

9

PRA that supports local development: the experience of developing a municipal rural development plan in Tombos, Brazil

Andréa Alice C. Faria

• Introduction

In recent years, there have been many discussions regarding the role of participatory methodology as a tool for popular emancipation and social transformation. Much emphasis has been placed on ‘understanding reality’. Paulo Freire and his concept of Popular Education is fundamental for those of us working in Latin America with PRA. He revived the notion of ‘knowing reality’ as part of learning, which is a cornerstone of PRA. Today, applications of PRA are diverse indeed but many face common challenges. One of these relates to analysis of the information that emerges.

- How can we systematise great amounts of mainly qualitative information?
- How can we make sure that the information collected contributes to an educational process of analysing local realities?
- How can we ensure that the analysis of information contributes to or generates a process of transforming actions?

In quantitative research, statistics guide data compilation and analysis. The researcher is the ‘reader’ of the information and is often responsible for planning-related outputs. The local population is the ‘target’. The problems of such situations are well known and widely discussed. However, qualitative research, particularly when also of a participatory nature, does not offer a magic formula. New ways of working have only been developed by trial and error. This article contributes to the ongoing rich methodological discussion by

focusing on the particular challenges of the analytical process. It draws on experiences in Tombos (Minas Gerais, Brazil), where a PRA process was the foundation for elaborating a Municipal Rural Development Plan.

Context

Tombos is a small municipality (284 km²) in Minas Gerais, with 10,400 inhabitants, of whom about 7000 live in the local municipal town of the same name. The local economy is based on the coffee and dairy production. In 1996, the municipal elections put a new popular-democratic administration into power, that strongly supported the rural sector. In 1998, the municipal agricultural department¹ initiated a partnership with a local NGO, *Centro de Tecnologias Alternativas da Zona da Mata* (CTA-ZM), to develop a Rural Development Plan. The methodology that was agreed was based on CTA-ZM’s experience with PRA². The work in Tombos lasted approximately 8 months and followed many steps (see Table 1).

¹ The local authorities contracted a professional facilitator from CTA-ZM (myself), and received voluntary input from 26 students and 4 professionals, besides the voluntary participation of more than 300 citizens of Tombos.

² It is based on ‘strategic participatory planning’ that was initially adapted by Professor Dr. Joel Souto Maior and used by CEPAGRO, another NGO.

Table 1. Analytical steps, participants and outputs

What?	Who?	Outputs
1. proposal discussion (2 meetings)	Municipal Secretary of Agriculture, EMATER ³ , STR ⁴ , APAT ⁵ , CTA-ZM and consultant	formation of core team formation of a Committee ⁶ to co-ordinate the development of the plan
2. collecting/systematising secondary data about the municipality	Municipal Agriculture Department, CTA-ZM	synthesis of secondary data
3. <i>analysis</i> of secondary data (2 meetings)	Core team (Municipal Agriculture Department, EMATER, STR, APAT, CTA-ZM and consultants)	first checklist for the fieldwork
4. collecting information from Committee (2 day meeting)	Committee members (40-45 people)	information collected with: mapping, Venn diagrams, historical matrix and flow diagrams
5. systematising council information	UFV ⁷ students and other professionals in the Committee	synthesis of information gathered by Committee
6. correction and <i>analysis</i> of council information (2 day meeting)	Committee members (40 people)	correction of synthesis 'dreams' and typology matrix new checklist for the fieldwork
7. collecting information from 16 rural communities and town (2 weekends per community)	Research team: members of the Committee, consultants, students and professional volunteers (54 people)	information gathered with: mapping, seasonal calendar, 'dreams', semi-structured interviews selection of representatives to help Committee in drafting the municipal Plan
8. systematising information	part of the research team	synthesis of information gathered up to that point
9. general <i>analysis</i> of municipal reality based on the elaborate synthesis (2 day meeting)	committee expanded with community representatives (55 people)	'logical relations' matrix (see Table 2) definition of a mission statement for the future Municipal Rural Development Committee
10. deepening of municipal analysis and formulation of possible action proposals (2 meetings, totalling 3 days)	committee expanded with community representatives	proposals for action
11. presentation of the proposals for action (1 day meeting)	open participation (236 people)	suggestions and comments about proposed actions
12. identifying ideas for proposals (1 day meeting)	committee expanded with community representatives	formation of committees for the elaboration of an operational plan
13. elaboration of operational plan	9 commissions (total 20 people)	operational plan

³ EMATER: Technical Assistance and Rural Extension (Government Agency)

⁴ STR: Rural Worker's Union

⁵ APAT: Association of Small Producers

⁶ Committee composition = 45 people (9 not from Tombos residents): STR (8); APAT (5); group coordinators (7), Rural Union (2); Health Department (2); Education Department (2); Social Security Department (2); Agriculture Department (2); EMATER (2); CTA/ZM (4); UFV (6); Integrated Services of Tributes and Fiscal Assistance (1); Local Council (2).

⁷ UFV: Federal University of Viçosa

• Establishing and analysing the information process

As Table 1 shows, we had three core sources of information:

- secondary data;
- information from the Committee members; and,
- information from 16 communities and the town of Tombos.

After each step of data collection, data was systematised to enable further analysis.

First, the *secondary data* was analysed by the core team in order to develop an outline for the appraisal methodology. After each bit of information was read out, notes were made on a flipchart of those issues that needed clarification in the fieldwork (the checklist).

The *information given by the Committee members* was compiled into a document, which was read, corrected and adjusted in three small groups during committee meetings. While correcting and adding new information, analysis took place and the groups identified those points that should be included in the fieldwork. The three groups presented their new ideas to each other in plenary for approval. Up to this point, the only objective of analysis was to check the quality and reliability of the existing information and to identify the vague or missing points that would form the basis for the next data collection stage.

After *collecting information from 16 communities and the town*, the analysis took on a different character. It aimed to examine the existing problems in order to come to concrete ideas for possible action.

Wading through the pages...

The volume of information we faced was enormous! In front of us lay about 200 pages of community-level data and ideas, 23 pages of information from the Committee and 8 pages of secondary data. To systematise the data we followed five steps.

First, information was summarised and registered on cards according to the checklist topics. Three colours were used for each topic: black markers for descriptions, red for the most important problems, and blue for opportunities. This registering was carried out for each community by the students and professionals who had undertaken the fieldwork in those communities.

Then all the cards - identified with a community name - were placed on a board and grouped according to the checklist topics.

The next step was a synthesis of the synthesised checklist topics, retaining the three colours: description, problems and opportunities. Two groups were formed, both of which contained researchers that had visited the communities. One group discussed the topics of natural resources and production systems, while the other dealt with history of land tenure and labour relations, other economic activities, demography dynamics, access to information, education, health, social organisation and other information. The outcome of this work was a group of cards that summarised each topic from the checklist. Any information that was not generally applicable to all 16 communities was identified by the name of the community to which it related. This method became known amongst us as 'SSC': Synthesis of the Synthesised Compilation.

After the SSC process, the cards were presented to and discussed with the executive team in preparation for a meeting of the Committee. The Committee, meanwhile, had already been expanded with community representatives.

The facilitator (myself) and two other professionals then wrote a document that incorporated the synthesised community information and the information collected in the Committee meetings. We wrote down the most important problems (see Table 2) that had emerged on 24 separate cards.

The general analysis only started after this stage, in a meeting of the Committee that included community representatives (Step 9,

Table 1). At this meeting, three groups were formed to read, correct and complement the document that synthesised the information. The suggestions from each group were presented and approved in plenary. To start the 'real' analysis, the 24 cards with the most important problems were presented. Two groups were formed to elaborate a 'logical

relations' matrix. This method helps to establish the relationship between causes and consequences of a problem. One group analysed about half the problems and the other group the remainder. Both groups analysed six of the same problems, in order to be able to merge the analyses in a subsequent step.

Table 2: Simplified matrix of problems in Tombos

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	T
1			1					1		1															3
2					1	1																			2
3				1		1																			2
4										1															1
5								1																	1
6														1											1
7		1	1		1			1		1	1	1	1							1					9
8		1																							1
9			1					1																	2
10																									0
11			1	1																					2
12			1																						1
13													1												1
14							1							1											1
15																									1
16						1																			1
17						1	1																1		3
18																									0
19																									0
20																	1	1							2
21				1																					1
22						1																			1
23						1																			1
24						1																			1
T	0	2	5	3	2	7	2	4	0	1	2	1	1	4	0	0	1	1	2	1	1	0	1	1	42

See Box 1. for key to table.

**BOX 1
KEY TO TABLE 2**

1. lack of technical assistance and little knowledge of alternative techniques
2. marketing problems
3. erosion and land degradation
4. water contamination, river pollution, diminishing water supply
5. low prices and excess supply of handicrafts
6. migration plus consequences: lack of labour and rural ageing
7. lack of information about internal municipal affairs and external affairs
8. no diversification, over-dependence on coffee and milk production
9. low investment; no credit
10. tourism: polluted waterfalls, lack of infrastructure, no tourists
11. agrochemical use (plagues and diseases)
12. deforestation
13. lack of organisation and community divisiveness due to political/religious parties
14. little participation and lack of knowledge about entities and their activities
15. individualism
16. reduced numbers of farm workers
17. school problems: curriculum, meals and others
18. low level of vegetable consumption
19. problems with healthcare/hospital
20. 'biodigital': insufficient volunteers and not accepted by evangelical group
21. sanitation problems: rubbish collection and drains
22. lack of entertainment
23. infrastructure: no road maintenance, no electricity or telephone
24. unemployed youth with no study options

The two matrices were merged to form one large matrix (see Table 2) that summarised the cause-effect linkages⁸. The number 1 indicates where there is a cause-effect relationship. For each box in the matrix, we asked ourselves, to solve the problem at the top of the column. For example, number 1: 'lack of technical assistance', is it necessary to solve the problem

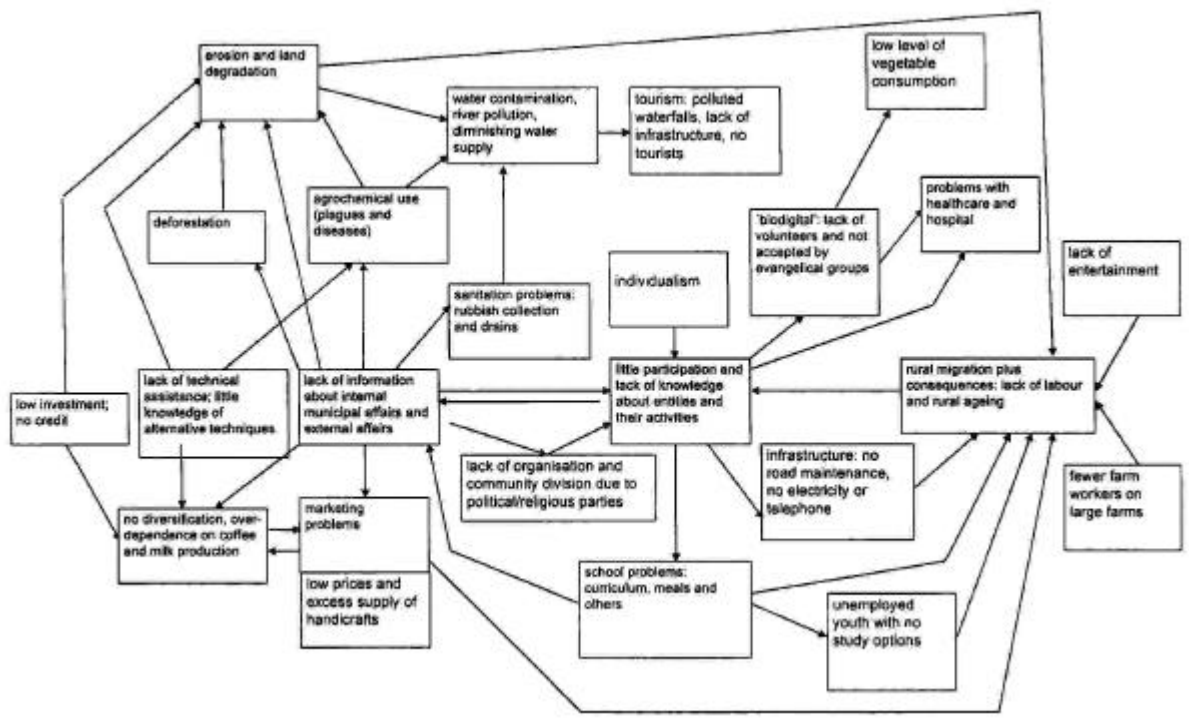
⁸ This method comes from: 'Cartilha de Planificacion Integral con Equidad en Genero - NUESTRO MUNICIPIO', published by Corponariño (Corporacion Autonoma Regional de Nariño), GTZ, PROEQUIDAD DINEM and Fundacion Social.

along the horizontal axis, for number 2 - 'marketing problems', number 3 - 'erosion and land degradation' etc.? If the answer was 'yes', it got 1 point; if 'no', then nothing. We discussed each problem per column, comparing it to the problems in each row. The total score at the bottom of each column indicates the number of problems that are caused by the problem listed at the top of the column. Thus the highest number causes the most problems (in this case, 6 or 'migration'). The opposite logic also helped us. The total score at the end of each row showed us the degree of dependency of problems, thus a high score indicates that it depended on the resolution of many other problems first. From the matrix, a flow diagram was created that shows the link between problems and their causes (see Figure 1). Every cause-effect link was represented with an arrow. Take for example, column 6, row 3. We analysed that problem 6 ('out-migration') was caused by problem 3 ('land degradation'), so an arrow was drawn from the card on which we wrote problem 3 to the card with problem 6.

This flow diagram was presented in the next meeting of the expanded Committee. With the flow diagram and using the mission statement for the future 'Municipal Rural Development Committee', small groups analysed further in order to identify possible actions (Step 10, Table 1). First, two groups of men and one of women identified six strategic issues that they felt were priority areas around which to focus actions (and were later adjusted in a general meeting). Then interest groups were formed to analyse the problems related to that question. Each group worked as follows.

On the flow diagram, they identified the problems related to the issue they were discussing. A copy of the relevant parts of the flow diagram was made, and discussions followed in which further causes and consequences were identified. Then the group used the synthesis document to identify opportunities related to their issue. And only then were possible action proposals formulated.

Figure 1. Causal flow diagram of key problems in Tombos



Proposal identification also followed several steps to ensure clarity and consensus. First, each person wrote down his/her ideas on paper. Then the ideas were presented and sorted on a board. Discussion followed, after which the final ideas were written on cards or flipcharts. In plenary, each group presented its clusters of ideas, and proposals were rejected, approved or expanded. The final list of proposals were then presented and discussed in a meeting that was open to any citizens of Tombos (Step 11, Table 1).

• **Observations about the Tombos process**

Differing levels of participation

A close look at the process in Tombos shows considerable variation in participation of different groups. The core team was responsible for guiding the process, and that was where analysis started, i.e. of secondary data. The Committee was given the responsibility to collect and analyse information from its members and to define the checklist of topics for the fieldwork. The expanded Committee, with community

representatives, analysed the synthesised data and formulated potential action proposals. The largest numbers participated during the open meeting, when proposals were presented, discussed, and assessed.

We opted for this strategy in order to increase insights about the realities in Tombos, while simultaneously aiming to mobilise ever larger numbers of people. Our objective was not just the product – a Municipal Rural Development Plan – but to facilitate a process that attracts, involves, and mobilises people to undertake actions emerging from the plan.

The challenge of participatory 'systematisation'

In many research processes, there are sometimes moments when the volume of information is so enormous that some kind of systematisation is needed in order to make conclusions. Systematisation requires synthesis, reduction, standardising and grouping. At such moments, some information is lost, while some is carried forward. Who chooses and who cuts?

In quantitative social research, a questionnaire is used to group responses, and the questions are based on choices made by the researchers. In qualitative research, multiple choice questions do not exist, so answers must be read, selected, and cut or retained. The information passes through the researcher, and the filter of his/her frame of reference and notions. It is always modified. Therefore, even though the synthesised output might be shared and adjusted by others, the people who synthesis greatly influence the final product.

In Tombos, most of the synthesising and clustering was undoubtedly conducted by the facilitator and students, without the citizen researchers. However this was subsequently read and amended by the extended Committee, which then tackled the logical relations matrix. Practical limitations, such as distance, made it impossible for 30 people from Viçosa and 22 people from Tombos (the field researchers) to meet with the necessary frequency for a truly shared synthesis.

A critical moment of analysis occurred in the synthesis of the huge volume of community-level information. If it had been possible to involve everyone and have unlimited time, then processing of such a vast amount of written material would still have been very tiring for those with limited literacy skills.

Nevertheless, to overcome the limitations of our strategy, several activities helped. After each community visit, the research group met to share impressions and information. Also, the students and professionals used the checklist to group the information, always making sure to identify the information source. Furthermore, after the first round in the communities, a group of the researchers met to revise the checklist on the basis of information gathered. Unfortunately, few researchers from Tombos attended. Finally, by organising the document around clusters of cards (description, problem, opportunity) instead of one long text, we were able to limit the extent to which we were influencing the interpretation of information. Overall, however, we feel that the challenge remains to find a more participatory approach for structuring and digesting the information.

The importance and limitations of a checklist

‘Optimal ignorance’ or ‘adequate imprecision’ are often referred to in PRA (see Chambers and Guijt 1995). One limits what is sought through a checklist. This guidance is fundamental and crucial - fundamental as it clarifies the purpose of the data collection and helps in systematising, and crucial because it defines what is not relevant.

In Tombos, we also followed the principle of progressive insight. The checklist questions were nothing more or less than questions that had not been answered in a previous stage. Therefore, its quality was directly related to the quality of the previous analysis stage. We worked with two checklists (see Table 1), the first being much broader than the second. The first emerged from a simple reading of existing data, and the second emerged after the use of some PRA techniques. So we ensured that the fieldwork was guided by questions from a relatively representative forum that was action oriented and not only from the researchers’ questions.

Constructing, deconstructing, reconstructing

To ensure that collective analysis with 55 people would be possible, the sheer volume of information needed to be reduced. We transformed 200 pages of synthesised information into just 24 problems. Although our process certainly risked some distortion and information loss, the final flow diagram was an interesting output that enabled further valuable analysis. The flow diagram was used to stimulate deeper reflection about core issues that could be tackled through planning. However, planning requires more than just issue identification. To ensure action-oriented analysis, we probed even further with discussions about more structural causes and wider-reaching consequences. This broader, and deeper, analysis was critical for a more meaningful identification of action opportunities.

We found this process of ‘construction - deconstruction - reconstruction’ both effective and efficient. First a synthesis was *constructed* by some researchers. Then, the Committee

with community representatives *deconstructed* the synthesis through problem analysis. Finally, synthesis and analysis *reconstructed* the information around strategic issues.

This dialectic process permitted a much more efficient appropriation of the information than what would have been possible through editing synthesised data. Through specific tasks, or 'analytic filters', people were able to revisit the information, clarifying and understanding in the process. There is always the risk of zooming in on and reinforcing personal opinions and not 'facts'. However many moments of correction allowed for biases to be adjusted. For example, the synthesis document proved to be very helpful in clarifying some polemic topics. The 'construction-deconstruction-reconstruction' process was fundamental to create an analysed consensus, from which action proposals were constructed.

- **Andréa Alice C. Faria**, Caixa Postal, 128 – Cep:36.570-000, Viçosa, Minas Gerais, Brazil. Email: andrea@alunos.ufv.br

REFERENCES

Chambers, R. and Guijt, I. 1995. 'PRA, Five Years On - Where are we now?' *Forests, Trees and People Newsletter* 26/27.