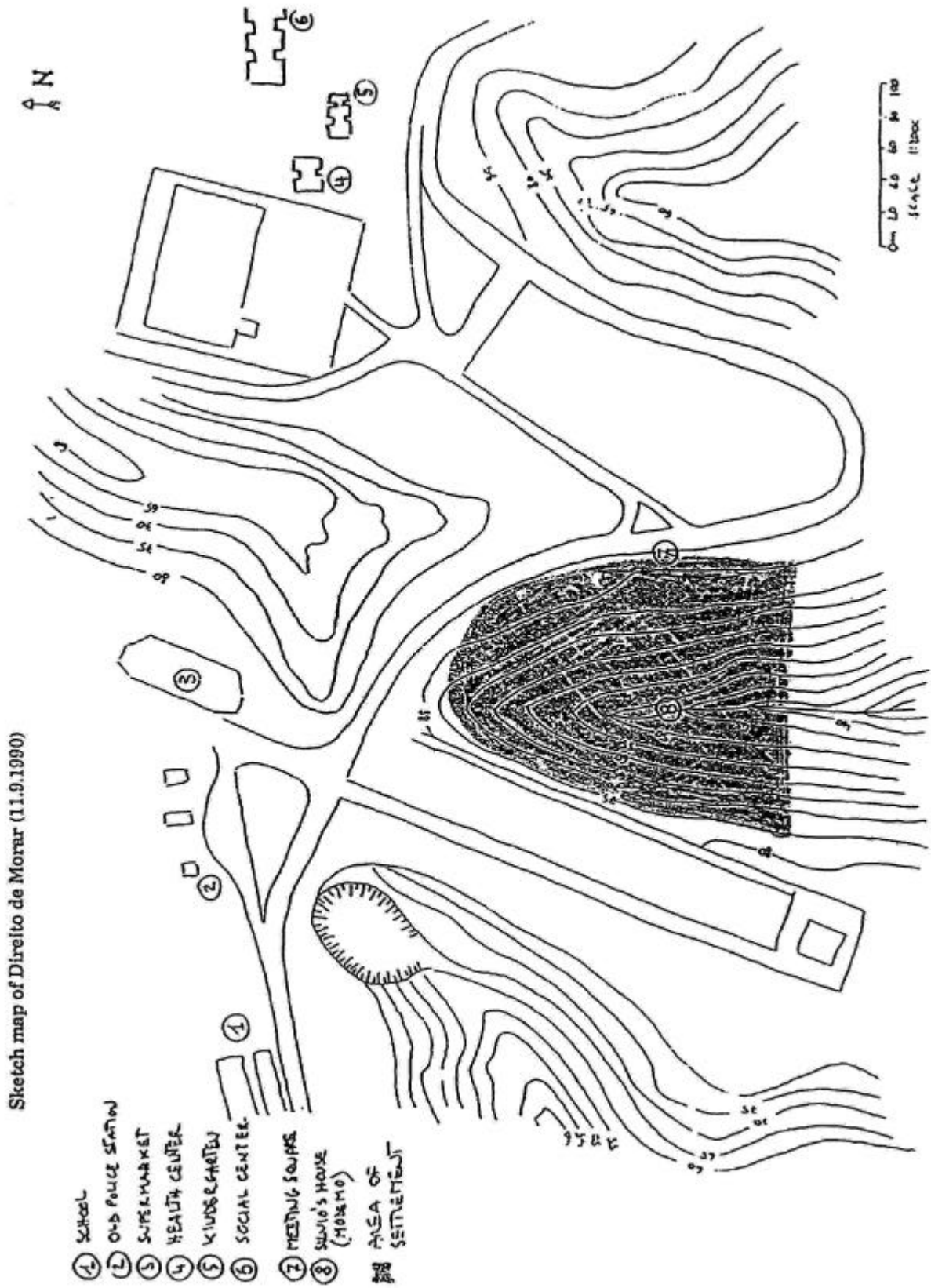


Figure 4. Discussion matrix of Direito de Morar**Direito de Morar: community environmental awareness and PEC priorities**

Positive aspects		
Women	Men	Youth
<ul style="list-style-type: none"> • Easy transportation • Presence of a supermarket and a pharmacy in the area • Working places are near • The health facility is near • No rent to pay • The school is near • Thieves and murders are unusual 	<ul style="list-style-type: none"> • The neighbours are nice friends • Nice social environment • Good people cohesion • Supermarket, health facility, pharmacy, bus stop are near • Easy transportation • The friendship • There is a house for meetings • Quiet environment • There is a police station • There is a place where to live 	<ul style="list-style-type: none"> • Quiet environment • Safety at night • Good relationship with neighbours • Water and electricity are free • Absence of drug users • Nobody pays for water and electricity • There are no drug users • No rent to pay • The area is near to many places
Environmental problems		
Women	Men	Youth
<ul style="list-style-type: none"> • Lack of water • Lack of sewage system • Unfair distribution of land • Lack of latrines • Illegal electricity connection • Lack of proper stoves 	<ul style="list-style-type: none"> • Illegal electricity connection • Lack of water • Lack of sewage system • Lack of proper pathways 	<ul style="list-style-type: none"> • Lack of land tenure • Social conflicts • Poor housing • Illegal electricity connection • Lack of water • Lack of sewage system • Lack of pathways pavementation • Garbage accumulation • Lack of latrines • Well pollution • Lack of school • Too large families • Landslides • Lack of health care • Lack of kindergarten • Poverty • Hunger
PEC priorities after discussion		
Women	Men	Youth
<ol style="list-style-type: none"> 1. Land tenure 2. Housing 3. Sewage system 4. Electricity supply 5. Water supply 	<ol style="list-style-type: none"> 1. Land tenure 2. Water supply 3. Electricity supply 4. Sewage system 5. Control of drug problem 	<ol style="list-style-type: none"> 1. Land tenure 2. Sewage system 3. Health care facility 4. Employment opportunities 5. Garbage collection

**Figure 5. Basic PEC interests matrix from focus group discussion
Cristo & Vida: basic interests in PEC expressed during the focus group**

Priorities	Basic need	Categories of motivations for priorities					
		Prevention of disease	Quality of life	Condition to solve another problem	Economic interest	Social interest	Opportunity/feasibility
Land tenure	To have a place where to leave (Y)			To be able to improve the building (W-M) To get water and other services (Y)	To stop being afraid to loose our properties (W-M-Y) To leave the house to our sons (W)	To give identity to our community (M)	It is a good moment to revendicate it now, before elections (Y)
Water supply		To take care of our personal hygiene (W-M)	To do domestic work (cleaning, cooking, etc.) (W-Y) To avoid difficult transportation of water (W-Y-M)		To pay less for the water (W)	Because a person has forbidden the use of the well (W) To avoid depending from other people for the water supply (W-Y) To avoid stealing water from EMDASA (unpolite) (M)	
Sewage system	Because we have no place where to put excreta (W-Y)	To avoid children playing in dirty places (W)	To have privacy (W-Y) To avoid the bad smell (Y)	To prevent pollution of the well (W) To prevent attraction of the insects (M)		To avoid the embarrassment of living in dirty places (M) To avoid throwing the stools away (Y)	
Health care facility	Because we can die before reaching the health facility (W-Y-M)		Because the health facility is far (Y-M)				Because we need external support to solve this problem (M)
Job services and employment	To find work (M) Because a formal work is very difficult to find (An informal job is easier) (M) To be able to buy the food (W)		To improve the quality of life with money (W)	To build a better house	To support our families (W) To help our husbands in supporting the family (W)		
School facility	To give the necessary education to children (M)	To learn individual hygiene (M)	Because as it is the school does not work well (M)	Because it is impossible to find a job without studying (Y) Because at school children can learn what to do about garbage (M)	Because we cannot pay for a private school (W) To get help from children after certification (W)		
Garbage collection			To avoid the bad smell (Y) To live better (M)	To prevent pollution of the area (Y) To prevent land slides (garbage blocks water drainage) (Y) to prevent attraction of animals (Y)			Because we can solve this problem without external help (M)
Policy facility						To avoid conflicts with the neighbours (Y)	

Reflections from experience

While for the results, conclusions and recommendations of our study we refer to our ICHM dissertation (de Colombani, de Melo and Irshaid, 1990), we would like to summarise here a few reflections on the methods we have applied. We believe that Rapid Appraisal is very suited to study fast-changing realities like urban squatter settlements (see also Peattie, 1983 and Yach et al, 1990) and excellent to stimulate people to communicate with one another and identify matters of common concerns. In fact, the RA methods employed in our field-study provided a much needed occasion for squatter communities to gather and talk about common concerns rarely discussed in a formal way. Among the squatters there is a strong desire to talk about their own situation, to become credible to others, to make others understand the reasons why they are in many ways forced to be 'second class', 'illegal' citizens (life histories were particularly illustrative of these aspects). A common feeling among the squatters is that they are 'abandoned' from the rest of society, that no one wants to hear about their problems, nor cares about them. In this light, if the governmental services would initiate community-based RA exercises, they may obtain relevant returns in public image and credibility. This, however, may also be a risky activity, since the expectations of a community can be raised -substantially and hopelessly - if the limitations and constraints of the exercise are not perceived and accepted. If the interested community would clearly understand that the aim of RA is building a participatory community diagnosis, building a 'risk map', gathering information to plan new services, discussing ways to set up a resident association, or introducing the PEC approach, we believe that the methods would be very appropriate. The usual RA methods, however, may not be sufficient to identify community-based solutions to specific problems. What is needed is a forum where not only problems can be articulated, but also strategies to solve them can be identified, options discussed, different needs mediated and specific projects, activities and tools agreed upon. A set of techniques that go under the name of *Making Microplans* (Goethert and Hamdi 1988) provide an example of how this second, more

action-oriented phase could proceed. The link between Rapid Appraisal and Microplanning is strong, since they both emphasise process rather than 'product', and are concerned about rapidity of analysis, local relevance of activities and partnership building among the many individuals and institutions who have a stake in a project. Moreover, both RA and Microplanning are problem-driven, and promote community leadership and self-reliance. In summary, we recommend that the PEC strategy build upon RA and Microplanning as successful integrated processes of community empowerment: a process of self-recognition, clarification of problems and needs, decision-making and action in full partnership with other interested parties.

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