METHODS AND TECHNIQUES FOR MORE PARTICIPATORY AND EMANCIPATORY MANAGEMENT: A SYSTEMATIC REVIEW OF POSSIBILITIES

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ABSTRACT

Research objective: The objective of this article is to identify and describe methods and techniques that can contribute to more participatory and emancipatory management.

Theoretical framework: According to Fadul and Afonso (2018), participatory methodologies have an emancipatory potential, from the moment they strengthen the capacity of subjects to assist in decision-making that permeates their social spaces. They contribute to the process of listening to the needs of individuals, promoting actions to promote and defend rights.

Method: A literature search was carried out to map participatory methodologies, using a systematic review approach, to better outline the search and selection of studies. The systematic review uses explicit and rigorous methods for reviewing work and synthesizing knowledge, based on prior planning and protocols.

Results and discussion: The review employed identified several participatory methodologies, at an international level, which can be subdivided into methods and techniques. The method has a more comprehensive and complete character, and encompasses a set of specific operational procedures (techniques). They have greater flexibility and can compose and adapt to different methods. For example, the “photo-identification” and “enter and exit” techniques aim to understand how communities organize themselves and can form part of the Participatory Rapid Diagnosis (DRP) method.

Theoretical contributions: The repertoire of methodologies presented theoretically enriches the understanding of participatory management and offers a basis for the effective application of these options in practice, which highlights the growing relevance of a more collaborative and inclusive approach. Although aimed at different contexts, the methodologies express common characteristics, such as the formation of interdisciplinary teams to guide work, constant discussions, common objectives, sense of responsibility, promotion of autonomy. These are characteristics that come close to the core of social management.

Originality: Based on a systematic review, this article will address scientific production on participatory methodologies, at an international level, based on results found in various databases.

Keywords: Participatory Methodology, Participation, Emancipation, Participative Management, Social Management.

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RESUMO

Objetivo da pesquisa: O objetivo desse artigo é identificar e descrever métodos e técnicas que podem contribuir para uma gestão mais participativa e emancipatória.

Enquadramento teórico: De acordo com Fadul e Afonso (2018), as metodologias participativas tem um potencial emancipatório, a partir do momento que fortalecem a capacidade dos sujeitos para auxiliar nas tomadas de decisão que permeiam seus espaços sociais. Elas contribuem com o processo de escuta das necessidades dos sujeitos, promovendo ações de promoção e defesa de direitos.

Método: Realizou-se uma pesquisa bibliográfica para mapeamento das metodologias participativas, a partir da abordagem de revisão sistemática, para melhor delinear a busca e a seleção dos estudos. A revisão sistemática utiliza métodos explícitos e rigorosos para revisão de trabalhos e síntese do conhecimento, partindo de planejamento prévio e de protocolos.

Resultados e discussão: A revisão empreendida identificou diversas metodologias participativas, em âmbito internacional, as quais podem ser subdivididas em métodos e técnicas. O método apresenta um caráter mais abrangente e completo, e engloba um conjunto de procedimentos de operacionalização específicos (técnicas). Elas apresentam maior flexibilidade e podem compor e se adaptar à diferentes métodos. Por exemplo, as técnicas de “fotoidentificação” e “entra e sai” visam compreender como as coletividades se organizam e podem compor o método de Diagnóstico Rápido Participativo (DRP).

Contribuições teóricas: O repertório de metodologias apresentado enriquece teoricamente a compreensão da gestão participativa e oferece uma base para a aplicação efetiva dessas opções na prática, que destaca a relevância crescente de uma abordagem mais colaborativa e inclusiva. Ainda que voltadas para diferentes contextos, as metodologias expressam características comuns, como a formação de equipes interdisciplinares para orientação dos trabalhos, discussões constantes, objetivos comuns, senso de responsabilidade, promoção de autonomia. Essas são características que se aproximam do núcleo da gestão social.

Originalidade: A partir de uma revisão sistemática, esse artigo abordará a produção científica sobre metodologias participativas, em nível internacional, a partir dos resultados encontrados em diversas bases de dados.

Palavras-chave: Metodologia Participativa, Participação, Emancipação, Gestão Participativa, Gestão Social.

1 INTRODUCTION

According to Fadul and Afonso (2018), participatory methodologies have an emancipatory potential, from the moment they strengthen the capacity of subjects to assist in the decision-making that permeates their social spaces. They contribute to the process of listening to the needs of the subjects, promoting actions for the promotion and defense of rights. This is because those interested start to set out their opinions about the various problems that affect them (Brito & Drummond, 2008) and to propose creative solutions.

The participatory methodology values dialog and the participation of the other, as a subject of change. It is carried out from a continuous process (not static) and because it provides a basis for participatory work, it needs to be constantly adapted to suit each target group and its reality (Kummer, 2007). Thus, each context will require specific methods and techniques, which, although they present "instruction manuals", need to be drawn from the reality found,
the needs established and the profile of those involved.

The development and application of participatory methods and techniques are totally related to the initiative of local actors, their way of life and perception of reality. Initially, the process should happen in a slower way, being with the passage of time developing with greater ease, from the construction of the autonomy of the subjects and the sense of responsibility and desire for change (continuity, long term). These subjects acquire a more active position and are no longer mere receivers of information, but also producers of knowledge.

According to Carmo et al. (2022), participatory methodologies approximate the theoretical assumptions of social management, with the ultimate goal of emancipation. They stimulate action and joint learning, causing subjects to access decision-making power and become empowered. Social management is a form of administration that seeks social emancipation, by promoting a "[...] more participatory, dialogical management, in which the decision-making process is exercised through different social subjects" (Tenorio 2008, p. 25).

Carmo et al. (2022), when mentioning some participatory methodologies used in social management, point out that others still need to be associated as potentialities for the field. As an initial effort of this gap and considering the relevance of these methodologies as tools for solving local problems, the objective of this article is to identify and describe methods and techniques that can contribute to a more participatory and emancipatory management.

The use of participatory methodologies proves essential for the development of administrative practices that respect and incorporate the demands and realities of the communities. By adopting participatory approaches, management goes beyond traditional top-down models, allowing members of the communities involved to have an active voice in decision-making processes that affect their lives. This strengthens the legitimacy of social interventions and promotes the empowerment of people, enabling the construction of solutions more aligned to their needs and aspirations. This approach, which focuses on inclusion and respect for diversity, contributes to the construction of fairer, fairer and more sustainable policies and practices, which promote the strengthening of social bases and community development in a more effective and lasting way.

Starting from a systematic review, this article will cover the scientific production about participative methodologies, based on the results found in various databases. All selected methodologies will be described, divided between those coming from theses and dissertations and those coming from scientific articles. And afterwards, a synthesis of these methodologies will be carried out, starting from their systematization in methods and techniques.

2 METHOD

A bibliographic survey was conducted to map the participatory methodologies, using the systematic review approach, to better delineate the search and selection of the studies. The systematic review uses explicit and rigorous methods to identify texts, perform critical assessment, as well as synthesize relevant studies, requiring prior planning and protocol formulation (Barroso et al., 2003; Mendes & Fracolli, 2008). Results are collected, categorized, evaluated and synthesized (Galvão et al., 2004).

A protocol guided this part of the research, as shown in Table 1. The process began with the delineation of the research question, which, at this first moment, consisted of mapping the participatory methodologies aimed at management. Descriptors were used: participatory methodology(s); participatory method(s), participatory technique(s), according to the configuration of each base.
The applied bases and filters are shown in Tables 2 and 3, as well as the specific descriptors. The localization of descriptors in titles, keywords or abstracts was prioritized, because due to the vast availability of materials, it is necessary to focus on those works that discuss participatory methodologies (methods and techniques) in a detailed and in-depth manner, not just as a mere citation.

The search for theses and dissertations was carried out in the CAPES Theses and Dissertations Catalog and in the Brazilian Digital Library of Theses and Dissertations (BDTD). Details of this search are presented in Table 2. In relation to the filters by area of knowledge, the areas of administration and other interdisciplinary fields were selected. The filters by the areas of agrarian sciences and agronomy, for example, are justified by the wide literature that relates them to the application of Participatory Rapid Diagnostics (ORDs), a reference in the application of participative methods.

As the CAPES database does not present the advanced search option, the search took place on the "Brazilian open data portal" (https://dados.gov.br/home). The term "capes" has been typed in "search the portal" and the files in CSV format have been downloaded for each year since 1987. As there were only data up until 2020, the search was closed that year.

In the selection stage of the works, the reading of the keywords and the abstract was initially carried out, to identify the works that really dealt with participatory methodologies. Next, a floating reading was carried out, focusing on the summary, introduction, methodology and conclusion. The objective was to identify if the works dealt with the methodologies in greater detail. After this, a complete reading was necessary in order to verify if the works had the potential to meet the objective of this article.
The search for the scientific articles was carried out on the Redalyc, Web of Science and Scopus bases, as shown in Table 3. The filters by area of knowledge followed the same criteria defined in the research of theses and dissertations. The start date of the searches varies according to the start of operations of the bases.

Redalyc covers 1,555 high-quality journals from 31 different countries covering the fields of social sciences, natural and exact sciences, arts and humanities, and multidisciplinary (Redalyc, 2022). The Web of Science is one of the main bases that includes journals that meet the highest quality standard (Abadal, 2012). It features strong coverage and includes more than 21,100 journals published worldwide, across more than 250 disciplines in the fields of science, social sciences, arts and humanities (Clarivate, 2022). The Scopus is a comprehensive database, with materials organized by specialists and incorporating academic literature from various disciplines (Elsevier, 2022).

Table 3 - Search and selection of scientific articles

<table>
<thead>
<tr>
<th>Redalyc Scientific Information System (1969 to October 25, 2022)</th>
<th>Filters</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>strings: &quot;participatory methodology&quot;; &quot;participatory method&quot;; &quot;participatory technique&quot;</td>
<td>general search (separated by string)</td>
<td>16,806</td>
</tr>
<tr>
<td></td>
<td>disciplines: territorial studies, multidisciplinary (social sciences), sociology, administration and accounting, policy</td>
<td>1,284</td>
</tr>
<tr>
<td></td>
<td>document type: article</td>
<td>1,211</td>
</tr>
<tr>
<td></td>
<td>articles that contained the string(s) in the title and summary</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>deletion of repeats (of the same basis)</td>
<td>61</td>
</tr>
<tr>
<td>Selection of studies</td>
<td>keyword reading and summary</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>floating read</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>full read</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WEB OF SCIENCE (1945 to August 31, 2022)</th>
<th>Filters</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>string: (&quot;participatory methodology&quot; OR &quot;participatory method&quot; OR &quot;participatory techniques&quot;)</td>
<td>topic search</td>
<td>2,403</td>
</tr>
<tr>
<td></td>
<td>research areas: social sciences other topics, business economics, development studies, public administration, sociology, urban studies, social work, social issues</td>
<td>603</td>
</tr>
<tr>
<td></td>
<td>web of science categories: social sciences interdisciplinary, development studies, regional urban planning, sociology, urban studies, management, economics, business, public administration, social issues</td>
<td>523</td>
</tr>
<tr>
<td></td>
<td>document type: article and review</td>
<td>435</td>
</tr>
<tr>
<td></td>
<td>open access</td>
<td>174</td>
</tr>
<tr>
<td>Selection of studies</td>
<td>keyword reading and summary</td>
<td>93</td>
</tr>
</tbody>
</table>
As indicated in the tables, it was necessary to carry out a floating reading of the works, initially, and subsequently in full. With the works already selected, a more detailed analysis was carried out, aiming at a greater adherence to the research and to the technical criteria of quality. After this analysis, the general information of the studies was tabulated, such as title, author(s), year of publication, source. Finally, a descriptive analysis was carried out, with the main findings, constructing a synthesis matrix that condenses the contributions of the studies.

3 RESULTS AND DISCUSSION

This section presents the methodologies found in each of the selected works, separated by type of text: theses, dissertations and scientific articles. The objective of the work and the description of the methodology(s) identified will be presented.

3.1 Descriptive Analysis of Methodologies in Theses and Dissertations

The participatory methodologies found in the selected works of the BDTD and of the Capes theses and dissertations bank are shown in Table 4.

Table 4 - Selected works at BDTD and Capes banks.

<table>
<thead>
<tr>
<th>Title (BDTD)</th>
<th>Thesis/ Dissertation</th>
<th>Author(s)/ Year</th>
<th>Methodologies identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>The participation of social actors in the formulation of the rural development plan of the municipality of Tombos - MG</td>
<td>Dissertation</td>
<td>Durán (2001).</td>
<td>Participatory Planning, Participatory Rural Diagnosis (DRP)</td>
</tr>
<tr>
<td>Participatory planning, local development and participatory methodologies: intervention projects and participation in small rural communities of the Pará Amazon</td>
<td>Dissertation</td>
<td>Miranda (2009)</td>
<td>Fast Participatory Diagnosis (DRP)</td>
</tr>
<tr>
<td>Scenarios of land use change in the Amazon: exploring a participatory and multi-scale approach at the Lago Grande SAP, in Santarém-Pará</td>
<td>Dissertation</td>
<td>Sheets (2010)</td>
<td>Participatory Scenarios</td>
</tr>
</tbody>
</table>
## Methods and Techniques for More Participatory and Emancipatory Management: A Systematic Review of Possibilities

<table>
<thead>
<tr>
<th>The use of social cartography and participatory techniques in spatial planning in agrarian reform projects</th>
<th>Dissertation</th>
<th>Miracles (2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participatory methodologies for the organic planning of family-run production units in Casimiro de Abreu e Silva Jardim - RJ</td>
<td>Dissertation</td>
<td>Barbosa (2018)</td>
</tr>
<tr>
<td>Title (CAPES)</td>
<td>Thesis/Dissertation</td>
<td>Author</td>
</tr>
<tr>
<td>The participatory budget and local authorities - a study on Araraquara, Franca and São Carlos in the period 1999/2002</td>
<td>Thesis</td>
<td>Marino (2005)</td>
</tr>
<tr>
<td>Methodological proposal for participatory planning of agroforestry systems with family farmers</td>
<td>Dissertation</td>
<td>Canosa (2016)</td>
</tr>
<tr>
<td>The culture of a people fighting: an audiovisual production on the Rural Sociology of the Community Quilombola Lages dos Negras -BA</td>
<td>Dissertation</td>
<td>Gomes (2018)</td>
</tr>
<tr>
<td>Sustainability analysis and extensionist support in the rural community Bom Jesus - Delmiro Gouveia - Alagoas</td>
<td>Dissertation</td>
<td>Mendes (2018)</td>
</tr>
<tr>
<td>The dynamics of dung in family agro-ecosystems</td>
<td>Dissertation</td>
<td>Goulart (2018)</td>
</tr>
</tbody>
</table>

**Source:** Own development (2022).

In total, twelve dissertations and a thesis were selected in the time horizon researched, between 1987 to 2020 (CAPES) and 1989 to 2022 (BDTD). The description of each of the methodologies will be carried out in sequence.

### 3.1.1 Participatory planning

The Durán dissertation (2001) sought to identify the social actions that promoted the participation or the removal of the population of Tombos, MG, invited to participate in the Rural Development Plan (RDP) of the municipality, in the period 1998-1999. This process took place in three stages: diagnosis, formulation and execution (Durán, 2001).

The diagnostic stage began to be discussed in 1997 and followed the guidelines of Participatory Rural Diagnosis (DRP). At the end of this stage, the activities began to be carried out for the drawing up of the plan and the organization of thematic commissions, directed towards areas such as sport, health and social assistance, together with the population. The primary objective was to review the results of the information collected in the diagnostic phase. Two months after the diagnosis was concluded, the City Council approved the institution of the Municipal Council for Rural Development (CMDR). The plan would begin to be developed in the following year, with some early actions (Durán, 2001).
3.1.2 Participatory Rapid Diagnosis (ORD)

Miranda's dissertation (2009), presented as an objective to understand how "the participation of people from traditional communities occurs in the elaboration of projects for local development and the incorporation of the knowledge of these populations in this planning instrument as a way to enrich and legitimize them" (Miranda, 2009, p. 12). The locus of the study was a quilombola community in the Pará Amazon (Miranda, 2009).

One of the methods used to achieve the proposed goal was Participatory Rapid Diagnosis (DRP), whose stages were: initial observation (understanding local reality), integration, understanding (understanding the shared vision about the local territory) and negotiation horizon (structuring, based on consensus, the chosen subprojects). This methodology enabled the actors' initial involvement and understanding of their perceptions about economic, political and social aspects (Miranda, 2009).

3.1.3 Participatory mapping and venn diagram

Souza's dissertation (2010), discussed management challenges at the Chico Mendes Extractive Reserve in Acre. The objective was to question the meaning and effectiveness of the expectation of shared management with residents and related public institutions.

To conduct the field data survey, Souza (2010) used two participatory techniques: mapping and Venn diagram. Mapping has occurred through groups. These were given the task of scratching out the community reference points with chalk, on the floor of the place where the meeting took place. Thus, it was possible to understand the way of organization of the social space and of production, the relationship between institutions and the distribution of resources.

The Venn diagram, also called the ball game, was performed to identify institutions and people with influence on the development and management of the reserve, as well as interpret the assessment of groups about their actions. Initially, the list of all related institutions was drawn and afterwards, a large circle representing the community and other circles, representing the institutions, of the size that considered their importance and according to their proximity or remoteness (Souza, 2020).

3.1.4 Participatory scenarios

The dissertation of Folhes (2010) set out to adapt the participatory methods involved with the construction of scenarios for the reality of the Amazon. The participatory scenarios are those constructed with the direct involvement of stakeholders in certain themes.

The participatory scenario workshops were composed of representatives of two communities of the Lake Grande Agroextractivist Settlement Project (PAE), Pará, and representatives of organizations that had intervention projects in the community. The workshops took place in four stages: past/present, present/near future, desired/undesired future, development of trajectories. They were systematized in four axes of discussion: infrastructure, social organization, land use, socio-environmental conflicts. Afterwards, these data are presented and discussed, aiming at understanding the history, the current situation of the community, and serving as a basis for discussions about the future (Folhes, 2010).

3.1.5 Social and technical mapping of Participatory Rural Diagnosis (ORD)

The dissertation of Milagres (2011), presented as objective the development of a participatory methodology based on the principles of social cartography and Participatory Rural
Diagnosis (DRP) for data collection and territorial planning related to agrarian reform. The work was carried out with farmers from the Itatiaia Settlement Project (PA), in the municipality of João Pinheiro, Minas Gerais.

The first stage focused on the identification of the key characteristics of the project. In the sequence, three stages were completed: crosswalk/crossing; construction of maps with important elements of the place where they reside; cartographic education; elaboration of a manual with operational routines for the construction of geo-referenced participatory maps. The second stage of the work was destined to the identification of relevant areas by the community itself. And in the last stage, the maps were validated and their usefulness identified, using the Geographic Information System (GIS).

3.1.6 Cross walk and spoken map

The Barbosa dissertation (2018), aimed to "study the case of the participatory process of elaboration and implementation of the Organic Management Plan with family production units of the Serramar Group SPG-ABIO" (Barbosa, 2018, p. 8). To construct this plan, two participatory techniques were used together: transversal walks and spoken maps.

The cross-walk corresponds to the crossing through the productive unit, with the guidance of a management family and a form of the Organic Management Plan, aiming to describe its conditions. This allowed the visualization of the unit as a whole, with passage through the areas of crops and orchards. The other subsequent technique corresponded to the spoken map, representing the graphic systematization of the previous stage, with the use of cardboard, pencil and pens and from conversations held during the walk (Barbosa, 2018).

3.1.7 Participatory budget

The thesis of Marino Júnior (2005) aimed to discuss "the existence or not of a redivision of the decision-making power in relation to the allocation of public resources for investments between the Legislative Branch and the delegates of the Participatory Budget" (Marino Júnior, 2005, p.1). The cities, the loci for the research, were Araraquara, Franca and São Carlos, from the state of São Paulo.

The participatory budget is defined by Marino Júnior (2005) as a model of democratic public management, marked by social intervention in the activities relating to the budgetary management of public organizations. From discussions and meetings, proposals are submitted in public hearings. The finalized budget is sent to the Legislative Branch to be analyzed and voted on. Once approved, it becomes law and is executed in the following fiscal year (Marino Júnior, 2005).

3.1.8 Participatory techniques for land use

Souza Filho's dissertation (2006) aimed to "stratify the environments of a hydrographic microbasin, starting from the integration between the environmental perception of farmers and technicians in relation to the limitations and potentialities of the soils" (Souza Filho, 2006. p. vii). The study starts from the valuation of the integration between popular and academic knowledge, as relevant for a better planning and use of the land.

Participatory techniques were used to survey information as a methodology: timeline, life histories, semi-structured interviews, maps and transversal walks. The timeline technique corresponded to the drawing of a line on a sheet of paper, with a record of the historical facts of the community, with a view to understanding its influence over the ecosystems of the region.
The life stories were the stories of the oldest inhabitants of the region, portraying memoirs that were striking in the history of the community (Souza Filho, 2006).

The semi-structured interviews took place based on a preliminary roadmap, as a guide for gathering information. Informal conversations were held with the farmers’ families, enabling observation, annotation of responses and exchange of ideas that raised new questions. Another technique used was the map of the community. Through it, it was possible to construct a scheme of the physical structure of the environment, starting from the perception of the farmers. Through spatial visualization, information was obtained about the biophysical environment and the production and stratification systems adopted in the community (Souza Filho, 2006).

Finally, Souza Filho (2006) described the last technique, called transversal walks. The microbasin was traversed transversally, following the accompaniment of those farmers who had in-depth knowledge about the region. Along the way, issues pertinent to the area were discussed and some locations were photographed, which made possible the generation of more detailed information and the mapping of critical problems.

3.1.9 Participatory Rapid Diagnostic Techniques (PDR.)

The Madalosso dissertation (2014) aimed to "understand the livelihoods of the fishing community of Ponta da Juatinga, in Paraty/RJ, and analyze how the recategorization of the Ecological Reserve of Juatinga can affect its resilience" (Madalosso, 2014, p. 3).

As a result of the need to grasp different views for understanding the daily life of the community and its knowledge about the natural resources of the region, Madalosso (2014) employed a number of participatory techniques with the participants of the research. They were: an unstructured interview, a semi-structured interview, a seasonal calendar, a time line, a collective map, a historical section, photoidentification.

The unstructured interview technique was conducted once and encompassed those older residents. This choice stemmed from the need to gain more knowledge about the historical facts of the region. It was also possible to identify changes experienced by the community, especially as far as fishing and activities carried out in the countryside are concerned. Semi-structured interviews were conducted at the homes of the interviewees or at fishing ranches. Thirteen interviews were conducted, with variable duration, according to the availability of the participants and their responses. There was also a phone interview, lasting fifty minutes, with the manager of the Ecological Reserve of Juatinga (Madalosso, 2014).

The seasonal calendar, according to Madalosso (2014), was based on local knowledge. To do so, the seasons of the year and their respective months were classified, as well as the species fished associated with their season and gear used. The timeline assisted in the understanding of community changes in time, starting from the account of striking historical facts. The technique was carried out with the help of some fishermen and their wives, being supplemented whenever necessary.

The participatory map, also called the collective map, made it possible to identify in spatial terms the areas of fishing and land considered important for the activities carried out by the families of the community. The maps were constructed either individually or in focus groups. In the end, the resulting maps were incorporated into an SIG.

The historical transect is commonly performed by drawing representations for variable analysis. In the case studied, the following variables were determined, representative of the socioecological system of Ponta da Juatinga: number of houses, fish, squid, boats, canoes, swidden, forest, tourists and income. Instead of the designs, a maximum of ten balls and a minimum of zero were made, with the aim of identifying the evolution of the variables every
ten years, between the period 1940-2013 (Madalosso, 2014).

The last technique presented by Madalosso (2014) was photoidentification. She made it possible to associate the species identified, above all in the seasonal calendar, with her photos. These photos were taken from magazines provided by the fishermen or from other works carried out in the community, which housed fishing and arboreal species.

3.1.10 Participatory planning of agroforestry systems

Canosa's dissertation (2016) aimed to prepare a methodological proposal, based on participatory methodologies, aimed at the planning of agroforestry systems. The loci of the research were the agroforestry systems in the territory of Cantuquiriguaçu, Paraná.

The methodological proposal was composed of three stages: pre-diagnosis and choice of working groups (semi-structured interviews to identify perceptions, concepts and experiences of ecological farmers; production of folders to publicize the proposed work; selection and registration of working groups), diagnosis and planning of forest systems (choice and application of participatory tools for planning - workshops, table-synthesis, maps, simplified economic return forecast matrix, integrated planning sheet, oral presentation, questionnaires) and evaluation of the participatory process (evaluations of the researcher, work team and working group, at the end of meetings, by means of questionnaires) (Canosa, 2016).

3.1.11 Participatory Diagnosis of the Rural System (DPSR)

Gomes's dissertation (2018), presented as an objective "to document in video the social history of the rural quilombola community, Lage dos Negros-BA, located in the Piemonte Northern Identity Territory of Itapicuru" (Gomes, 2018, p. 32). The objective was achieved by carrying out the Participatory Diagnosis of the Rural System (DPSR).

The first DPSR technique used was the timeline. It represents the exhibition of important events in the history of Lage dos Negros, with the aim of understanding the social history that provided the formation of the community. In the following, still to understand the history of the community, the crossing was carried out - walks through the streets of the village, observing aspects of the territorial configuration and of its landscape. The last technique used was the calendar of activities, to identify the main daily occupations of community members. They were then organized in a general framework, to carry out comparisons between the families.

3.1.12 Venn Diagram

The dissertation of Mendes (2018) aimed to analyze the effectiveness of the actions of Technical Assistance and Rural Extension (ATER), in the community of Bom Jesus, Delmiro Gouveia, Alagoas, regarding sustainability. To analyze the relationship of the community with different institutions, the author used the technique of the Diagram of Venn, which makes up the DRP.

According to Mendes (2018), the construction of the diagram took place, through the design of geometric figures, starting from the following stages: survey of institutions, definition of the level of importance of these institutions, positioning of institutions as to the level of proximity. After the conclusion of the work, all the participants reflected on the community, its role in the change of the current situation, and on the actions that could be carried out to bring closer the institutions that were far away.
3.1.13 In and Out

Goulart's dissertation (2018) aimed to "analyze the quality of dung produced in family units of agro-ecological farmers" (Goulart, 2018, p. 41). To characterize the agro-systems and to analyze the interactions between the subsystems that make them up, the author proposed the participative methodology Entra e Sai, or flow of inputs and outputs.

Initially, the design of the main subsystems (house, backyard and site) was carried out. Afterwards, questions were asked about the community management activities, the inputs and the products used. The answers obtained were transcribed into pieces of paper and fixed to the original design. In the sequence, arrows were drawn, indicating the direction and the path of the entrances and exits. At a second moment, a quantitative analysis of the results was carried out, by way of the formulation of indices, which would determine the importance of the backyard, the autonomy of the agro-ecosystem and the dynamics of the dung. The results made it possible to evaluate the current situation and define guidelines for future actions (Goulart, 2018).

3.2 Descriptive Analysis of Methodologies in Scientific Articles

The participatory methodologies found in the selected works of the Redalyc, Web of Science and Scopus databases are shown in Table 5.

<table>
<thead>
<tr>
<th>Title (Redalyc)</th>
<th>Author(s)/Year</th>
<th>Methodologies identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>A participatory method for mapping of fincas y recolección de información agrícola applicable to different spatial scales</td>
<td>Smith et al. (2009)</td>
<td>Participatory mapping, Participatory workshop</td>
</tr>
<tr>
<td>Participation in the management of natural resources for use común en la mixteca oaxaqueña</td>
<td>Sánchez et al. (2013)</td>
<td>Participatory Diagnosis, Social Mapping (maps), Problem Tree, Objective Tree</td>
</tr>
<tr>
<td>Participatory methodologies and inmaterial cultural heritage in los barrios</td>
<td>Salazar et al. (2020)</td>
<td>Participatory methodology aimed at protecting Intangible Cultural Heritage: Memory of the neighborhood, Workshop discussion, Guided collective walk</td>
</tr>
<tr>
<td>Participatory methodologies in the construction of public policies migratorias en la frontera colombia</td>
<td>Acevedo et al. (2020)</td>
<td>ENALDEF participatory methodology: Participatory diagnosis, Social cartography, Focal groups, SWOT matrix</td>
</tr>
<tr>
<td>Participatory environmental diagnosis with jóvenes de una Reserva Ecológica municipal para el diseño de una propuesta de educación ambiental no formal</td>
<td>Castillo et al. (2020)</td>
<td>Participatory Environmental Diagnosis (PAD)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title (Web of Science)</th>
<th>Author(s)/Year</th>
<th>Methodologies identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photovoice as a Method for Revealing Community Perceptions of the Built and Social Environment</td>
<td>Nykiforuk et al. (2011)</td>
<td>Photovoice</td>
</tr>
<tr>
<td>Minga biographic workshops with highly skilled migrant women: enhancing spaces of inclusion</td>
<td>Riaño (2016)</td>
<td>Participatory workshop Minga</td>
</tr>
<tr>
<td>Hybrid forums, participation and Sustainable management of world heritage sites, The case of Santa Ana de Cuenca</td>
<td>Molina (2019)</td>
<td>Hybrid Forum</td>
</tr>
<tr>
<td>The development of occupational science outside the</td>
<td>Magalhães et al.</td>
<td>Metaplan</td>
</tr>
</tbody>
</table>

Table 5 - Redalyc selected works.
In total, twenty scientific articles were selected, from the beginning of the coverage of the bases until the year 2022. The description of each of the methodologies will be carried out in sequence.

### 3.2.1 Participatory mapping

The paper by Smith et al. (2009) aimed to design and test a participatory mapping method, combined with agricultural information collection, for replication in distinct institutions in two rural communities in the Venezuelan Andes.

For Smith et al. (2009), participatory mapping consists of a methodology for delimiting farms or objects in a remote image. The method makes it possible to bring together different social, governmental and community organizations, representing a rich platform for the exchange of knowledge. It can be carried out by means of seven stages: preparation of the maps, first workshop (printing of the maps, defining the boundaries of the areas and filling in questionnaires with basic data), digitalization of the information, agricultural research, second workshop and gathering of information, field verification, mapping and processing of information (edits and drawing up thematic maps of each community), final workshops for the presentation of results and delivery of maps (discussion and interpretation).

### 3.2.2 Participatory diagnosis

Sánchez et al. (2013) presented a participatory diagnosis of the use and management of natural resources in the community of Guadalupe Cuauhtepc, Oaxaca, Mexico, based on situational awareness, perception and participatory analysis.

The participatory diagnosis was carried out through participatory workshops. The beginning of the workshop was composed by the exposition of its objective and dynamics and the presentation of the participants. The other stages for its realization were: description of the
biophysical environment, by means of social cartography; identification of the problem and the current situation of the community, by means of the problem tree (identifying causes and effects) and tree of objectives (identifying means and ends of causes and effects); analysis of the problems and proposing solutions, with a view to constructing the community action plan.

3.2.3 Participatory design

The article by Martinez and Cantaloube (2015) sought to validate the techniques of participatory design that are applied to the design of bioclimatic urban spaces, by analyzing a case in the Obreros Rurales III neighborhood, in the province of Mendoza (Argentina). Participatory design consists in the action of defining, in a collective way, project proposals for the development of community life and physical spaces.

The development of the method was initiated by the realization of a first workshop, with some activities with families: formulation of the general problem, elaboration of a general urban diagnosis, elaboration of case descriptive forms, elaboration of didactic materials to be presented the possible options for the participatory project. After this first stage, other workshops were held to validate the diagnosis made with the families, technicians and researchers involved (Martinez & Cantaloube, 2015).

For the analysis of the workshops, the affinity diagram was used, which would help in the understanding of the structure of the global problem, by means of the analysis of verbal affinities. The classification of this technique arises from the consensus of the team. A "cascade of ideas" is drawn up, and questions are asked about the concerns of the community, as well as suggestions for their future homes and spaces. Afterwards, additional techniques were used to carry out participatory design: visualization with cards (making it easier to seek consensus), brainstorming (sharing tastes and preferences) and mural (deepening knowledge of reality). In the end, all the information was processed through the register of meetings, analysis and synthesis (Martinez & Cantaloube, 2015).

3.2.4 Participatory methodology aimed at protecting Intangible Cultural Heritage

The article by Salazar et al. (2020) aimed to design and implement methodological actions for the creation of participatory spaces, aimed at the management of intangible heritage of neighborhoods and local communities. The case is reported in Málaga (Spain).

The proposed methodology requires a multidisciplinary team. The following stages are defined: construction of a map with the involved agents or sociogram of the neighborhood; elaboration of an initial technical proposal, open and generic; guided collective walk (collective walks, guided by informants with knowledge of the neighborhood); memory of the neighborhood (collection of old photos that show the memory of the neighborhood); discussion workshop (timeline referring to the images and stories compiled) and public exhibition (graphic construction of the timeline, associating the collected and selected material with the type of element with patrimonial value, the sector of the population and the temporal or sequential origin in which it is found); workshop for debate and prioritization of the heritage elements (Salazar et al. 2020).

3.2.5 Participatory methodology of ENALDEF

The article by Acevedo et al. (2020) addressed the experience of joint knowledge building between academia and the state with regard to the development of public migration policy in Colombia. The authors present a participatory methodology, proposed at the I National
Meeting of Border Departments (ENALDEF).

The proposed methodology aimed to promote a space of articulation between various actors, which are located in the border environment, aiming at the formulation and development of a public border policy. The methodology was developed in three stages: participatory diagnosis (understanding the social reality and identifying what the needs and possible solutions for problems are), mapping of existing programs and policies (analysis of interrelations and consolidation of lines of interest, by means of social cartography) and definition of strategic axes (focal groups, SWOT matrix - analysis of the Forces (Strengths), Weaknesses (Weaknesses), and Opportunities (Opportunities and Threats), for the participants to identify what could be strengthened and minimized in the current policy).

3.2.6 Participatory Environmental Diagnosis (PAD)

The article by Castillo et al. (2020) described the development of participatory environmental diagnosis (PAD) with young people from Dzoyaxché, Mérida, Yucatán, Mexico, who live in the Cuxtal Ecological Reserve. Its realization presupposes the fulfillment of four phases and a transversal axis that functions as a tool for managing sustainable local development.

The stages were: design and production (pre-diagnosis of community problems, through document review and dialog with municipal authorities and communities); implementation and application (training of the work team, workshops for identification, geographical location, synthesis and prioritization of problems); information analysis and proposal generation; participatory session (alignment between the proposed pedagogical process and reality). The transverse axis of the DAP made it possible to return the information to the participants, so that they could follow the progress and the data resulting from each session or workshop and from the process of drawing up the environmental education plan (Castillo et al., 2020).

3.2.7 Photovoice

The paper by Nykiforuke et al. (2011), addressed the successes and challenges of using the Photovoice participatory methodology in a community-based participatory research project, with the aim of exploring community perceptions about the built and social environment. The project was Community Health and the Built Environment (CHBE) developed over three years in cities in Brazil and Canada.

Photovoice was conducted in five sequential stages: semi-structured interview (understanding participants’ perceptions and ideas about community, physical activity, and food); recording photos by participants of places or things that helped them to be physically active and healthy; follow-up interview (stories about photographs); summary of key photographs; presentation of photographs (accompanied by discussions) (Nykiforuk et al., 2011).
3.2.8 Participatory workshop Minga

Riaño's article (2016) designed and critically evaluated the method of Minga biographical workshops, which promoted inclusive spaces for data collection, as well as critical analysis with highly qualified migrant women living in Switzerland. The methodology took place in four stages: Minga workshops, individual conversations, workshops to analyze the results, dissemination of the results.

The workshops lasted one day and comprised groups of eight to nine women, including academics, highly qualified migrant women, and representatives of NGOs. Participants performed and talked about their expectations. Subsequently, the academics made initial contributions, with the objective of stimulating the discussion, amongst women, about integration and social exclusion. Participants then reported their experiences in the labor market and soon afterwards a collective debate was held (Riaño, 2016).

3.2.9 Hybrid forum

Molina's article (2019), aimed to demonstrate the effectiveness of hybrid forums in long-term sustainable management of global heritage, based on the analysis of the outcomes of the forums held in the historic center of Cuenca, Ecuador. Hybrid forums are a participatory methodology aimed at eliminating asymmetries between individuals and valuing individual knowledge for wealth management.

The process begins with an understanding of the context, which involves the analysis of networks, available or potential resources, regulatory and legal requirements, political and administrative processes, and the mapping of actors. From this information, the main controversy that influences both heritage and community is established. Following this, a work plan is developed with the objective of putting into practice the hybrid forum (clear and objective development of the contents to be discussed, preparation of the physical space and dissemination of the event) (Molina, 2019).

3.2.10 Metaplan

The paper by Magalhães et al. (2019) aimed to discuss the main issues and priorities identified in the sessions of international conferences on occupational sciences and to attract attention to opportunities for decolonization of the production of knowledge about the area. The Metaplan methodology was used to stimulate discussions and collective reflections.

From the use of Metaplan, participants were invited to reflect on questions of their current realities. Afterwards, they were divided into small groups and invited to discuss the main barriers to be faced and propose alternatives, writing them on cards. The answers were hung on the wall for everyone to see, and one representative per group briefly presented what had been worked on. And then they used stickers to pick the ideas that they thought were most important. In the end, a visual answer to the questions was created democratically by the groups (Magalhães et al., 2019).

3.2.11 World Café

The paper by Löhr et al. (2020), presented World Café as an additional method for qualitative research, aimed at participatory evaluation, being widely used in processes of community development and organizational change. In the study, the method was used in a German-Tanzanian food security (Trans-SEC) project.
Forty-five people participated in the method. These members were expected to give their opinions on the topic of research. Initially, a seminar room (similar to a café) was prepared in the hotel that hosted the conference. Initially, the principles and instructions for the change of table were passed on. During this session, the co-moderators served tea and assisted in changing paper formats (flowers, leaves, etc.) at the end of each round of discussion. After the end of the round of questions, a plenary session took place (the results were summarized and discussed briefly). All responses were grouped and organized in the form of a tree (Löhr et al., 2020).

3.2.12 Future Scenarios

The paper by Evans et al. (2008) discussed how the participatory method of future scenarios can assist in the interaction between forest communities and local governments. Experiments with future scenarios were described in forest communities in the northern Bolivian Amazon and in central Vietnam. The method of future scenarios allows members of a community to discuss the future and make decisions on important issues. It makes it possible to develop community plans, starting from the reflection of the members of the community about their desires, for voting and linkage with the local governments.

In the case reported by Evans et al. (2008), the method started with the division of the community into small groups. As a primary activity, they had to reflect and glimpse what the community would be like ten years from now. The groups shared their ideas and through voting elected the most important aspects to be prioritized. The results of the discussions were later shared with the local government.

3.2.13 Ketso method

Furlong and Tippett's (2013) paper evaluated the performance and implementation of a participatory project focused on post-project engagement in communities in Peru. To this end, the authors have adapted the participatory Ketso method to the theme of drinking water. Ketso is a practical engagement kit consisting of several workshops for use in the community. In the study, five workshops were held, with up to nine participants each. An analogy was made of a tree, in which the trunk was the main focus — contamination of the water at home — and the branches represented the related themes — sources of drinking water, for example. Questions were asked during the workshop and answers were recorded on color-coded sheets and placed in the workspace. The participants would place the leaves in the position of the branches that they thought their responses related. This leaf movement allowed us to explore the meanings and perceptions of the themes worked on. In the end, they should highlight the key issues, using mobile icons (Furlong & Tippett, 2013).

3.2.14 Causal map participative

The article by Aledo et al. (2015), aimed to improve the ex-post evaluation of the complex social transformations caused by the operation of hydroelectric plants. The locus of the study is a community of Puerto Rico, Paraná River, Brazil.

The causal maps for the assessment of the main factors of socio-environmental impacts of the dams were created in a collective manner, with representatives of social groups most affected by the dam. Participants were instructed to indicate the main changes Puerto Rico has undergone due to the construction of the Rosana and Puerto Primavera dams. Through a discussion and analysis process, participants pointed out the causes and effects of seven changes identified. The causal map had at its center the chosen scientific impact, and from it flowed its
effects (above the center) and causes (below the center), in the form of a "skeleton". The maps cover the participants' contributions and create an ongoing process, in which each analysis guides the next one (Aledo et al., 2015).

3.2.15 Framework for Participatory Impact Assessment (FoPIA)

The article by Coutinho et al. (2017), aimed to present the results of the application of the FoPIA methodology (Framework for Participatory Impact Assessment) in the Southwest Planning Region of Goiás (SGPR). This methodology is designed to assess the impacts of land use policies on regional sustainability.

The FoPIA took place from three stages: development of public policy scenarios (workshop, for consultation with regional experts, guiding lectures, and following on, group work and plenary discussions), definition of land use functions (construction of a panel, in a group), and construction of impact indicators. The scenario for carrying out the methodology involved the policies of expansion of sugarcane in the southwest of the state of Goiás (Coutinho et al., 2017).

3.2.16 Social Multi-Criteria Evaluation (SMCE)

The article by Lutz et al. (2017), described the application of the Social Multi-Criteria Evaluation participatory method (SMCE), with farmers in Austria. This method helps farmers reflect on cooperative decisions and paths.

The SMCE took place in three participatory workshops. In the first, discussions indicated issues among farmers. Based on this, the researchers prepared an initial list with guiding criteria for the evaluation of possible paths. Participants were invited to indicate optional paths for agriculture. The second workshop was aimed at complementing the list of decision criteria and potential paths, which were weighted and used for comparison. The aim was to define the most appropriate cooperative system for sustainability in family farming. In the last workshop, the researchers analyzed the relationship between the criteria and the possible paths suggested by the farmers. The results were discussed and published in posters (Lutz et al., 2017).

3.2.17 CreativeVoice and Photovoice

The paper by Lopez et al. (2018) described the CreativeVoice method (an adaptation to Photovoice) and the value of integrating arts-based methods into research aimed at advancing sustainability. The study addresses the challenges farmers face in growing native corn in Mexico.

The first step of CreativeVoice was to hold a community meeting and visits, to inform about the project and invite members to participate. Afterwards, participants were invited to create works of art that would show their history and the history of native corn in the community. After that, participants were invited to discussions in small focus groups and there was a general meeting with all members to share their perceptions about the value and threats associated with growing native corn. The last stage featured a community event, in which the results of the project were shared, as well as proposed solutions (Lopez, et al., 2018).

3.2.18 Circle of stories

The paper by Hebert et al. (2020) aimed to understand how gender influences the lives
of young women living in the urban slums of Lucknow in Uttar Pradesh, India. To do so, we used story circles as a research methodology.

Each of the sessions of the technique was composed of five young people and two to three facilitators, positioned in circles. At first, facilitators introduced the methodology with a brief description of its history. A question was then put for reflection on the difficulties experienced by the participants. Each of them, following the order of the circle, was invited to share a story in response to the previous question. After the last participant reported her story, the process was repeated. With the end of the second round, participants were asked to reflect on each other's stories. Finally, the facilitators, through a semi-structured guide, guided a discussion with the participants, identifying similarities and differences between the stories (Hebert et al., 2020).

3.2.19 Structured Democratic Dialog (SDD)

The article by Habes et al. (2021) aimed to explore the action plans that have the potential to facilitate the inclusion of Finns in the process of integrating minority groups in Swedish-speaking Ostrobothnia, aiming at integration in the region. To achieve this goal, the Structured Democratic Dialog (SDD) participatory methodology was used, with participants from varied socio-economic, cultural and educational backgrounds.

The methodology was composed of six phases: launching a "provocative question", about an identified complex problem; presenting ideas, to answer the question; deep discussion about the similarities between the reports; voting on ideas considered relevant to the resolution of the question; discussion of ideas and about the existence of influence between them (influence map); definition of SMART actions (specific, measurable, achievable, realistic, and time specific), in which details were shared for the analysis of the main causes of problems (Habes et al., 2021).

3.2.20 Participatory Scenarios

In the article by Tori et al. (2022), a creative and participatory methodology was developed and applied, aimed at developing visions and scenarios for rural mobility. The study was developed in the Belgian village of Oetingen.

Three workshops were developed. Initially, a 2050 projection was made in Oetingen, based on the current scenario, from policy documents. Subsequently, participants were asked to imagine wildcard events that would possibly hinder the projection. The workshops produced fifty-seven different wildcards (categorized into political, economic, social, technological, environmental, legal), such as "rising energy prices." A survey was conducted with the experts to assess the likelihood of the occurrence of wildcards. In each of the categories, a wildcard was chosen to be used in the construction of the scenarios. Subsequently, participatory vision and scenarios with citizens were developed (Tori et al., 2022).

3.3 Results Summary Matrix: Classification of Participatory Methods and Techniques

The review identified several participatory methodologies, at international level, which can be subdivided into methods and techniques. The method is more comprehensive and complete and comprises a set of specific (technical) operating procedures. Figure 1 presents the methods identified in this study. Each of them, as described in the previous sections, adapts to particular contexts and is aimed at achieving different objectives.
Methods and Techniques for More Participatory and Emancipatory Management: A Systematic Review of Possibilities

Figure 1: Summary of selected participatory methods
Source: Own development (2022).

Figure 2 presents the identified techniques. They have greater flexibility and can compose and adapt to different methods. In the figure, the sets of methods in the rectangles and their associations with the specific objectives (in the circles) normally met are exposed. For example, "photo identification" and "in and out" techniques aim to understand how collectivities organize themselves.

Figure 2: Summary of selected participatory techniques
Source: Own development (2022).

According to Carmo et al. (2022, p.10), participatory methodologies (methods and techniques) need to be directed "towards the same goal - to promote the emancipation of the individual, through dialog and effective participation, starting from the collective identification of problems that compromise the reach of the common good, and possible solutions." Felizardo et al. (2023) point to the use of these methodologies, based on dialogical processes of reality transformation, to assess the reality of an organization, a community, small groups or a collectivity, in relation to organizational change and sustainable development. These notes corroborate the proposals of the methodologies presented here.
4 CONCLUSION

The present work presented the objective of identifying and describing methods and techniques that can contribute to a more participatory and emancipatory management. Nine different methods and thirty-three varieties of participatory techniques were selected from a search in the international literature, present in renowned databases. This rich collection of participatory methodologies can contribute to practical applications in various contexts. The various approaches presented show that the promotion of the active participation of individuals in the decision-making process and the search for collective emancipation are fundamental elements for the strengthening of management practices.

The repertoire of methodologies presented not only enriches the theoretical understanding of participatory management, but also provides a basis for the effective application of these options in practice, which highlights the increasing relevance of a more collaborative and inclusive approach. Although directed towards different contexts, the methodologies express common characteristics, such as the formation of interdisciplinary teams to guide the work, constant discussions, common objectives, sense of responsibility, promotion of autonomy. These are characteristics that are close to the core of social management.

As a suggestion for future work, and which falls as a possible limitation of the work here developed, it refers to the use of different strings for the identification of the works. This is because there may be studies that deal with participative methodologies, but that do not use the terms researched specifically. In addition, a more in-depth study of the limits and potentiality of each of these methods and techniques can be done.

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