

## PEOPLE'S COMMONS' REGISTER: INVOLVING LOCAL COMMUNITIES IN MANAGING COMMON POOL RESOURCES

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### Abstract

Communities across the world interact with common pool resources in distinct ways, including for economic as well as social and cultural purposes. The involvement of local communities in the conservation and management of these resources requires recognising and building upon their customary de facto governance arrangements. However, the absence of a comprehensive database around the customary governance arrangements hinders their recognition, also weakens these arrangements and the institutions around them. The absence of such a database weakens the trust of external stakeholders in these customary arrangements and in local communities' abilities to act for sustainable management of resources. In an attempt to address this issue, this research was carried out for preparing such a database to record the customary governance arrangements around the common pool resources, namely the People's Commons' Register (PCR). This participatory action research was conducted at three locations in the central Indian states of Madhya Pradesh and Chhattisgarh. This paper shares the methodology evolved as an outcome of the research. It also highlights some key insights into the complex relationships of different stakeholders around the common pool resources. The creation of a database such as PCR is an essential first step in creating awareness and collectivising local communities for the conservation and management of the common pool resources. PCR aims to become a people's document by enabling them to access opportunities to secure their rights to use, protect, manage and establish claims on their resources.

**Keywords:** Common Pool Resources, Commons Governance, People's Commons' Register, Bundles of Rights, Participatory Action Research.

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## Introduction

Common pool resources are natural resources which are in use by a group of people or households and not held by any individual. Elinor Ostrom (1990) defines common pool resources as the resource systems from which it is difficult to exclude access or use by its potential beneficiaries. As clarified by Schlager and Ostrom (1992), the term common pool resources (hereinafter referred to as 'commons') refers to the physical characteristics of resources, non-excludable and rivalrous, while the governance of these resources is examined under the different property regimes. The local communities in rural India, especially tribal communities, are directly associated with the commons in a wide variety of ways, including for economic benefits, through their diverse social customs and also to maintain the ecology in their vicinity (Abdul Azeez E.P. & Sebastian, 2016; Gadgil et al., 2000; A. Sarkar & Dasgupta, 2009).

However, the commons in India continue to face significant degradation (Foundation for Ecological Security, 2012). Starting with the pioneering efforts of N.S. Jodha, scholars have attempted to estimate the adverse implications of this degradation on rural livelihoods (Jodha, 1985; Kapur et al., 2010). The most popular proposition to date pertaining to the commons' degradation remains the 'tragedy of the commons' promulgated by Garrett Hardin (1968). According to this view, without well-defined private (or State) property rights over commons, each individual accessing the commons will act purely in their self-interest, leading to resource depletion and jeopardising their dependence on it in the long run.

However, the ecological history of India, as discussed by Gadgil and Guha (2012), points to the contrary. Gadgil and Guha, for instance, note the State control of earlier commonly held forests under the British colonial period. This State control sidelined the local populations' sustainable historical associations with these forests. It further led to an overexploitation of these forests and their depletion for the gains of the British colonial State.

On the other hand, Elinor Ostrom (1990) and

scholars following her work have shown that the community-based management of commons to be more sustainable. Communities dependent upon commons possess certain knowledge about these resources acquired through their long-standing association with these resources (Ostrom, 1994). While some of these diverse associations are unregulated, others may be governed by customary or de facto rules, at times unsaid and unwritten (Barry & Meinzen-Dick, 2008). Research by Ostrom and other commons scholars demonstrates that local, self-organised institutions leverage collective action to sustainably manage and govern commons through their customary regimes (Meinzen-Dick et al., 2020; Ostrom, 1990; Sandler, 2010).

From India, one such example of local communities coming together to sustainably manage the commons is that of the Mendha (Lekha) village in Maharashtra. The inhabitants of this village have been successfully conserving forests in their vicinity since the 1980s by enacting several community institutions (Tofa & Hiralal, n.d.).

However, the unabated degradation of forests and other commons across India indicates that success stories like Mendha (Lekha) are only a few (Nayak et al., 2013). The more widespread scenario is that of competition within the local communities and their conflicts with the State – through its agencies like the Forest Department – or other external entities trying to govern the resource differently (Deora, 2017; Shah & Rao, 2020).

Such conflicts are destined to further the depletion of commons as they take away the resource-ownership of the local communities, a key motivation for them to conserve the commons. The non-recognition of these customary governance regimes around commons weakens their effectiveness and hampers the locals' livelihoods around these resources. However, their replacement by other legally recognised or de jure norms does not necessarily translate into an effective governance of the commons (Ostrom,

1994). Rather, it may contribute to a further rise in conflicts and resource depletion. For instance, the local communities of a village that were earlier conserving their neighbouring forests and using them judiciously through their customary norms might now become more aggressive and start cultivating food crops deep within the State-owned forests.

The historical injustice to the forest-dependent rural communities in India has been recognised through the Forest Rights Act of 2006. However, despite the recognition of Forest Rights through this Act, the local communities continue struggling to assert this right (Gupta et al., 2022). Moreover, the commons include much more than just forests. They include, for instance, rivers, streams, ponds, open lands and hills. The policy measures to recognise customary governance regimes around these resources remain inadequate. Acknowledging traditional knowledge and strengthening customary practices around these commons is crucial to ensuring their sustainable governance (Biswal et al., 2017; Deininger, 2003; Springer & Larsen, 2012).

However, despite good intentions, two challenges outlined by Nagendra and Ghate (1970) render the task of strengthening the commons system complex. These challenges are (1) different languages used for the commons across community groups and the State and (2) the absence of a reliable and comprehensive database of the existing customary practices and norms related to these resources. Both these challenges make communication difficult among different stakeholders and leave communities disempowered during the conflicts around a resource (Barry & Meinzen-Dick, 2008; Sirait et al., 1994).

***About the People's Commons' Register:*** Aiming to address the gap as discussed earlier, the VikasAnvesh Foundation (VAF) carried out action research to evolve a methodology for preparing a

database around commons, namely the People's Commons' Register (PCR) (Deora et al., 2020). The name of the database has been adopted from the People's Biodiversity Register (PBR). By focusing on recording the customary de facto system of rights and governance around commons, PCR aims to become a repository of local communities. It also aims to record the de jure ownership rights to these resources. PCR has a wide range of potential applications for communities and other stakeholders associated with commons, both in the short and the long terms. Examples of some of the outcomes obtained from the PCR-making exercise are discussed in the result and discussion section.

With the above context, PCR, as a first step, proposes to bring a conscious recognition and appreciation of the commons in people's minds. The participatory nature of the PCR-making exercise enables communities to exchange knowledge about resources while instilling in them the faith for collective action. In the long run, to ensure the conservation of resources, there is a need to make sustainable management of resources a part of the development agenda and an aspiration of youngsters (Gadgil et al., 2000). The PCR aims to direct the attention of the young generation towards the significance of commons and the importance of their conservation. When one looks at the route to 'commoning' – that is, evolving a widely shared and legitimised system of local governance of access and use of commons (Meinzen-Dick et al., 2020) – ambiguities related to de jure and de facto customary rights invariably create a potential for conflicts and confusion. The very concept of who holds what type of right over which resource is fluid. PCR attempts to address this challenge by aggregating the different types of rights around commons and their users in the language of local communities. Recording of age-old traditional and customary management and governance practices in the PCR would enable communities to access opportunities to secure their rights, getting de jure recognition of the customary rights and negotiating these rights if challenged.

## Objective

This research's broad objective was to develop a methodology for preparing a database of commons – the People's Commons' Register (PCR). As emphasised by the word "People" in its name, the participation of local communities in preparing the PCR, reflecting their understanding of the commons, is central to the idea of a PCR and this research. The two specific objectives of this research are as follows.

1. *Identifying a methodology to record the following information within the PCR:* the customary de facto system of rights and rules around the commons and the de jure ownership rights around them. This information needs to represent the local communities' perspective on the commons – governance arrangement around the commons as observed and experienced by the local communities – which may be different from the perspective of the State and other actors.
2. Designing a structure for the PCR to organise the information collected in step 1 above.

A critical component of the two objectives is the need to ensure that both the activities – information collection and its organisation in the PCR – can be performed by representatives from local communities with some external capacity-building support. That way, PCR can also act as a catalyser for collective action around commons by the local communities. This, however, requires the methodology of preparing the PCR and its design to be both effective and easy to follow for different sections of the population.

## Methodology

**Field Setting:** The field area for this research falls in three districts from central India – Burhanpur and Mandla districts in Madhya Pradesh and Bastar district in Chhattisgarh. In each of these three districts, the field area spanned a watershed covering an area of 8,000 to 10,000 hectares falling within the same administrative block.

Selected this way, the field area for this research includes 57 villages from three administrative blocks (one block each from three different districts) in these two states. These 57 villages are distributed across the three districts as follows: 16 villages from the Khaknar administrative block of Burhanpur district, 31 villages from the Bichhiya block of Mandla district, and 10 villages from the Darbha block of Bastar district (see Figure 1).

A significant part of these three administrative blocks has an undulating topography. The field area is drained by the tributaries of the Tapi River in the villages of Khaknar, tributaries of the Narmada River in the villages of Bichhiya, and tributaries of the Sabari River in the villages of Darbha (Gol, 2013). All three administrative blocks have a significant forest cover. Two of the blocks in the study even adjoin national parks – Darbha has the Kanger Valley National Park in its neighbourhood, and Bichhiya borders the Kanha National Park.

These three administrative blocks fall under the Fifth Schedule of the Indian Constitution (Gol, 2003). They are predominantly inhabited by the communities categorised by the Indian Constitution as Scheduled Tribes (ST), who rank lower on multiple socio-economic indicators than other communities (S. Sarkar et al., 2006). As per the census of 2011, in Khaknar, Bichhiya, and Darbha, the ST communities contribute to 64.5 per cent, 62.2 per cent and 82.9 per cent of the total population, respectively. It is much higher than the fractions of the ST communities in MP and CG at 21.09 per cent and 30.62 per cent, respectively (Gol, 2011). Major ST communities inhabiting the villages where this research was carried out are Korcu in Khaknar, Gond and Baiga in Bichhiya, and Bison-horn Maria, Dhurwa, and Halba in Darbha. Along with these, several other communities such as Mahara, Raut, Lohra, and Balai also contribute to the population of these villages.

Cultural practices of local communities – their customs, festivals, art forms, and even dialects – vary widely across the selected field area. For instance, different villages have different local

deities, and many of them have specific art forms like the Gond paintings (Arur & Wyeld, 2016; A. Sarkar & Dasgupta, 2009). These different cultural practices also relate distinctly to the natural resources surrounding these villages through, for instance, their different and unique ethnomedicinal practices (Abdul Azeez E.P. & Sebastian, 2016; Mahant, 2015; Mishra, 2008).

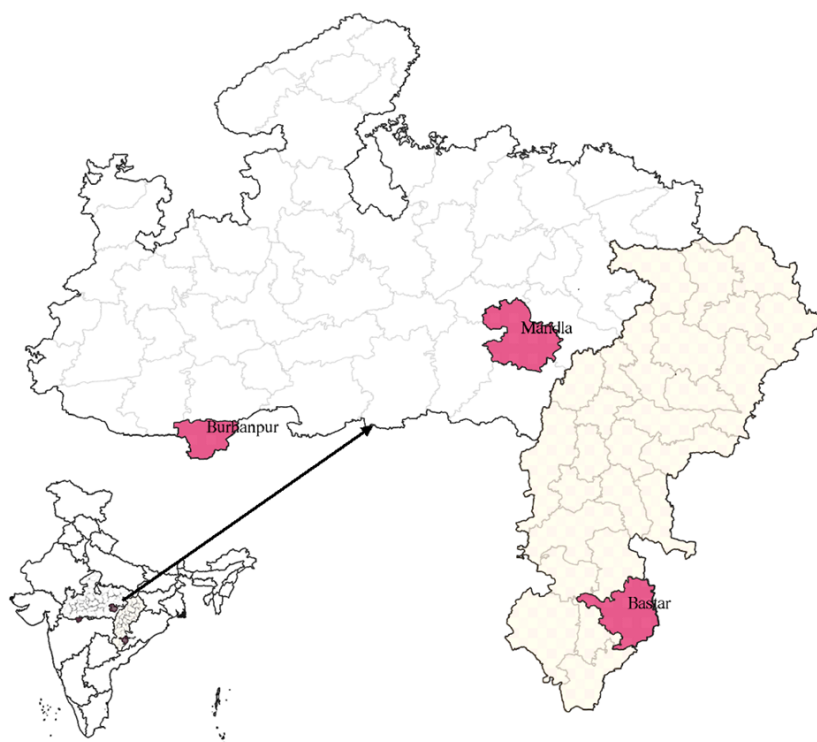
The primary livelihood in all the villages under the research is agriculture. However, observations and primary information collected during the fieldwork highlight differences in the agriculture practices across locations. For instance, in only one of the three blocks, a significant fraction of farmers cultivate a cash crop, cotton, as one of their primary crops. In the other two blocks, primarily cultivation is of food crops. Farmers from the villages under study in Khaknar block also rely

significantly on groundwater for irrigation through deep borewells. Whereas in the villages of the other two blocks, farmers continue predominantly rainfed cultivation, with only a tiny fraction having access to surface or groundwater-based irrigation.

Local communities depend on the forests for various purposes, from visiting a spiritual deity inside the forest to regularly collecting and selling minor forest produce for livelihood generation (Gol, 2019). Like the forests, local communities in the research area also indicate a significant dependence on water resources for diverse purposes, including drinking, domestic, irrigation, fishing, and spiritual (Arur & Wyeld, 2016; Nagar, 1982). Other alternative livelihoods in the research area include animal husbandry, local and migrant wage labour, and very few people taking up jobs or operating businesses.

**Figure 1**

*Map of Study Area*



*Note:* Map prepared by authors. The State and district boundaries in the map have been provided by Data(Meet) Community Maps Project (Data(Meet) Community Maps Project, n.d.). This data is made available under the Creative Commons Attribution 2.5 India.

**Conceptual Framework:** This research builds upon Ostrom's (1990) institutional design principles and Schlager and Ostrom's (1992, p. 249) property rights typology of the "bundles of rights" (see Table 1) to devise methods and instruments for collecting information to design the PCR. Ostrom's eight institutional design principles characterise the institutional arrangements governing long-enduring commons, finding support in empirical studies on community-based natural resource management. Analysing the status of commons against these principles gives crucial insights into their sustainability, which PCR aims to facilitate (Cox et al., 2010).

This research attempts to address a critical challenge by documenting that information on institutional design principles, which is in the local communities' domain (Barry & Meinzen-Dick, 2008). It documents such information on six of the eight design principles in the PCR, leaving only the last two principles because they invariably require information from other stakeholders and at different administrative hierarchical levels. The six institutional design principles around which the PCR documents information are (1) clearly defined boundaries of the commons and clear identification of users, (2) appropriation rules are congruent with local conditions and provision rules, (3) individuals affected by operational rules participate in modifying these rules, (4) monitoring with monitors accountable to the appropriators, (5) graduated sanction to violators of operational rules, and (6) access to the low-cost and locally available conflict-resolution mechanism (Ostrom, 1990). The two remaining principles that are beyond the scope of

the PCR-making exercise and are instead the goals to be pursued after creating the PCR are (7) recognition of the rights of the users of the commons to organise and govern these resources and (8) a nested governance system around the commons with multiple layers of governance.

The bundles of rights framework helps organise the processes of information collection and its documentation in the PCR. A common resource can fall under one or more of the four different types of property regimes defined in terms of who holds the rights. These regimes and their respective right holders are – "the state for public property, individuals (or legal individuals, such as corporations) for private property, and some form of defined group or community for common property", and open access without any established property rights (Barry & Meinzen-Dick, 2008, p. 13). In any kind of property regime, except for open access, different individuals or groups can hold different types of rights around a resource, which Schlager and Ostrom (1992) identify as the bundles of rights.

These rights represent "particular actions that are authorised" around a resource and are different from rules which "refer to the prescriptions that create authorisations" (Schlager & Ostrom, 1992, p. 250). This research employs the bundles of rights framework to organise the information on rights and rules on the aforementioned six institutional design principles around the commons. It attempts to capture the diversity, to the extent it is perceived by the local communities, in recording variations in resource use throughout the year. It also compares the current status of the bundles of rights with that in the past (two decades ago).

**Table 1**

*Bundles of Rights Associated with the Commons*

<b>Rights Category</b>	<b>The ambit of the rights</b>
Access, Withdrawal, or Use	Right of access and withdrawal from the resource, exploitation of the resource for economic benefits, non-tangible and spiritual uses/association with the resource
Control or Decision-making rights	Rights to manage the resource and exclude people
Alienation or Ownership rights	Rights to rent, sell, or transfer the rights of the resource

*Note:* Categorisation in the table adopted from Barry and Meinzen-Dick (2008)

**Scope of Information in PCR:** The concept of commons encompasses a wide range of resource categories to be found across India. The resource categories in a land-locked geographical region can differ starkly from those in a coastal region. Similarly, the resource categories in a desert may differ from those found near a river's flood plains. To become a reliable database of commons, the PCR database needs to capture these diverse categories of resources adequately.

However, being a pilot study, the scope of PCR for this study has been limited to certain categories of natural resources found in the research area. These categories include land-based natural resources, surface water resources, groundwater resources and forest resources among natural resources. PCR also captures human-made commons, which exhibit only the characteristic of non-exclusion from the commons' definition but are nonetheless considered commons by the local communities. Such human-made resources may include, for instance, community halls, schools, hospitals, and places of worship. The resource mix to be documented in a PCR can vary depending upon the commons found in the field setting.

The concepts of resource systems and resource units, fundamental to commons, are relevant here. Resource systems are like a stock of resource units from which people can extract these resource units as required (Ostrom, 1990). Forests, pasture lands, ponds, and groundwater aquifers are examples of resource systems. From these systems, the resource units which can be extracted may include – fuelwood and minor forest produce from forests; grasses for livestock feed from pasture lands; water, fish or crabs from ponds; and water from groundwater aquifers. PCR attempts to capture the rights and rules against individual resource systems and not for the different kinds of resource units.

**Target Population and Sampling:** The target population for this study and the PCR-making exercise are the diverse rural communities across India with significant associations with the commons in their vicinity for diverse purposes.

Out of this target population, the study sample comprised a watershed of 8,000 to 10,000 hectares each from the three administrative blocks of Madhya Pradesh and Chhattisgarh – translating into 57 villages across the three blocks. A watershed, due to the natural undulation inherent in its definition<sup>1</sup>, allows the capturing of very diverse types of resources – from sacred groves and temples at hilltops to water reservoirs and playgrounds on the plains. Conducting this research across multiple blocks could ensure enough diversity in the rules and rights around the commons in different contexts. Such diversity can facilitate the evolution of a widely applicable methodology for PCR preparation.

The three blocks were selected from the central Indian states of Madhya Pradesh and Chhattisgarh because of the prior knowledge of the research team members about the predominant natural resources found in these land-locked states. The three administrative blocks in the study were selected through purposive sampling with the following criteria.

1. Inhabitants of all three blocks could understand Hindi to a significant extent. As this research is also a pilot PCR-making exercise, it was essential to limit the tools and instruments of data collection to just one language so that they could be improvised based on the feedback from the field. Using a single language across the field sites ensured that the interviews, focus group discussions and questionnaires could be improvised based on the feedback from any of the three blocks.
2. All three blocks had the presence of a Civil Society Organisation (CSO) working with the local communities at the time of the study. CSOs working in the field area for this study are – Foundation for Ecological Security (FES) working in Bichhiya, Professional Assistance for Development Action (PRADAN) working in Darbha and Aga Khan Rural Support Programme (India) (AKRSP(I)) working in Khaknar.

3. The three blocks have significant populations from the ST communities, which have deep-rooted associations with the commons, particularly forests in their vicinity. However, the scope of PCR is not limited to the ST communities. Rather, it captures the associations with the commons of all the diverse communities inhabiting a village.

The sampling unit for this research and the PCR-making exercise is a village, as defined by the Revenue Department (Meinzen-Dick et al., 2020). The revenue village is a standard unit for administrative purposes, and aligning the PCR with the revenue village can help ensure its spatial fit with the existing institutional structure at the village level.

**Data Collection and Analysis:** This study is primarily qualitative, attempting to capture the situated and contextual nuances of rural communities' associations with commons. However, for data collection, the study employs a combination of qualitative and quantitative methods within a participatory action research design.

The PCR for every village in the study area records data on two broad aspects. These are (1) data to understand the locale, history and other features of the villages and to know about the stakeholders around the commons in the village's vicinity, and (2) data to learn about the commons in the village's vicinity and to understand how they are governed. The study uses two semi-structured questionnaires – one for each broad aspect – with a mix of open-ended and close-ended questions to guide the data collection process. Both these questionnaires are administered across communities.

To bring in nuances from the diverse communities residing in a village, it also employs multiple Participatory Rural Appraisal (PRA) tools to collect data on the parameters identified in the questionnaire. The PRA tools were used initially to identify the commons in the village vicinity and, later, to capture the association of local communities with these commons. The PRA tools used in the study are (1) resource mapping to

identify commons in the village vicinity with which the local communities are associated, (2) transect walks followed by (3) focus group discussions across different hamlets of the village, and (4) interviews with key informants to elicit responses on the associations of local communities with the commons identified through resource mapping. During the transect walks, the coordinates of each resource were captured through geo-tagging. Additionally, the village boundaries, as understood by local communities and the boundaries of larger resources such as ponds, were also captured.

The data was collected for the present situation as well as the changes in the last two decades based on memory recall of the participants of the PRA activities. The point in the past, as two decades ago, was chosen based on the interaction with the local communities who could recall significantly accurately only up to around two decades ago. This data was collected between May 2019 and January 2020.

All collected data was triangulated across multiple village hamlets and was analysed to refine the methodology of the PCR-making exercise and to understand the relations of local communities with the commons in their vicinity in the study villages.

Additionally, the following section also relies significantly on the direct observations the research recorded and the data collection methods mentioned above to discuss the findings from this study.

## Results and Discussion

**Methodology for PCR Preparation:** The methodology for preparing the PCR database is the primary outcome of this research. Figure 2 shows the conceptual flow of the methodology resulting from this study. Most of the components of this methodology require participatory exercises with local communities through some facilitation support.

The initial cluster-level workshop with community representatives helps decide a structure



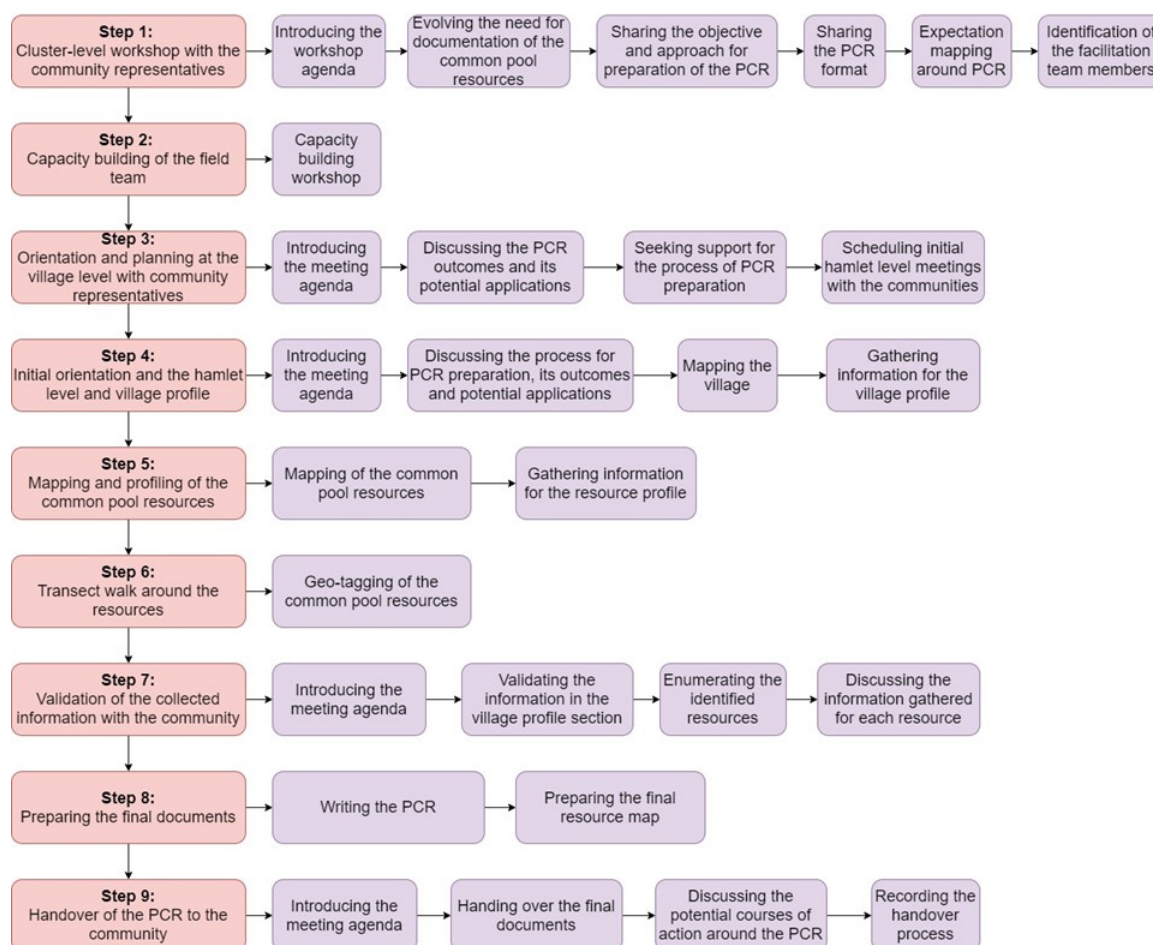
for PCR based on participants' understanding. Because of the highly participatory nature of this methodology, it requires the research team members to possess certain facilitation skills along with the technical skills related to the use of Geographic Positioning System (GPS), PRA techniques, and preliminary knowledge about the commons. These skills are imparted through capacity-building efforts to the field team comprising members from local communities. The research team members then carry out village and hamlet-level orientation meetings. These orientation meetings also mark the start of the commons' identification process in the village. It is followed by multiple PRA activities to gather information about the associations of locals with

these commons and to collect data about the village.

Transect walks with key persons are carried out to locate the resources on the map. The information on the rules and rights around the commons is also verified with the communities across different hamlets. The research team members then present the draft of the data collected and the corresponding resource map to the communities for final validation. After the validation, the collected information is hand-written in the physical PCR registers and handed over to the community by organising a Gram Sabha sort of meeting. The geo-tagged resources are also mapped and recorded on satellite imagery to preserve them in a digital format for future use.

**Figure 2**

*Flowchart of the Step-wise PCR Preparation Process*



**Structure of the PCR:** The data collected as part of the PCR-making exercise is recorded in two separate sections in the PCR – (1) village profile and (2) resource profile. The village profile section aims to briefly introduce the village to readers of the PCR, specifically stakeholders other than local communities around the commons. The village profile section has been further divided into multiple sub-sections: village history, geography, ecology, demography, culture, livelihoods, health, and education.

The second section, resource profile, comprises information on some basic characteristics of the commons in the village. It records the information on the rules and rights, changes in their use over the last two decades, and conflicts around these resources.

**The Complexity of Relationships around Commons:** The relationships of communities with the commons are under transition due to the influence of changing climate, demographic pressure, weakening cultural relations, and external exploitation (Barry & Meinzen-Dick, 2008). The PCR-making exercise acted as a mirror for local communities reflecting on these changing relationships across the study area. The study area faces diverse pressures on the commons from local inhabitants and outsiders. A prevalent sight across the villages in the study area is the ubiquitous presence of invasive plant species like *Lantana camara* and the muddy monsoon rainwater flowing from privately owned and common lands carrying good quality topsoil. This land degradation and the presence of invasive species are associated with the degradation of forests and other vegetation in and around these villages.

During FGDs in villages of Darbha, women living further from forests reminisce about the ease with which they could walk to their neighbouring forests and fetch fuelwood for cooking only two decades ago. However, since then, they confess to cutting down their neighbouring forests, converting them into crop fields and houses. Now, to collect the fuelwood, these women have to take public transport just to reach the nearest forests a few

kilometres away. On the roads emerging from the forests, one can notice these women walking hurriedly in groups with headloads of wood to reach home by sunset. Yet, nightfall is not their only concern while going on a fuelwood collection trip. They are also constantly afraid of being caught by a Forest Department staff, who may confiscate the fuelwood and levy a fine on these women.

The interactions of different stakeholders around the commons generate complex dynamics. In Bichhiya, the local communities inhabiting the villages neighbouring Kanha Tiger Reserve have lost a significant portion of their traditional grazing grounds to this protected area. They take solace in remembering the local names, shared across villages, of these traditional grazing forests deep within the core zone of the Tiger Reserve. Yet, despite restrictions on grazing, cattle can be easily seen grazing on the fringes and within the buffer zone of the Tiger Reserve.

Inhabitants from a few villages in Bichhiya and Darbha have also claimed forest rights under FRA. However, even as some people struggle to collaborate with the State by participating in forest conservation, others from their villages indulge in surreptitiously cutting down trees.

The local communities continue adapting to these changing associations with the commons and other stakeholders' presence. However, to assert their de facto governance norms around the commons and manage them more effectively, the local communities may need to articulate their tacit knowledge about these resources. Across the study area, local communities have diverse forms of tacit association with the forests, hillocks, water bodies and open lands. In Darbha, the Bison-horn Maria communities have set aside specific open lands far from their settlements to bury their dead. People across the study area have rituals involving their nearest water body after a death in the village. The local communities in Darbha and Bichhiya have their deities at specific places, at the sites of specific trees within the forests or on particular plots of land. In Bichhiya, the local communities have traditionally distributed Mahua (*Madhuca*

*longifolia*) trees among households to collect and sell their flowers. Baiga and other communities in the study area use medicinal plants to perform traditional healing practices. However, these communities may not be adequately equipped to deal with the commodification pressures on these resources (United Nations Environment Programme & Natural Justice, 2009, p. 34).

Emphasis on recording the de facto and customary rights makes the local communities appreciate their role as custodians of the traditional knowledge and practices around their commons. Communities' participation in management and governance planning also helps ensure equitable benefit distribution and sustainable management of resources (Kumar, 2002; Swain & Das, 2008). The PCR-making exercise is an initial stimulation in that direction, as seen in at least two villages in the study area. In these two villages, the PCR-making exercise culminated in the constitution of a dedicated committee responsible for conserving and managing the commons.

However, articulating such tacit knowledge and customary associations alone may not always be enough to check the commons' degradation in a conflict scenario. This study noted such multiple conflicts where the local communities are pitted against interest groups with significantly higher power relations. No matter the implications of such conflicts on the commons, their inequitable power relations with the external stakeholders, including State and private players, leave the local communities at a losing end.

For instance, in Khaknar block, several villages neighbouring Tapi River witness unabated sand mining from the river bed. Urban residents from different nearby towns carry out this illegal sand mining. This sand mining does not benefit most of the local village residents in any way, as recorded in interviews. It is instead leading to a reduction in groundwater tables and hampering the irrigation water availability in farmers' wells. Members of local communities express their concerns about sand mining in personal interviews. However, fearing repercussions, many hesitate to discuss the

issues around sand mining during FGDs. Checking such degradation requires institutional mechanisms dedicated to the commons' protection against the interests of the powerful.

Several instances of less obvious but more localised practices in the study area also lead to the commons' degradation. These practices are propagated by the local communities themselves, primarily to fulfil their livelihood needs. A widespread practice on the undulating lands in the study area is farmers' encroachment of the water channels adjoining their crop fields to increase the area under cultivation. Such encroachment by one farmer on the water channel also encourages others close to the channel to capture a part of it for crop cultivation. The local communities also hesitate to accurately identify such encroachment in the PCR, indicating one of the limitations of such a community-owned document.

The PCR can, however, be the foundation on which the collectivisation of local communities for the commons' governance can be advocated. This is discussed in the following subsection.

### **PCR as a Foundation Stone**

The customary norms and practices around the commons are subject to adaptation, accommodation, erosion, and exploitation depending on the changing environmental or other external pressures. The PCR-making exercise has the scope for documentation of these customary norms at different points in time.

The database of commons in the PCR can be leveraged to enable communities to assert their rights to use, protect, manage, and claim the resource through collective action. By documenting the hitherto unwritten customary governance arrangements around the commons in the Fifth Schedule areas, PCR can provide them with legal backing through Gram Sabha meetings. It can strengthen the provisions of the Panchayats (Extension to the Scheduled Areas) (PESA) Act by providing local communities with a powerful instrument for the local governance of their

commons (Gol, 1996). It can facilitate them to claim their forest rights under FRA. This database can also help identify the priority areas for conservation and management of commons.

By recording information about the commons, PCR complements the other existing frameworks for recording ecological, social and economic information about natural resources, such as the International Forestry Resources and Institutions (IFRI) manual and People's Biodiversity Register (PBR) for the forests.

The information recorded in PCR is similar to the Bio-Cultural Protocol (BCP), which records customary and cultural laws relating to indigenous communities' traditional knowledge and resources (United Nations Environment Programme & Natural Justice, 2009). However, recording of both de jure and de facto rights for all the common resources significantly widens the scope of PCR as compared to BCP.

### Challenges and Limitations

This research and the database of commons prepared in PCR also have certain limitations. For one, PCR does not capture the historical association, sentimental relationship and anecdotal experiences of people with the resources. Furthermore, each village in the study area has only one PCR database. A single database for the entire village may not always capture the vast differences in the usage or management of a resource by the diverse groups inhabiting a village. However, this is also a future work emerging from this research.

### Conclusion

This research evolves a methodology to create a reliable database of commons with a focus on the de facto rules and rights around these resources. To create the database, PCR, this research builds on the institutional design principles and the bundles of rights approach. It further highlights the complexities associated with the day-to-day

practices of local communities around the commons. These practices and complexities discussed in this paper allude to the de jure and de facto governance arrangements around the commons.

PCR offers crucial insights into these complex governance arrangements while highlighting the relevance of commons in the lives of the local communities. This document highlights the increasing pressure faced by the diverse commons – forest, groundwater, surface water, land and human-made commons. Together with other frameworks and processes, PCR can help communities resolve conflicts around resources, claim their customary rights and ensure sustainable conservation and management of resources. However, making this happen requires significant efforts in two directions: (1) creating a more nuanced version of PCR and (2) long-term handholding of local communities.

The PCR-making exercise discussed in this paper is a pilot exercise. There is a significant scope to bring a more in-depth and nuanced understanding of the commons' governance at the intersection of caste, class, gender, and other parameters. Furthermore, the experience of this research suggests that even after the local communities from a village have prepared a database of their commons, capacity-building of the local communities may be necessary to keep the database alive, relevant and useful.

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### End Notes:

1. A watershed is a geographic area draining to a water body such as stream, pond, river or ocean (USEPA, 2020).

### Author Contributions:

Shashank Deora: Design of study, data collection, analysis, and drafting

Rashmi Komal: Literature review, analysis, and drafting

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