Cadernos do Itaboraí

PARTICIPATORY RAPID DIAGNOSIS – PRD
AND PARTICIPATORY CARTOGRAPHY – PC

TOOLS FOR ADDRESSING SOCIAL
INEQUALITIES AS DETERMINANTS
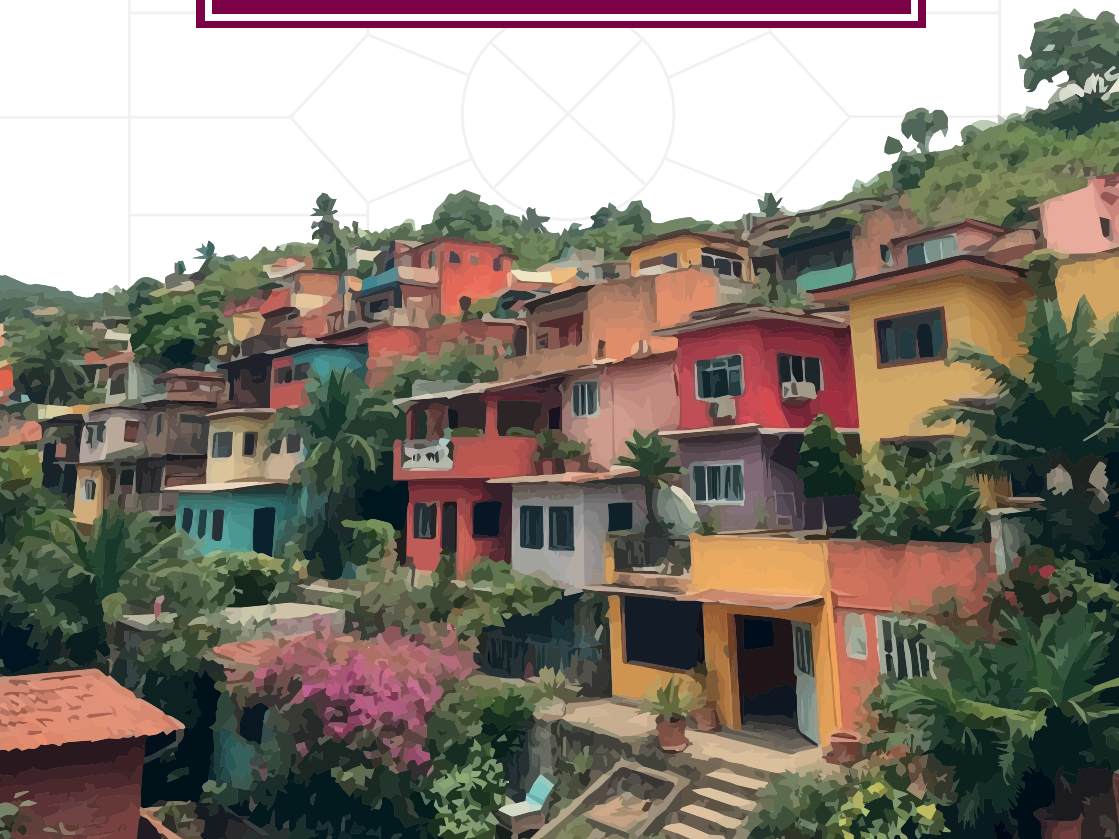OF HEALTH INEQUITIES

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CADERNOS DO ITABORAÍ
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PARTICIPATORY RAPID DIAGNOSIS – PRD
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TOOLS FOR ADDRESSING SOCIAL
INEQUALITIES AS DETERMINANTS
OF HEALTH INEQUITIES

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SUMMARY

INTRODUCTION

This guide was prepared by the team of the Itaboraí Forum: Politics, Scienceand Culture in Health[1], a special program of the Presidency of the Oswaldo Cruz Foundation (Fiocruz) / Ministry of Health, Brazil. Located in the city of Petrópolis, state of Rio de Janeiro, the Forum has, among others, the objective of organizing, systematizing and disseminating a strategy for action in communities of high social vulnerability, through the combination of field activities and participatory initiatives, so that communities appropriate tools capable of making them understand their reality and act collectively in the transformation of their living conditions.

The proposals for Health Promotion policies with the use of participatory methodologies and territorial actions, mentioned here, are based on the concept of individual and collective well-being, of harmony of human beings and the community with their environment, of their "healthy" relationship with the territory they occupy and build or, as conceived by the original peoples of the Americas, with the "Good Living" of the human being and his environment. It is now accepted that the differential conditions for the onset and recovery of specific diseases, as well as the factors that define individual and collective well-being, are determined by the reciprocal relationship between the social structure and the territory, mediated by economic, social and environmental elements, such as income, education, sanitation, employment, etc. This has become practically a global consensus since the World Health Organization's World Conference on Social Determinants of Health, held in Rio de Janeiro in October 2011. Thus, the main objective of the Itaboraí Forum has been to develop participatory methodologies to characterize the territories of greatest social fragility and to understand their main elements linked to the Social Determination of Health (SDH), as subsidies for the formulation of municipal Health Promotion policies that, by definition, require broad community participation and a practice of intersectoral public intervention.

This guide establishes the basic premises and tools for the practical application of Participatory Rapid Diagnosis (PRD) and Participatory Cartography (PC), based on the uses and adaptations that the Forum team has developed over the last decade with the most vulnerable communities in the municipality of Petrópolis, recently enriched with the pilot application in locations in five Latin American countries[2].

TERRITORY AND PARTICIPATORY METHODOLOGIES

The Participatory Rapid Diagnosis (PRD) and the Participatory Cartography (PC) are field tools built through actions within the territories with their populations. Both methodologies complement each other in the knowledge of the different social groups that make up the territories, allowing them to build organizational processes that strengthen them.

As a political space, territory is the result of social forces that inhabit and interact with it. Participatory methodologies operationalize forms of struggle, strengthen vulnerable groups and formalize processes and knowledge production. The territory thus becomes a field where participatory processes flourish that, by reflecting on the social and economic structure, trigger movements of consciousness and political direction based on their weaknesses and potentialities. As a result, these populations actively participate in the reorganization of space, transforming it into an environment more conducive to well-being and community life, influencing and being part of the Health Promotion process.

[1] - Learn more about the Itaboraí Forum atm https://forumitaborai.fiocruz.br/

[2] - Access the final project report at https://forumitaborai.fiocruz.br/multicenterfinalreport_eng

1 - PARTICIPATORY RAPID DIAGNOSIS (PRD)

The PRD is a continuous methodological process of research and reflection on a reality or situation, from the perspective of local actors. Its objective, in community projects, is to allow the community and local health agents to become aware of aspects related to living conditions, health and their determinants, in order to broaden and deepen the knowledge of their problems, their capacities and resources so that they can, with autonomy, establish the bases for the planning of actions related to their own development.

The PRD methodology emerged from field practices, of an experimental and interactive nature, combining elements from different disciplines. For many of those who apply it, the basis is research - action inspired by Paulo Freire, for whom theory and practice are always in a process of continuous review, based on experiences, reflection and learning, but above all on the relationship of dialogue with the people who live and build the territory.

As a process of knowledge and collective production of information about their reality from the point of view of the community, in the PRD the community groups and the main local actors, in dialogue with the responsible technicians, explain their history, their survival strategies and their living conditions, the problems and the solutions they envision to solve them.

Once systematized, the information is returned to the community for validation, discussion and analysis. From this knowledge, which interacts with the contributions of a professional team, paths for social transformation are formulated through possible compromises and pacts necessary for the development of people and the localities where they live. It is, in fact, a process of collective formation and production of knowledge about the territory, together with the communities that compose it.

In the PRD, in addition to qualified listening, there is also direct observation of local living conditions, urban or agricultural practices, established relationships, problems and the roles played by the population that lives or works there. The PRD, therefore, is not a conventional diagnosis because it is not only about obtaining information, but also about integrating technical observation, perception and experience of community life, allowing popular participation in the debate and analysis of problems and possible solutions. On the other hand, despite what the term "rapid" seems to imply, the PRD is a permanent and continuous process, as it aims at local transformation and not only data collection.

The PRD can be applied by government technicians from the health, education, environment and agroecology sectors, among others, community agents, leaders and other local social actors who make up a multi and transdisciplinary team. The more diverse the team, the more enriching it will be to develop the diagnosis from the point of view of residents and outside observers. Local articulators, people identified during the PRD, who can be mobilizers and multipliers to encourage community participation and ensure the continuity of community projects to transform local conditions, can also participate in the team. It is always recommended that local articulators be from the community.

The sustainability of the PRD process will depend on the participation of the community and the commitment of government actors, particularly community health agents (promoters) and technical researchers. It is understood, in this sense, that the population, aware of its reality, is creative and capable and that the technician is a facilitator. Technicians and managers must consider the resident and the community not only as users, but as essential partners for governance and the exercise of democracy in the implementation of public policies.

It should be noted that the PRD process does not replace quantitative research but complements it. It is also not a magic solution, but, if applied responsibly and with respect for people's dignity and originality, it leads them to visualize, understand and want to solve local problems as active, collective and autonomous subjects. It is of fundamental importance to deepen the concepts

transmitted, as well as constant communication and continuity of actions. The conditions that are in place for the realization of the PRD should allow time for the processes to mature, both among the leaders and community groups and in the technical team itself. Professionals trained in traditional methodologies and systemic conceptions are reluctant to apply approaches that are not formalized and established a priori, so it is essential that the team and the people and organizations involved delve into the fundamentals of PRD.

STEP BY STEP OF THE PRD

The first step of the PRD should be preceded by a preliminary mapping of the existing secondary data on the territory. In addition to saving time and avoiding duplication of effort, secondary data give an idea of the context, the current state of knowledge on the topic and territory, and previous trends, and contributes to better planning of practical work. They also serve to validate the results of the fieldwork. Available statistical information should be sought on the locality or territory most compatible with the action area, for example, a health unit, a census unit, neighborhood or municipality. Relevant information includes up-to-date demographic data; social and economic indicators and more frequent diseases and/or demands for medical care.

STEP 1: Get closer to the territory

• PRIMARY HEALTH CARE UNIT – As a starting point and reference, already on the ground, meet with the entire local Primary Health Care – PHC team, (Family Health Strategy or equivalent), including administrative and general services, with the aim of informing and exchanging ideas about the PRD process, so that everyone can collaborate, providing the necessary information to users and even participating in fieldwork, if applicable.
• SCHOOLS – Together with PHC professionals, visit public and private schools (at any level of education) established in the area covered by the health unit to explain the purpose and process of the PRD. Talk with the head and the faculty about the general social profile of the students and their families, the characteristics of the locality, the difficulties, specificities and potentialities of the territory and suggestions in relation to the problems indicated.
• SOCIAL ASSISTANCE REFERENCE CENTERS OR EQUIVALENT – Visit existing social assistance units in the territory to explain the purpose and process of the PRD, learn about the institution's vision of the territory and consult about the interest of any social worker to join the work team.

STEP 2: Exploring the territory

The crossing consists of a group walking through parts of the terrain/neighborhood, with observation and individual, group and community conversations. It is a route through streets, stairs, alleys, etc. whose itinerary is previously established together with the team of technicians and inhabitants. The crossings aim to identify the problems perceived by residents and local technicians, in addition to identifying the key people to be interviewed throughout the PRD.

STEP 3: Focus group

The focus group, as a qualitative research tool, can be used in the PRD to collect opinions, suggestions, information and even attitudes on a given topic of interest for community work, from different points of view.

The Team will invite representatives of institutions with local insertion (leaders of associations, public and private organizations, influential business and commercial establishments, leaders of all religious manifestations active in the localities) to participate in a Focus Group, in a place to be defined by the Team. Each Focus Group meeting should have 6 to a maximum of 15 participants, including members of APS. As many focus group meetings as deemed necessary will be organized.

STEP 4: Semi-structured interviews

The semi-structured interview is carried out through an open and flexible dialogue between interviewer and interviewee and is important to complement the qualitative information of the diagnosis. They should be carried out with key people, important to the community and usually with a long-standing presence in the territory, indicated in the initial contacts, in the crossings and in the focus groups.

STEP 5: Conversation Circles

The Conversation Circle at the PRD is a collective space for collecting information, debate and reflection on various topics. Priority is given to the relationship, the connection between the participants who are stimulated by the moderator to participate in the conversation.

• With students: meet with each class of students from the public schools established in the territory lasting approximately 40 minutes. Introduce the team and the reason for this activity to the young people, get to know the occupations of family members and themselves, main problems, potentialities and dreams.

•With women, preferably with organized groups. (If there are no pre-existing organized groups, invite some community-referred women to participate due to their territorial activism.)

• Other groups that meet frequently in the PHC unit, in social assistance centers or in other spaces in the territory.

STEP 6: Systematization of the results

The results of the consultations and conversations carried out during the PRD and PC process should be gathered and organized in a way that facilitates their understanding and interpretation, enabling the formulation of corrective proposals.

There are several categories by which information can be organized, depending on the referrals to be followed.

• SDGs: A recommended way to systematize the results is according to the main Sustainable Development Goals – SDGs. Thus, for example, results related to hunger and food and nutrition security (SDG-2); the main diseases, conditions and access to the health system (SDG-3); education (SDG-4); to sanitation (SDG-6) and so on.

• Demographic and social categories: In order to better understand the territorial perception, it may be interesting to organize the results according to various categories of inhabitants, such as: Women; Students; Workers; specific occupations, etc.

• Localities/sub-territories: When the territory is composed of some housing or geographical particularities, for example, housing complexes; slope X, etc.

STEP 7: Feedback (return) to the community

This step is of fundamental importance, as it consists of evaluating, complementing and legitimizing the information collected throughout the PRD and PC processes. The objective is to open a space for dialogue with the different groups that participated in the activities, so that they can give their opinion on the work carried out, correct information that does not coincide with their perceptions (and this often serves for the team to evaluate sensitive issues or conflicts between groups in the community itself) and feel motivated to continue with the process. Participatory methodologies serve as triggers for organizational processes when other specific themes or issues may come to the fore, in order to start new processes of cartography, community listening or meetings between local groups and public authorities.

It is very common that, when community and territorial awareness processes are triggered, the PRD and the PC strengthen groups that wish to continue with the collection of other information that was not contemplated

or that was identified in a less profound way. It is precisely at this moment that the team must strengthen local leaders so that they can continue with the development of community organization and the selfmanagement of their living conditions.

STEP 8: FOLLOW UPS/REPORTS

Once the information has been analyzed and validated with the community, the information, already systematized, must be documented with two main purposes: on the one hand, to build a memory of everything that has been accomplished, in some cases, necessary to be accountable to hierarchical authorities or eventual sponsors and, on the other hand, to prepare reports to be forwarded to public authorities or civil society organizations that, eventually, collaborate with the solution of the problems identified.

It is appropriate that the reports include tentative plans for correcting weaknesses agreed with the community during the feedback meeting, and that they are prepared with different levels of detail, language and specificity, according to their recipients, for example, the sectoral bodies of the municipal government, residents' associations, other civil society organizations, legislative representatives, etc.

2- PARTICIPATORY CARTOGRAPHY – PC

Cartography is traditionally defined as a science that encompasses the set of tools and procedures that aim to represent phenomena or elements arranged in geographical space. With a trajectory that dates back to Prehistory, Cartography followed the spatial turn of the last century, with visible consequences in the expansion of the use of geotechnologies around the world.

Participatory Cartography is a fundamental tool in strengthening vulnerable social groups and preserving the territorial rights of traditional or peripheral communities, serving as an instrument of territorial planning. The PC requires the collective participation of the population involved.

What differentiates the work carried out by the Itaboraí Forum from traditional mappings is the choice of socially, economically or environmentally fragile territories with the main objective of complementing the PRD allowing, on the one hand, to delimit and characterize the class conditions that define the territory and, on the other hand, to spatialize the main information, including the potentialities and weaknesses perceived by the community and the PRD team. In this way, maps are understood as products resulting from the processes of collective reflection around territorial dynamics, where agreements and discussions are developed on how the actors involved decide to classify and represent their own reality.

The PC developed by the Itaboraí Forum is carried out through the mapping of territorial crossings with community members and facilitators, tracing the information on a printed map or in the Geographic Information System – GIS, with the use of a common cell phone, as well as from the participatory construction of maps in cartographic workshops with different groups in the territory (women, young people, local leaders, etc.)

This practice provides not only for the mapping of information, but also for the participatory construction of categories for maps and a legend that can be understood by all. In the process, it is necessary to delimit the area to

be mapped, based on the regionalization of the locations defined by the PRD. This regionalization takes into account objective attributes and forms (streets, squares, public facilities and government boundaries, such as neighborhoods, provinces, etc.), but places them in dialogue with elements of the local imaginary. This imaginary brings with it the possibility of mapping the localities that symbolically exist in the community culture, as places of community memory, even if they have not been inventoried in official government agencies. The characterization of the hegemonic social class or groups and their determining elements is an essential element for the delimitation of territories.

Regional representations are constructed that show the smallest territorial units to be defined, constituting the localities that express the differences and complexities of each territory. It is in these places that the fieldwork is organized, looking for representatives from each place to develop it. In some cases, it is possible to appoint representatives on even smaller scales, by streets or blocks. This process ends up bringing part of the social memory of the communities that, when remembering their histories, justify or not a certain limit of current location where, most of the time, they refer to the differences that are expressed in the social classes of the residents and in the territorial composition that has been formed over time.

The main elements of PC in community projects include the generation of physical and digital maps, forming the following products:

• Descriptive map: Cartography of the area that covers the territory, streets, public facilities and community references.

• Regionalization: Territorial subdivisions, constituted from the understanding of the differences between the groups that inhabit the territory (different occupation processes, different predominant occupations/professions, political and identity conflicts, etc.).

• Potentialities and vulnerabilities: Locates the positive and negative representations of the community, allowing the classification of areas of greater or lesser socio-environmental fragility, as well as areas of strategic potential for community organization.

• Flow maps: Locates the perception of trips imposed or chosen by the populations, such as routes and means of transport for access to public facilities, leisure areas, family visits, etc.

• Spoken map: Open representation, where participants are invited to record the perception of the spatial dimension of the community, combining symbolic, affective and belonging relationships with the place. Spoken maps are also useful for representing spatial realities of other temporalities, such as maps of the community's past, or of a specific place.

HOW TO INTEGRATE PC AND PRD?

The PC was operationalized at the Itaboraí Forum as the methodology that focuses on the spatial approach to the PRD tools. Therefore, it is appropriate that the activities provided for in the PRD have a cartographic component. However, it is necessary to recognize the particularities of each instrument to prevent one procedure from interfering with the particularities of the other. Thus, for example, during an initial crossing, the query about the location of specific information on the map can distract from the construction of a reasoning and the free course of conversations. On the other hand, it is necessary to evaluate the technological conditions available in the territory and in the work equipment (such as internet access, mobile phone, GPS, etc.).

If there are technicians working with GIS (such as QGIS, ® gMaps® or SWMaps®) on the part of the work team, PC can be implemented by combining physical maps collected in the field and georeferenced digital maps, allowing a better exchange of information. The Itaboraí Forum develops PC based on free software, which can be used on the work team's own cell phone and the community members. Without the need for the use of complex geoprocessing tools, PC becomes more accessible and can be performed by a greater variety of social groups.

Specific crossings for PC, conversation circles and focus groups enable the most opportune moments for the spatialization of the data. It is suggested that specific PC workshops be held to work on the spatial perception of the group, in order to complement the report with the location of information in the territory, giving a greater impact to the activity.

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ANNEX 01

GUIDELINES FOR PERFORMING PRD

ANNEX 01 - GUIDELINES FOR PERFORMING PRD

Convêm que o contato inicial para as visitas seja articulado pelo agente comunitário de saúde ou por uma liderança local.

1: GUIDES FOR INITIAL VISITS

1.1: Guide to visit the health unit(s)

The first institution to visit is the Family Health Unit or equivalent, with coverage in the territory where the RPD/PC will be carried out. For this, it is advisable to contact the municipal management of Primary Care and schedule a visit to the Unit.

With the local team, talk about:

a) What is it like to work in this community in relation to welcoming/interest/participation.

b) What is the socio-cultural and economic profile of the people who seek the Unit?

c) What are the main health problems observed in this area/region? Do you have an idea about possible causes/determinants?

d) What are the biggest difficulties for working as PH professionals in the area?

e) What are the greatest capacities/potentialities of this community?

f) Suggestions for improving work/participation in the Health Unit.

1.2: Guide to visiting schools

a) Introduce yourself to the school administration and explain the purpose of the visit.

b) Talk to the head and/or teachers about:

- The profile of students and their families: what they do, where they work.

- How they get to school (on foot, by bus, etc.).

- Conditions and problems of students and their families.

- The features that stand out in this city.

- Serious health problems, including serious illnesses; main interfering problems, vision problems (many students with problems in this sense?)

- The main difficulties of working in this school.

- The potential of the territory: local initiatives that stand out positively.

c) Ask for suggestions on the topics mentioned.

d) Ask for references from key people (leaders, women, youth, etc.) to interview them later.

e) Request an agenda for a Conversation Circle with 9th Grade Students

1.3: Visit guide to the local Social Care / Assistance Reference Center or equivalent

a) Introduce yourself and explain the purpose of the visit

b) Talk to professionals who have a good knowledge of the locality about:

- The reasons and frequency of users' visits to the Center

- The profile of people and groups of users: what they work on, where they work, characteristics and most obvious problems.

- The characteristics of the locality.

- The difficulties of working in this city.

- The potential of the territory: local initiatives, which stand out positively.

- The most excluded places in this territory and why.

c) Ask for suggestions on the topics mentioned.

d) Ask them to refer key people (leaders, women, youth, etc.) to be interviewed later.

e) Inform that a Conversation Circle will be held with women active in the daily life of the neighborhood and ask for names for this activity.

2: CROSSING GUIDE

2.1: Preparation

a) Start at the Health Unit: Define with the group the path to follow in the microarea, where to start. Ask the respective community health workers to indicate the names of key people in the micro-area who can be interviewed by the team during the crossing, if possible.

b) Whenever possible, community agents should contact, even by telephone, people from their respective micro-area, to communicate the route of the group of professionals.

c) Each team will travel through their respective micro-area, equipped with the specific map of that area. During the RPD period, make as many crossings as necessary, until you collect the information from the micro-area.

d) Start the crossing, approach people and groups on the street, in bars, shops, squares, introduce yourself, explain the reason for the work. Communicate with people who aren't in a hurry or who aren't too busy. For example, a street vendor, the owner or employee of a bar who is not with customers, a group of people who are talking, a group of young people and/or children at the school gate or in a square, etc.

e) We must remember that we must listen more than we speak. Don't ask continuous questions. It is more important to let the person speak freely to answer the initial questions. Look directly at the person, listening attentively.

f) In each group, someone (one or two people) takes notes and then the group organizes the information, ordering or systematizing it. It is important to excuse yourself/explain the reason for taking notes, otherwise it can inhibit those who are answering the questions.

g) It is recommended to photograph, but discreetly, asking permission during a conversation with people, explaining the importance of photographing.

2.2: Crossing script

• How long have you lived here? If the person is old in the area and knows historical or other relevant information about the neighborhood, tell them that you would like to talk to them about it at another time. At the end of the conversation, schedule an interview with this person or someone who knows the history of the locality.

• Most frequent (labor) occupations, where and in which people labor, unemployment, and formal and informal employment. In what locality or territory do they work, how do they get to work?

• Do people come from other places to work in the city? Or do local people go to other places to work?

• Where do children study and how do they go to school? (bus, car, hike, hike, etc.)

• Do you visit other communities? To work? To visit friends, to go to events, to church, etc.

• What are the main health problems in this city?

• What do you like most about this place?

• What are the city's main problems? How are they solved?

• What do you suggest to solve the problems?

• Who and which local organizations are important in the life of the community?

• Are there neighborhood associations? Community groups?

• Who would you recommend us to talk to?

Observe and talk, as far as possible, on the following topics:

• <u>History/Trajectory</u>: changes that have occurred in the place in recent years, remarkable events in the history of the village, origin and history of territorial occupation told by the inhabitants, especially the oldest, some personal trajectories (write down name and telephone number for later contact).

• <u>Area profile</u>: income/economic, high school level (incomplete primary, complete primary, secondary, etc.), age profile of the community (many young children, many elderly, many adolescents?).

• <u>Housing</u>: agglomerated, rarefied, type and quality. If you are invited to enter, observe the interior, ventilation, walls, roof, indoor or outdoor bathroom, sanitary drainage, cesspools, water tanks, solar lighting, plant care, medicinal plants, etc.

• <u>Main discomforts or illnesses</u>: Do they need medical assistance? Are they handled in a satisfactory and timely manner?

• <u>Access roads</u>: avenues, streets and alleys, easements (conditions), paving, public sewage, lighting, water supply, uses (commercial, residential, industrial, etc.).

• <u>Sanitation</u>: open sewage, garbage disposal? presence of springs and mines, invaded areas, occupied areas, new settlements, etc. Flood zones, free market and aftermarket collection.

• <u>Mobility</u>: Existing means of transport. Frequency.

• <u>Natural areas</u>: environmental protection (preserved areas?), floodplains, rivers and canals, with forests, hills, deforested, with landfills or garbage dumps; dikes, water mines, areas where people wash clothes, bathe, wash cars, etc.

• <u>Cultivated areas</u>: type of production, approximate size of properties, drainage channels, conditions, use of pesticides, workplace, type of activities and type of workers, women? Means of transport in rural areas.

• <u>Existing public and private services and institutions and quality of supply:</u> education, health, labor market, recreation, consumption, clothing, social security, leisure and culture, entertainment, religious centers and temples, problems and initiatives related to environmental issues. Government and civil institutions: identify not a simple list or just the quantity, but the quality of their local insertion and the services they provide

• <u>Communication</u>: how does communication, participation in networks, accessible internet, newspapers, community radios occur?

• <u>Community associativism and social integration</u>: strategies of the population to solve problems, existence of associations (active? Deactivated?), quality of organization and participation, potentialities; forms of organization, cultural values, social habits, differences between groups according to their social class and the place where they live; formal and informal, constituted, spontaneous leadership; local collective particularities: problems, possibilities, resources and collective initiatives existing in the community; individual, group or collective income-generating initiatives, as well as spaces/places used or that can be used for income-generating activities; channels and instruments for the collective organization of inhabitants; formal and informal groups and networks of kinship and solidarity, by age group, gender or interest.

• <u>Artistic-cultural manifestations</u>: identify community groups that carry out cultural sports/recreational activities (music, theater, dance, etc.), collective and individual initiatives specific to the locality.

• <u>Critical aspects</u>: areas of extreme poverty, abandoned lots, vacant lots, dismantling, warehouses, tire shops, junkyards, markets, disposal of garbage or materials, etc.; presence of open-air containers, accumulation of garbage, stagnant water, open-air wastewater, remains of industrial processes, use of pesticides, air, water and noise pollution, etc.

Observe and photograph if possible.

• <u>Significant places/spaces mentioned or observed</u>: where the youth and the elderly gather; agglomeration; public spaces. Spaces frequented for leisure, cultural or religious activities, sports fields, informal or official, conditions of these spaces.

• <u>Key organizations and people</u>: ask and identify in each community/micro-area

3: FOCAL GROUP GUIDE (FG)

3.1: How to form a focal group

The participation of three professionals from the team is convenient. The role of the person who will moderate the conversation is to promote the participation of all, avoid the dispersion of the objectives of the discussion and the monopolization of some participants over others. The content of the conversation is identified in the script to be followed.

It is essential to clarify to the group the objective of the research and the use that will be made of its results. It should be clear to the group how the discussion will be conducted. Clarify that this is a conversation about what people think about the topic and that everyone is expected to participate.

One of the three people will be in charge of taking notes, which must be quite complete in terms of content and behavior of the participants, paying attention to the preponderant ideas. In general, it is important to take into account: repeated information; the context; agreement or disagreement between the opinions of the participants; the change of opinion caused by peer pressure; prioritizing answers given based on personal experiences of greater relevance rather than vague impressions; the main ideas; prejudices; difficulties in understanding the questions asked; enthusiasms; difficulties in facing challenges, etc.

3.2: Chat about the Community: script

• Population profile, most common occupations, and survival strategies (formal and informal).
• Local living conditions; particular characteristics of the territory.
• Population educational levels.
• The main health problems. People's perception of current or most common diseases.
• The degree of access of the population to services; what hinders or prevents

the care of the population; access to food by the population; malnutrition; the capacity of public agencies to meet the needs of the population.
• The main potentialities and the main problems of the locality.
• How children and youth live and what they do when they are not in school.
• Recreational and cultural spaces and activities in the community.
• Initiatives by the population already implemented in search of solutions to their problems.
• What suggestions would you have to minimize the problems faced by the population?
• Which key people in the locality should be contacted (for further interviews)?

4: SEMI-STRUCTURED INTERVIEW GUIDE

• Schedule interviews with the people indicated during the crossings and in the visits, with the support of the Community Agent or whoever indicated the person to be interviewed.
• Two or three people do the interview. Introduce yourself, explain the purpose and reason for the interview with this person (they were indicated for their performance and knowledge, their seniority in the territory, their leadership role, etc.).
• There is no need to record the interview.

a) IDENTIFICATION OF THE INTERVIEWEE
• Name; Current address; City/State of origin; Marital status; Age; Sex.
• How long the family has lived in this community.
• Why did the family come to live in this community? Location of previous residence.
• Informants' education.
• Number of people living in the house.
• Profession; occupation of the interviewee and the people who live in the

house; labour conditions (formal employment; informality; unemployment; where they work; where they look for work if they are unemployed, etc.).

b) ABOUT THE TERRITORY

• What are the main health problems?

• Where do you seek medical care?

• Where do your relatives study?

• Entertainment venues: in the community / in the neighborhood / in other neighborhoods: Which ones?

• Situation of women in the territory

• What is missing in the neighborhood for children / adolescents / youth / women / the elderly.

• Spaces/places/buildings considered important by residents. Why are they important?

• Which groups in the community participate in associative, religious, sports or cultural activities (music, theater, dance, etc.).

• Do you read any newspapers, which ones? Do you listen to any community radio? Which one?

• Existing media in the community.

• Do you belong to any social network/WhatsApp group, Facebook, Twitter, etc.?

• Which people and/or organizations do you consider active in the community?

• What important changes have taken place in this city in the last 5 years?

• What are the events that most marked the history of this community?

• What are the biggest problems of this place?

• What are the greatest qualities?

• What would you like your community to look like?

5: GUIDE FOR THE CONVERSATION CIRCLES

5.1: Script for the Conversation Circle with the youth

• Origin and occupation (labor) of the family

    - Where do their families come from?

    - Where and in what activity do family members work? Formal or informal workers? How many family members are unemployed? Since when and where are they looking for a job?

• The territory

    - Main health problems/diseases.

    - Entertainment venues: in the community / in the neighborhood / in other neighborhoods: Which ones?

    - Are there community groups that carry out recreational sports/cultural activities (music, theater, dance, etc.)?

    - How do you find out the news about your locality, the Country, the world?

    - Do you listen to any community radio? Which one?

    - They belong to a social network/group: WhatsApp, Facebook, Twitter, etc.

    - Which people and/or organizations do you consider active in the community?

    - What do you like about this city/neighborhood?

    - What do they not like?

    - What would you like your community to look like?

    - What is your dream?

5.2: Script for the Conversation Circle with women / Other groups

• Occupation / Work:

    - Where and in what activity do family members work? Formal or informal workers? How many family members are unemployed? Since when and

where are they looking for a job?

• <u>Education</u>: Educational levels of the group. If they gave up, why?

• <u>Health:</u> What are the main health problems? Where do they seek health care?

• <u>Territory</u>:

    - What is life like in this city?

    - What are the biggest difficulties in living in this place?

    - Entertainment venues: in the community/neighborhood, others: which ones?

    - Who in the neighborhood solves problems when they occur?

    - Do you participate in any community groups that engage in recreational sports/cultural activities (music, drama, dance, etc.)?

    - Which people and/or organizations do you consider active in the community?

    - What do you like most about this city?

    - What do you not like?

    - What would you like your community to look like?

    - What is your dream?

6: FEEDBACK TO THE COMMUNITY

How to proceed:

• Schedule a broad meeting with the people and leaders involved in the previous steps, bringing the documents with the information systematized by the technical team, as well as the maps produced throughout the process.

• Explain again how the activities were developed, their objectives, their relationship with the dynamics of the territory, its limits and prerogatives.

• Present systematized data that is easy to understand by community members, with intensive use of photographs, images and maps.

• Present the results of the entire process, listing potentialities and problems,

with graphs to analyze them, discussing their causes.

• Define the priorities for the reality in question, as well as the responsibilities of each person and/or group.

• Based on the chosen priorities, prepare the WORK PLAN with definition of indicators, responsible persons and schedule.

• Leverage the discussions generated in the feedback to escalate issues to be addressed by community members or government officials.

7: OTHER TOOLS

***7.1:** Elaboration of Diagrams*

Produce diagrams, often on-site, (e.g., maps, crossings, calendars, etc.), that can be marked on the floor or roughly drawn on paper, to improve communication and learning and make it easier for the nonliterate to understand.

***7.1.1:** Ball Diagram (Venn Diagram)*

<u>**Objective**</u>:

To identify the degree of involvement and importance for the group/community of public agencies, private institutions, community groups, NGOs, projects, programs and the relationships between them. It serves to compare, evaluate, verify the complementarity or competence between the activities carried out locally by them. By establishing these relationships, one understands how close or distant the community feels from the entities being compared, as well as the roles played by these actors, the conflicts that exist between the groups operating in the area and the residents' perception of the specific work of each institution.

<u>**How to proceed?**</u>

• Mark the point or focus of the evaluation, in relation to which the institutions will be analyzed. It can be, for example, the PHU unit or the citizens' association.

• Ask participants to make a list of the different institutions, organized groups,

public agencies, etc. that operate in the territory.

• Then, ask them to evaluate each of these institutional actors and assign values to each of them. The values are assigned according to the performance and work done by the listed institutions and can be symbolized by cardboard circles of different sizes and colors. Larger circles represent a better-quality contribution, smaller circles represent a lower quality contribution, and so on.

• The distance of the circles from the point of evaluation means the proximity or identification with the interests of the residents.

• Depending on the level of interaction between the groups or institutions, indicated by the participants, the circles can be placed one on top of the other.

Notes: The diagram is a simplified representation of a complex and dynamic system of interactions. The situation should not be assumed to be static. It should be considered that the points of view between the participants may be different.

7.2: *Workshop of the Future*

<u>**Objective**</u>: To unleash creative energies in the search for solutions to problems and conflicts and to contribute to the reduction of paternalism between organizations (government, companies, NGOs, etc.) and citizens. It works as an open space for the most fragile populations who, with practical exercises of self-management, actively participate in the process of discussing and defining their lives, outlining their own future.

<u>**The Moderator**</u> has a fundamental role. It explains the dynamics, the rules, and establishes its functions and authority. As working with rationality and emotions, the moderator has to convey confidence and dominate the process, interrupting discussions, neutralizing leaders or technicians who sometimes want to interpret or speak on behalf of groups and participants, which undermines the authenticity of the interventions.

<u>**How to proceed:**</u> There must be a preparation and a continuation. The ideal maximum number of people is 25. The time, number and previous preparation of the participants determine the organization and duration of a workshop, which is divided into three parts:

• *Criticism phase:*: all criticisms are allowed, and it is not allowed to criticize the critics. Working in subgroups (by age, gender, activity, resident, civil servants, etc.) facilitates the completion of this phase, which serves to allow each one to express their point of view, their perception of the problems. In addition, it helps to unload possible "aggressions", linked or not to interpersonal relationships. The important thing at this point is not to raise the problems, nor to discuss their causes, but the possibility of expressing the different perceptions. It requires a lot of skill on the part of the moderator. The atmosphere may become negative and "critical," but it will soon move on to the reverse phase, liberation from dreams and utopias.

• *Utopia phase (dreams):* it is the phase of the search for solutions, even if they are "utopian", even if they have no relation to reality. It is the search for unconventional paths, where people can let themselves go, be creative. Here it can also be divided into subgroups that later, when confronted, will show the different perceptions and creative solutions. Avoid specific discussions (lack of resources, political problems, for example) that limit creativity. The results must be documented on paper, drawing, poster, theater or other.

• *Implementation phase:* It is the moment of "return to reality", where the group tries to define improvement actions to be carried out by the people present. The results of the previous phases should be used and analyzed. An "Action Plan" can be achieved. The moderator has the role of leading the process towards a realistic result with goals and deadlines that help in the realization of the proposals, documenting the commitments made. It is necessary to clarify the limitations of financial resources, feasibility, etc.

At the end, discuss what can be done immediately ("**Next Step Panel**"), scheduling a next meeting to return to the first defined tasks. It is also possible

to draw a **Synthesis Map**, giving residents the possibility to see their participation and intervention in the same places where they live.

ANNEX 02

GUIDELINES FOR THE REALIZATION OF PARTICIPATORY CARTOGRAPHY - PC

ANNEX 02 - GUIDELINES FOR THE REALIZATION OF PARTICIPATORY CARTOGRAPHY - PC

Using physical maps

Physical maps are the most affordable option for execution of PC because they can be printed and taken to the field, without the need for internet access or the use of electronic equipment. Its objective is to approximate the outline of the city, making it possible to view streets, houses and other geographical elements in detail, with the help of free satellite images or official cartographies that can be added to overlapping layers of the map.

Resources needed:

• Printing of a basemap, preferably large (A0 or A1), consisting of an open access satellite image (OpenStreetMaps®, GoogleMaps® and others) with the location.

• If there are technicians with basic training in geoprocessing, it is possible to make use of open tools (such as GMaps®, GEarth® or SWMaps®) to add layers to the basemap that make it easier to locate (territorial boundaries, landmarks...). This information can be added manually to the printed map with a pen or marker.

Use of open source software

Digital maps allow for greater cartographic accuracy of the information collected, in addition to allowing it to be shared and read more easily by different social groups, making it more accessible to the public and the general population. The use of Geographic Information Systems (GIS) allows the addition of geographic coordinates to the information collected in the PRD, with the use of GPS or georeferencing software, facilitating the production and systematization of maps (see annex 3).

Resources Needed

• Internet access or mobile GPS in the field: With the use of a normal cell phone with internet access or the mobile GPS network, it is possible to geolo-

cate the information collected on site.

• Computer or notebook with GIS access (QGIS, GEarth and others).

1: PC DURING CROSSINGS

Whenever possible, it is recommended to carry out a separate crossing for the spatialization of information, so as not to interfere with the free progress of the conversations resulting from the initial crossing of the PRD.

The cartographic reconnaissance of the area must be done even before the specific crossing of the PC, so that it helps to locate itself on the ground. The technician responsible for using the mapping tools must go to the crossing with a cell phone with integrated GPS and, if possible, with internet access. If the use of the cell phone is not possible, it is valid to print the map of the area to be visited, with the streets superimposed on a satellite image. Before starting the route, it is important that the technician has already located the streets to visit, preferably locating some reference points for the spatial interpretation of the area (such as churches, main streets, reference schools, etc.).

In the specific crossing to the PC, during the conversation with the residents, one of the team members (geographer or technician close to the use of the GIS) listens carefully to the reports and seeks to spatialize the information. Sometimes, this facilitator needs to intervene in the conversation to achieve greater geographical accuracy of the reports. In all the references used by the neighbor, an attempt is made to identify where they are, asking where a certain event occurred, on which street the mentioned square is located and, if possible, the neighbor can take the team to show locally what he is reporting. In some cases, the map of the micro-area itself can be used to improve the location of the information, if the resident has good reading skill.

However, it is necessary to be aware that geographical interpretation should not be central at this time and that, later, some of the information collected may be better located by the community agents participating in the

crossing, since they are also residents and knowledgeable about the territory. This is a fundamental step for PC, as it begins to prepare maps of the areas visited, achieving satisfactory cartographic accuracy with the use of GIS.

2: PC IN CONVERSATION CIRCLES

Its objective is to map the territory based on the specific representation of the groups (socio-economic, occupational, age, gender, ethnic, migrants, etc.), allowing greater visibility of their problems and strengthening the networking of these local actors.

How to proceed?

• Adapt the activity to the participating group, since each group has its specificities and means of organizing and perceiving the space.

• Bring the most relevant topics to the group to be represented on the map, in addition, discuss the symbology in the way they want it to be visible.

• Preferably, divide the activity into small groups, with a map for each group.

Note: In the activities of the Conversation Circles in Schools, it is necessary to pay attention to the dynamics of the class, respecting the knowledge learned by each age group. In many cases, the use of a Spoken Map activity is interesting to collectively build the spatial perspective of the group.

3: PC WORKSHOPS

Following a greater integration between the team and the community, it is possible to consider a deepening of the mapped information or even a complementation of the PC, especially in stages in which the use of maps was not possible due to logistical issues or the difficulty that residents had in reading and using the available maps.

The facilitator will need to carefully assess how the mapping is developing throughout the process. If they identify difficulties in the use of maps by the population, it will be necessary to carry out training workshops or even cartographic literacy with those involved, building an approximation of PHC tools with the local population.

Some tools and/or strategies used to make PC easier to develop include:

3.1: Making Spoken Maps

Objective:To enable the registration and visualization, in a schematic way, of the different parts of the territory, of the existing services and their distribution in the various areas identified, according to the vision and participation of the neighbors themselves. In addition, the Spoken Maps have a pedagogical character because they enable the contact of the residents with the cartographic language, without the need to use the conventions traditionally present in the maps, but which can be introduced gradually throughout the activity. The spoken map is a dynamic that can be performed at any time, even during some crossings. The spoken map mainly allows the participation of illiterate people.

Main uses/type of information:

• It represents the physical structure – natural and built – of the territory: during the process of representation, stories emerge that give a more qualitative meaning to the information. The facts of reality, of everyday life are told from the construction of the map.

• It allows the identification of the different locations and problems of a region in terms of geographical, social and infrastructural aspects: relief, vegetation, springs, wells, watercourses, paving, infrastructure works, sanitation, housing, risk areas, commerce, institutions, main roads, etc.

• It facilitates the correlation between natural and social aspects.

• It is a means of communicating impressions about the local environment and the way the community organizes and represents the space.

• Provides a better understanding of past, present, and future historical projections of a given location

How to proceed?

• Previous to the practical part of the activity, it is necessary to build a common understanding about the meaning of Territory, bringing the conceptual and material issues of geographic research closer to the agents involved. At this point, it is also possible to raise issues related to cartography, serving as a preliminary step for more accurate mapping activities in the future.

• People gather in groups to draw the main aspects that can represent the place in which they live.

• Depending on local conditions, various materials can be used, such as stones, sticks, pieces of materials, leaves, paper or the ground itself, colored pencils, chalk, etc.

• The entire representation process is carried out in an interactive and dialogical way, making it easier for participants to visualize the territory as a whole.

Recommendations

• Explain to the participants the characteristics of the technique to be adopted, its objectives and strategies.

• Form the group based on a few jointly defined criteria, such as:

    - Greater identification with the chosen location

    - Participation of people of different genders and ages with the aim of enriching the information.

    - Participation of local leaders.

    - Adjusting the duration of the exercise.

• Transcribe the map on a sheet of paper

Observations

• Remember to always be informal, not too rigid, use the script as a guide and not as a questionnaire. Not to induce response, to let people speak freely. The professional should not guide but observe and listen carefully. Encourage everyone's participation by making sure leaders don't speak for others.

3.2: Workshops for the construction of taxonomy and legend

Objective: At the end of the mapping activities with various groups in the territory, the facilitator's biggest challenge will be to develop the classification of the elements that appeared and, above all, to present the best symbology for the traced elements. This step is related to what the final map looks like, what symbols will be present, and what elements can be agglutinated or generalized.
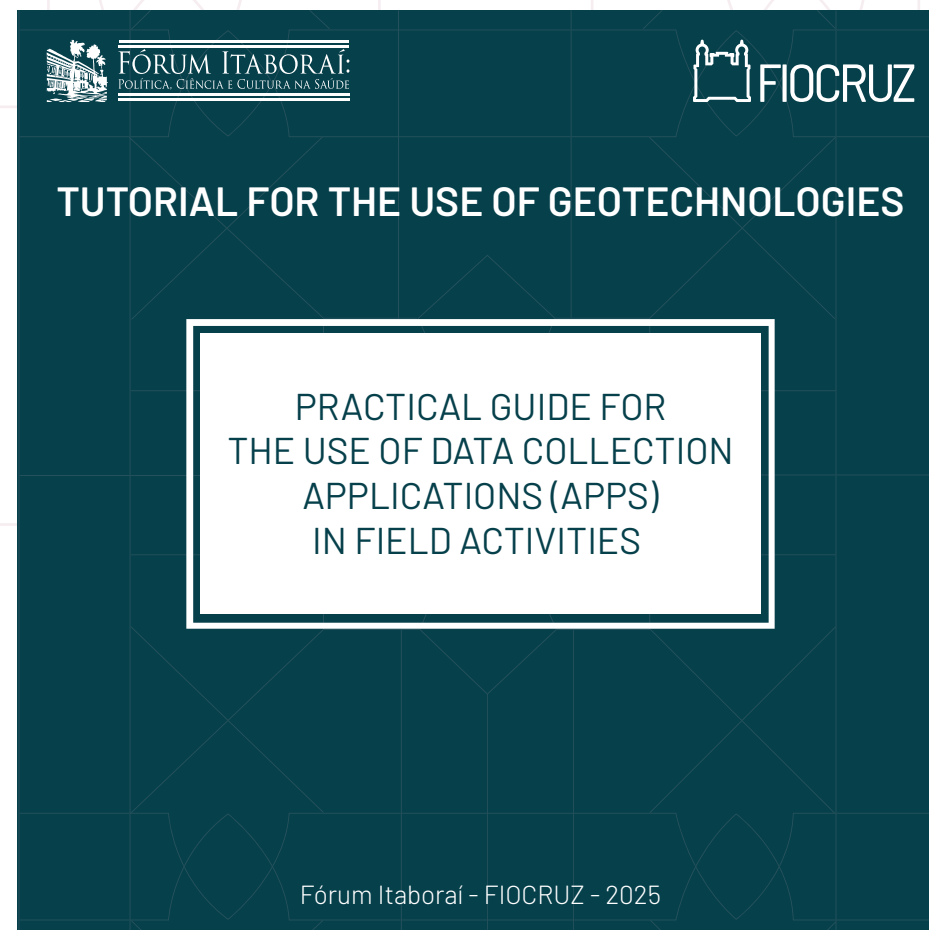
How to proceed?

• Carry out one or more activities with the community group most active in the process, which has participated in the conferences, conversation circles, focus groups, etc. In this way, the group will be composed, in general, of local leaders and community health agents.

• Analyzing the maps prepared in the previous activities, the facilitator must build, in the form of a draft, a basic symbology to propose to the actors involved.

• During the activity, the facilitator must show the PC symbology proposal and build with the community members a taxonomy and legend that makes the most sense to them, with graphic elements agreed upon by all. It is a question of asking: what will be the icon that represents the school? The square? The church? The barrier zones? The floods? And so on.

Recommendations:

• Be careful about what the community wants or doesn't want to symbolize. Some elements may be interesting for the group, but problematic to be presented, publicly, to the community as a whole, such as violent areas, drug trafficking, etc..

• If possible, community members can create some icons they deem necessary. This drawing can be digitized and transformed into a vector file (.svg) and serve as part of the symbolic inventory of the maps produced.

• Throughout the other activities, the facilitator must be attentive to the symbolization proposals that appear. Often, people draw on the map some usable icons or symbols, which makes the process easier.

ANNEX 03

FÓRUM ITABORAÍ:
POLÍTICA, CIÊNCIA E CULTURA NA SAÚDE

FIOCRUZ

TUTORIAL FOR THE USE OF GEOTECHNOLOGIES

PRACTICAL GUIDE FOR
THE USE OF DATA COLLECTION
APPLICATIONS (APPS)
IN FIELD ACTIVITIES

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The Tutorial for using Geotechnologies is available at

https://forumitaborai.fiocruz.br/tutorialforusinggeotechnologies

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