A Participatory Action Research using affective mapping to promote forest commoning

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Supplementary Material

1. Context of the PAR: research project and team, case study selection and funding

The project is the result of a partnership between the governing board of Ansiães baldio and the PhD project of the first author of this paper conducted within the SUSPLACE Marie Curie ITN Network (Horizon 2020, European Union).

The PhD aimed at exploring the commoning processes occurring in community forests of Northwestern Peninsula (including Galicia region in Spain and North region in Portugal) to explore the relationship between forest commoning and sustainability transformations[1]. To this aim, the PhD research followed a case study approach selecting two communities in Galicia with a long commoning trajectory and focused on studying commoners' agency (i.e., how the historical and broader political-economic context shaped commoners' actions, the political motivations/claims of commoners themselves, the type of participation and citizenship that commoning nurtured and the role of socionatural relations in the process and outcomes of commoning).

Ansiães baldio in Portugal was chosen as a third case study to experiment with PAR in its potential to promote commoning. In line with a postructuralist PAR approach (see section 2 in the main text), the approach sought to unveil the socio-natural relations among commoners and community forest to make them more real, exploring their effects in enhancing feelings of being-in-common and participation.

Ansiães community was selected on the one hand, because it was democratically organized, that is, it had a governing board capable on applying all the requirements around forest management, such as the design and implementation of a management plan for the baldio, and around community participation, such as the organization of two community assemblies per

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[1] https://ruralsociologywageningen.nl/2022/12/12/rebuilding-historical-commons-exploring-forest-commoning-as-a-transformative-practice-in-the-northwestern-iberian-peninsula-phd-defence-by-marta-nieto-romero/

year, as required by law. Being organized democratically was a prerequisite as the PAR was sought to support self-organized community initiatives sustained in democratic processes of direct participation[2]. Moreover, at the start of the PhD project in 2016, Ansiães community had decided to break the co-management agreement with the state forest services, taking full responsibility of forest management duties. This was considered an opportunity to work with the community around their relation to the baldio as they navigated through the transition to be fully autonomous and developed their self-organized commoning practices. On the other hand, we selected the case as a 'typical case' among other baldios in the region, which usually suffer from poor community engagement in the baldio duties, and high rates of depopulation (located in mountainous peripherical rural areas).

The PAR fieldwork was implemented by the first author alone (PhD candidate), having facilitation support of other researchers during the two events organized (workshop and final community event). None of the researchers involved had a prior relationship with the community, but the case was introduced to us by a forester practitioner working for the Ansiães community who was developing a research proposal with researchers at the University of Porto.

Most of the costs were funded by the Marie Curie ITN network, yet the baldio accepted to fund the design and print of the affective map, as well as half of the costs associated to the employment of videographer. The share of the costs was agreed in advance with the governing board of the baldio (see next section) but was managed by the PhD researcher all along. Other costs such as the building of cottage, tree planting activity and the collective meal organized within the final event of the PAR were managed by the PAR participants, with no intervention of researchers. These activities were supposed to be based on community volunteering and individual contributions (e.g., paying a participation fee). Yet, at the end, the parish government decided to fund these activities, which caused a conflict of interest: the president of the parish, who was also a participant of the PAR, invited a municipal employee who was evaluating the parish performance on a municipal project. This created some confusion with the schedule during the event as the president of the parish wanted to add another activity within the PAR

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[2] Decades later of having passed the law that recognized community property, many baldios were still occupied and administrated non-democratically by state agents, local powers, forest associations or companies, and thus had no assemblies to which attend. In other baldios, the commoners had asablies but were engaged in social conflicts and legal battles among each other (Serra and Allegretti 2020).

community activities. Yet, this situation did not divert the attention from the PAR activities, nor affected the purpose and scope of the activities.

2. PAR design

2.1. Preliminary diagnosis through semi-structured interviews

In June 2018, the PAR started by interviewing and being in the place to make a preliminary appraisal of the socionatural relations present in the baldio, as well as create social bonds and trust. A total of 14 semi-structured interviews were done with 1) key governing actors of the baldio (president, convener of assemblies and treasurer), 2) with baldio users and workers (forest worker, shepherds, honey producer), 3) with representatives of different social groups (residents at different settlements, representatives of women, young and elders), and with 4) external related actors (technician of state forestry services, and National Association of baldios- BALADI, and the Local Action Group of the area). After these first interviews we concluded that:

- **The baldio followed a forestry logic, disconnected from community's needs and desires.** While the baldio was implementing all the forest and baldio regulations, practices were guided by top-down state forest regulations with no inclusion of community desires and needs. As mandated by law, the community had a governing board, a president, a vice-president, a treasurer, and a community assembly's president (with the duty of convening two community assemblies a year). They had also a management plan approved, which was implemented with a team of seven forest workers (co-funded by the state through the fire prevention policy), a forest engineer technician who coordinated forest workers so they were in line with their legal duties of fire prevention (i.e. clearing biomass for in strategic places and fire monitoring in summer season), and a hired secretary that managed all the paper work (i.e. subsidies, payments to workers, petitions, commoners' census, etc.). Beyond forestry operations, the management plan included potential individual uses of the baldio by residents, such as mushrooming, herbs, beehives, and firewood. (In practice commoners only used it for firewood). Baldio was also rented by external operators and non-residents- i.e., baldio was rented to Eolic energy infrastructures, and by non-resident shepherds who paid an annual fee for using specific areas.
- **Commoners perceived the baldio as a community property or as forestry resources but did not feel responsible towards it**. When people were asked about the baldio, they referred to forestry resources and the infrastructures that were funded by these (e.g., school, lighting, football field). They also referred to the baldio as a community property, but did not feel responsibility towards the baldio, but generally referred to the good job of the president. Therefore, participation in community

assemblies reduced to, on average, 10 persons out of approximately 600 commoners, all of them men, and almost all over 50 years. There were no commoners shepherding (the two active shepherds lived in a nearby parish). Ansiães commoners did visited the baldio in summer, for bathing at the rivers, and for taking firewood of dead fallen trees (as indicated by baldio regulations) but did not feel a collective responsibility towards it.

- **Community was affected by a feeling of decline and foreboding due to depopulation and aging.** Many interviewees felt the parish "does not have anything", pointing to the emigration as the main reasons for the high rates of emigration and the passivity of the community. All people interviewed complained of a lack of union, cooperation and trust among neighbors which also explained reduced participation in baldio, as well as other associations- i.e., lack of cooperatives for selling products to distributors (e.g., goat milk), or for creating community jobs (e.g., weaving, herbs, etc.). Associative life and cooperation disappeared during the 1990s, period with a dramatic reduction of population due to emigration and abandonment of traditional economies based on agriculture (mainly corn farming and goat grazing). Before that time, there were several associations in the parish, a tuna (traditional music band) and communal herds in some settlements. Sundays and seasonal festivities (e.g., Carnival) were organized in common, involving music, dancing, and sharing of food. While criticizing the community character, the structural / historical factors explaining community disintegration such as a history of strong state intervention followed by a drastic withdraw and lack of public investment, were rarely mentioned. Only a shepherd using the baldio referred to the lack of support of public institutions and the social marginalization of shepherding.

2.2. Design of the methodology and discussion with the community

Following the above results, it was clear that 1) the community was blocked in representation of decline, that disempowered them to engage in community activities, and 2) a framing of the baldio as a property or as forestry resources limited the kind of activities that could be implemented to support community thriving and participation. As a result, the PAR design was inspired by postructuralist approaches to PAR focusing on finding ways of opening subjects to new possibilities (see section 2). Specifically, the PAR had two objectives:

1) promoting a new image of the baldio as interlinked with community's history, identity and culture as opposed to just resources or property.
2) enacting new empowered subjectivities based on feelings of *being-in-common* with each other and the baldio, instead of feelings of decline and foreboding due to trends of depopulation and aging.

These objectives are in line with the poststructuralist approach to PAR, but were set up by the first author, in collaboration with supervisors, supported by the interviews' results. To present these objectives to the community, the project was described as a *'community inquiry to gather the feelings, stories and emotions linked to the baldio to understand the* residents' *current connection to their baldio, and ultimately with the Marão mountains".* A preliminary design of the research methodology was outlined by the researchers emphasizing also process-based outcomes: *"the collective creation of a map with our memories of the place creates dialogue and a sense of togetherness and belonging"* (see BOX 1). This preliminary design was discussed with some community members, both formally (with the president of the baldio) and informally in cafes and other casual encounters.

BOX 1. Preliminary methodology presented to the community

1) Why this project?

- *Here the objectives of the mapping approach were presented:* "we want to create a collective map with the meaningful places in the *serra* from the point of view of its residents […] The collective creation of a map with our memories of the place creates dialogue and a sense of togetherness and belonging. Furthermore, a map can be used as a basis for designing action plans according to the visions and values of the residents. This is important in Ansiães because last year, the Ansiães commoners decided to terminate the co-management agreement with the state forestry service to have complete freedom of what to do with the common. So now is the time to encourage a discussion about the residents' current connection to their baldio, and ultimately with the Marão mountains, to build a common future vision and action plan."

2) Who are we?

- Presenting the project as a partnership between the baldio's governing board and the researchers' team:
  "The project is the result of a partnership between the Ansiães landfill and the University of Aveiro (SUSPLACE project (Marie Curie ITN Network, Horizon 2020, European Union). The Junta de Ansiães will also help in the execution of the activities and their organization"

3) How do we create the map?

- The overall methodology was presented:
  "During the month of September, armed with a "mapper's kit" and their cell phones, the residents of the Ansiães parish will have to choose and mark **a place in the mountains where they feel really good or where they have already experienced**

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a significant moment in their lives. These points will be used to organize gatherings where participants can share their stories of the chosen places and objects they have picked up from that place"-

4) Specific program of activities

- The key steps in the methodology as well as the timeline was presented (see section 4.1.)

5) What will the final map look like?

- We propose that a summary of stories could be available in a printed map designed by a graphic professional, and complete stories (respecting anonymity if requested) will also be available online on the [web](#)site of the project.

6) How are we going to make our map seen and read?

- Three ways of sharing the stories among the community were suggested:

i)   During the month of October, meetings will be organized for sharing stories. If it is possible, and depending on the location of the points, the sharing can be organized in the countryside. If the places are too far away or if people prefer, the sharing will be organized in the social center of Ansiães, in the café of Ansiães or in the one of Póvoa. The sharing of the stories will be shared by groups of 5 to 10 people to talk about why they chose those places, and those objects.
ii)   The printed map can be distributed to residents, emigrants, and tourists.
iii) A final event of the project could be organized to present the map.

7) What funding and materials are needed?

- We presented the materials needed, approximate costs and sources of funding. As mentioned above, this budget was discussed with the governing board of the baldio who agreed to pay the costs of the printed map (600 euros including the graphic design and printing). Other costs were paid by the SUSPLACE fieldwork funding of the first author. As also mentioned above, this preliminary agreement was discussed over the course of the project with the president of the baldio as the activities and costs suffered from unexpected changes.

8) What other future actions might come out of this project?

- We presented here a possible next step: "This exercise could serve to create a joint future vision for the Ansiães baldio, as well as a strategy on how to achieve the vision. This exercise can be key at the transition point where the baldio is, to try to involve people in the wasteland, and to think about how the baldio can benefit the way of life of the residents of the parish."

The methodology was well received by the community who suggested to gather the stories of elders, as they were the last witnesses of baldio's history. We then added meetings with elders with the objective to record their conversations around the topic of inquiry. Yet, the activity evolved into individual video recorded interviews with elders because of the difficulty to bring them to a common place, and the realization of the importance of collecting stories in first-person recalled with their own voice, emotional narratives, and expressions. For this, we employed an ex-student on audiovisual documentary of the University of Aveiro, hiring Gabriela Benedetti.

3. Recruitment of the core group

For recruiting people for the PAR, we started disseminating the project at the end of July 2018. For this, we set up a website in WordPress (https://maraominhaserra.wordpress.com/), a Facebook page (https://www.facebook.com/minhaserrameubaldio/), and an email for the project. In parallel, posters were distributed in all cafés and grocery stores explaining the idea of the project and speaking with the manager of the establishments (Fig. 1). The poster called for expressions of interest and gave a telephone and email contact (Fig. 1). In this phase, those interested people were those that we knew about the project already and had participated in the previous phase of the design pf the project. As such, they all expressed their interest in person.

After this dissemination time, the recruitment was done via two presentation sessions, in two distinct locations of the parish to facilitate participation (Primary school of Póvoa and Social Centre of Ansiães in Eido). Again, a poster was distributed in cafés and grocery stores (Fig.

2), inviting directly to people that were at the establishment at that moment. We also made personal invitations to those interviewed residents.

The session had the following structure:

Figure 1. Posters to invite poeple to the presentation session.

- Welcome and round of introductions.
- Presentation of Marão Minha Serra Project
- How to participate and project schedule.
- Presentation of the Mapping kit
- Session summary and next steps (asking for their participation and feedback).
- Informal exchange and snacks.

In total we had 30 people participating in these sessions, 20 in Eido and 10 in Póvoa. From these, 16 accepted to participate in writing a story about a meaningful place in the baldio. After the session, three persons dropped and two new persons contacted us, ending up with 15 persons making a place and writing a story about it (Table 1).

Table 1. List of participants in the activity of choosing a place and writing a story.

Number	Participant code	Sex and age	Participation & profession
1	P1	Male, ≈ 70 years old	President of the governing board of the baldio, subsistence farmer
2	P2	Female, ≈ 50 years old	Vice president of the baldio, worker at a public trout nursery within baldio limits
3	P3	Male, ≈ 40 years old	President of the community assembly of the baldio, civil construction sector
4	P4	Female, ≈30 years old	Assistant in community assemblies of the baldio, farm business entrepreneur
5	P5	Male, ≈ 50 years old	Assistant in community assemblies of the baldio and forest worker hired by the baldio since 2000, subsistence farmer
6	NP1	Female, ≈ 50 years old	Not participating in baldio matters, subsistence farmer and worker
7	NP2	Female, ≈ 30 years old	Not participating in baldio matters, bank employee in the nearest city
8	NP3	Female, ≈ 40 years old	Not participating in baldio matters, working in a nearby city
9	NP4	Male, ≈ 40 years old	Not participating in baldio matters, working in a nearby city
10	NP5	Female, ≈15 years old	Not participating in baldio matters, high school student
11	NP6	Male, ≈ 60 years old	Not participating in baldio matters, free-lance worker in the construction sector
12	NP7	Male, ≈ 60 years old	Not participating in baldio matters, president of the parish and hotel employee
13		Male, ≈ 8 years old	Not participating in baldio matters
14		Male ≈ 50 years old	Not participating in baldio matters, resident in Eido, unemployed

Number	Participant code	Sex and age	Participation & profession
15		Female ≈ 40 years old	Not participating in baldio matters, resident in Póvoa

4. Collecting significant places and stories

The step started in October 2018 and lasted six months.

4.1. Written stories

For the collection of stories, any resident of the parish was invited to choose a significant place for them and write the story behind it: the participant should think of a place where they feel really good or where they experienced a significant moment in their lives. The activity included a 'mapping kit' (Fig. 2) with a notebook with prompt sentences, detailed instructions, a map of the baldio, and several objects to motivate people to go to the place for the exercise to promote an introspective experience (i.e., a yellow string to mark their place and a jar to pick an object of the place). Importantly, the design included language and image coherent with the community diagnose. We used existing community symbols such as the word 'serra' (mountain), more appellative than 'baldio' and shaped proverbs linked to it (Para lá do marão mandam os que lá estão) (Fig 2).

For this, a " mapping kit" was distributed, consisting of:

a) A notebook with prompt questions and/or a tasks, to facilitate the description of the place: Why is this place special to you?, When and how often do you come here?, What do you like about this place?, What significant moment have you experienced in this place?, How do you feel in this place?, What wish do you have for this place?, The name you want to give to the place.

b) objects to incentivize people to go to the place to promote an introspective experience. Namely, a yellow string to mark their place, and a jar to pick an object of the place.

c) a disposable camera for those who did not have a smartphone.

4.2. Video stories

In parallel affective stories of the elders were gathered from November 2018 to January 2019 through video with the help of a leader of an elder care association who introduced us to

volunteers. After compiling of a list of storytellers, we generally went to their villages. The main researcher guided the interviews, while Gabriella Benedetti, the hired videographer, was filming. Interview questions included asking about what they did in the baldio, what they liked most, favorite places, and most cherished memories, but they were open conversations. Beyond those referred by the local elder association, we also video interviewed the president of the baldio, and a local poet, singer and goat shepherd who was referred by the core-team as an important person to interview. All interviewees were born when the baldio had already been expropriated by the military state (after 1938), and most were above 80 years old.

A bottom-up coding process was used for building the narrative of the video, covering the following themes (and organized chronologically): the history of state forestry and the baldio, personal life stories, history and experiences before the dictatorship, state forestry work and experiences, other uses of baldio and experiences, joy, poverty and community during the dictatorship and current sorrows. The video concluded with stories of the core group and their affective relations to the baldio—to open reflections and discussions regarding the future.

5. Sharing stories

5.1. Community workshop

The workshop had the following structure:

- After a check-in where people laid down their expectation for the workshop, commoners had to share their stories in groups of four, and then identify the resources and values contained in the stories. Table 2 shows the variety of resources surfaced with affective stories. There were many references to mutual help and union, as well as the family and friendship values, which contrasts with the preliminary interviews where people referred to the lack of these characteristics.

- After identifying the resources and values, participants had to draw how they felt in relation to the baldio. This drawing then served to facilitate a discussion about the baldios' future challenges and what they needed to solve them. They collectively identified challenges and needs.

- After this discussion, people had to think on actions using the identified resources and values to solve the baldios' future challenges and satisfy the needs they had identified. Actions were supposed to be activities that could be implemented by themselves in the following months. Two groups proposed an activity that involved cooking ad sharing traditional products, as they identified a lack of community gatherings beyond the café (which did not offer any traditional food). One these groups suggested to cook traditional dishes and share the food together on the day of the exhibition, sharing the costs. The other group, proposed to build together a small cottage near the river that would serve traditional 'petiscos' (starters) during the warm seasons. The third group proposed inviting commoners to plant meaningful native tree species together to remember the importance of the baldio and the forest. They suggested that all participants invited at least one commoner who did not participated before at the baldio-community. Participants committed to organize them together for the day of the video exhibition (one month later).

Table 2. Resources and values contained in the story.

Resources	Values
Forest commons	**Capacity**
Forest valley, Marão river, native forests trout nursery, fountain, centenary trees, baldio as collective property, ability to mobilize people for a common cause	*Adaptability because of necessity, defense of the commons by local community. Investment capacity, capable people, work*
Cultural	**Community**
Traditional music, village, traditional cuisine, gastronomy, wine, church as a monument	*Altruism, companionship, team spirit, friendship, family, willful mutual help, sharing, welcoming, union, exchange, gathering, religion*
Recreational	**Future generations**
Landscape, pedestrian trials, pure air, environment, natural surroundings, rivers and Póvoa dam	*Human view in the past vs. economical view at present, long-term strategic vision vs. short term vision now, legacy for generations to come, memory maintenance, respect for nature, clean*
Economic	
Tourism potential (bridge, ranger houses, Póvoa dam), gold, water as a wealth resource, pastoralism, beekeeping, hunting,	

5.2. Video exhibition

The exhibition day was named 'Encounters with the baldio', and involved the actions proposed by core group participants and the video documentary with the affective stories (more details below). It was divulgated online through Facebook, and locally with posters (Figure 2). The date and times were chosen with the core group participants, following their availability.

Figure 2. Poster used for dissemination.

6. Focus group and exit strategy

One year and a half later since the start of the project (November 2019), we organized a last session engaging the same core group that had organized the actions above. It consisted of two focus groups dividing the core group in two (6 participants per focus group). The aim was both to close the project with a collective reflection, on the different activities carried

out, as well as speak on how the process had impacted their visions about the baldio, the community and their role in the future of it. Both focus group followed the same script, were facilitated by the PhD candidate, were recorded, and later transcribed for analysis. During the discussion, pictures of the different activities were shown to evoke different moments. This activity closed the project, while promising to maintain contact for other projects in the future. The COVID pandemic and lockdown that hit Portugal some months after (March 2020) may have affected the dynamics created by the PAR as it hindered community actions for at least for two years.

7. Paper writing

The writing of this manuscript started in March 2022 ex-post developing the PAR. The manuscript had the aim of describing the PAR process and materials produced during its implementation. To order the manuscript, the co-authors defined the following question:

1. Which community relations existed around the baldio prior to the PAR? How do these explain (non)participation?
2. Which new relations and feelings of being-in-common with the baldio and to others did PAR facilitate (if at all)?
3. How did the design of the PAR contribute to these outcomes?
4. Which new insights on (non-)participation were reached through the implementation of PAR?

This helped to unwrap the process of the PAR from its design to its closure to be able to reflect on their outcomes (success and failures). While not involving the commoners in paper writing, we involved them in analyzing their own stories during the workshop (see section 5.1.) and in a collective reflection at the of the PAR process through the focus group (see section 6).

8. Other activities: documentary exhibitions and workshops

The documentary produced during the Marão Minha Serra PAR was presented on five cities in the year following year its production:

- Open documentary exhibition and debate at the University of Aveiro, Aveiro.

- *Open documentary exhibition and debate at the Biblioteca Municipal* de Vila Real, Vila Real

- *Open documentary exhibition and debate at the Associação para a criação do Museu Eduardo Teixeira Pinto - Casa da Granja*, Amarante

- Documentary exhibition in the context of the international cinema festival of *Paisagens – Festival Internacional de Cinema,* Sever do Vouga

- Documentary exhibition in the context of the international cinema festival of *Festival de Cinema de Avanca*, Avanca.

The Marão Minha Serra project was also presented by invitation at:

- "Sarau comunitario em Ansiães", 2022. Presentation in the context of a Roundtable about community tourism in Ansiães. Organized by Stay to Talk- Instituto de Imersão Cultural.

- "Ciclo A Hora da Floresta", 2021. Title of communication: Marão minha serra: ativando as ligações afetivas à floresta e ao baldio. Organized within the project "Participação comunitária na construção de uma floresta resiliente e multifuncional" (consórcio F4F - Forest for Future) coordenated by CFE ad by VOUZELAR - Associação de Promoção de Vouzela.

- *TRANSECO.* Economias transformadoras em debate*. Presentation and documentary exhibition in the context of a roundtable on the topic: "Commons". Organized by the Associação Gato Vadio*, Porto.
  https://www.facebook.com/events/754250341710018/754250345043351/

9. Limitations of our PAR and suggestions for improvement

One limitation of this PAR was the limited number of people involved. Our study was designed to involve 30 people in the place-story activity and in workshop/focus groups, but in the end only 15 people became involved in these, and 12 participated in the core group. While writing was a friendly way of expression for those who participated, it may have inhibited the participation for some. Indeed, Mark and Boulton (2017) and Rivera Lopez et al. (2018) highlight the importance of including culturally sensitive creative methods. In our study, orally transmitted music and poems appeared as a popular artistic expression that was only partially included in the video recordings. Moreover, other more collective ways of gathering stories, such as organizing collective walks to visit and record affective place-stories, could have been more evocative for collective orally transmitted customs and affective memories in the landscape (Duffy et al. 2018).

Actions over a longer period and involving other type of activities (such as future visioning or networking activities with other community-based initiatives) may have helped to change the current governance of the baldio to make it more participatory and invitational, as well as to guide and motivate actions. While the PAR, as a facilitated participation, may suspend some structural (gendered) barriers, structural barriers for participation continue to exist in other spaces surrounding the PAR, curtailing the empowerment effects possible beyond the PAR (Kesby et al. 2007) (e.g. women continued to carry most of the burden of family care). As Kesby (2007) suggests "only when resources able to affect empowerment are available to ex-participants other domain of association, will these spaces be reconstituted in way that make them conducive to the reperformance of empowerment" (pp.25). One key 'resource' that is lacking in our case-study was social networks due to depopulation, aging, and subsequent erosion of existing spaces of socialization. As a result, we argue that activities that involve networking with other baldios, as well as between women of other baldios or community-initiatives, may have helped to produce the necessary networks, and associated knowledge and energy, to have more lasting effects.

We still believe that our PAR shows the potential of poststructuralists approaches to PAR combined with creative methods in recovering, expanding, and strengthening humans' relationality in contexts where affective more-than-human entanglements are weak. Through the PAR, as well as other documentary exhibitions, debates, and presentations this research has facilitated, this research has surely contributed to making communities' affective relations with forests more visible, countering the dominant forestry technical views on community forests.