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The boom of social forestry policy and the bust of social forests in Indonesia: Developing and applying an access-exclusion framework to assess policy outcomes

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ABSTRACT

Governments around the world are promoting social forests as part of their stated commitments for sustainability and social justice. Since 2014, social forest policy in Indonesia has undergone rapid expansion, increasing by a factor of five, from 653,311 ha to around 3,369,583 ha in 2019. This paper examines the processes through which social forest policy is implemented to consider who benefits (access) and who loses (exclusion) within different policy stages. We identify these stages to include initial formulation, formal handover, and policy implementation, and map them onto an access-exclusion framework to analyze how power is contested and who benefits. Applying the framework to three case studies from Sulawesi demonstrates that at the initial stage, processes that generate social forestry are defined by access and exclusion related to the collection and control of information. Through processes that define the formal handover stage, key actors contest rules and establish the contours of legitimacy governing social forestry. Finally, during implementation, access and exclusion occur through the management and use of resources. By analyzing access and exclusion dynamics across temporal dimensions that structure social forestry policy, we at once demystify what social forestry entails while providing a clearer picture about the boom of its expansion in Indonesia since 2014, showing how a highly anticipated policy filled with populist ideals goes bust from below.

1. Introduction: making sense of Indonesia's boom in social forestry permits

Governments around the world continue to promote policies of joint forest management to support livelihoods and conservation (Gilmour, 2016; Van Chu et al., 2019). In Indonesia, such policy formulations fall under the umbrella policies of 'social forestry,' which represents a broad set of programs that express populist policy ideals for rural rights to land and forest protection (Firdaus, 2018; Anugrahsari et al., 2020). Indonesian forests have garnered significant international attention for two reasons over the past 15 years. The first is due to high carbon stocks and biodiversity (Boyd, 2010; Estoque et al., 2019), while the second is due to the land conflicts that take place as a result of displacement in favor of industrial-scale plantation operations. Social movements for justice and conservation have therefore convened under a concerted voice by promoting social forestry on Indonesia's state forest lands (Bettinger et al., 2014; Afiff, 2016). Social forestry policy formalization therefore represents many attendant objectives, including agrarian reform, addressing land degradation and forest fires, poverty reduction, and reducing violent land conflict (Sikor et al., 2013; Firdaus, 2018; Fisher et al., 2019). As a result, operationalization is grounds for increasingly contested policy implementation.

Recent research has tried to make sense of progress on Indonesian social forestry (Bong et al., 2019; Fisher et al., 2019), providing

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guidelines for evaluation under the rubric of rights recognition, livelihoods empowerment, and conservation goals (Maryudi et al., 2012). Empirical cases on social forestry implementation describe historically problematic land enclosures that shape subsequent land and administrative relations, determining outcomes at a given site (Firdaus, 2018; Firdaus, 2018). Evidence is also emerging about the way social forestry is used as a political tool, and can thus take on new shapes depending on the powerful networks and interests involved (Firdaus, 2018). This suggests that the rush in social forestry implementation is focused more on reinforcing bureaucratic outcomes and formalizing state mechanisms rather than offering a meaningful mechanism for devolution of authority (Erbaugh, 2019). As a result of this overall implementation experience, early proponents are increasingly expressing frustration that social forestry is only printing permits and failing to meet the target of community empowerment or conservation.

This paper describes our attempt to develop a clearer strategy for assessing social forestry by establishing a framework and testing it across distinct case studies. To do this, we disentangle the various stages that shape social forestry schemes and systematically examine power contestation by focusing on the processes that determine who benefits and who loses. By presenting this framework, we aim to support researchers, NGOs, and policymakers, and imagine its applications situated among the external actors closely involved in designing, drafting, approving, and evaluating social forestry permits. We envision the framework as a way to help cultivate a better understanding about the extent to which social forestry implementation efforts meet desired outcomes. In short, amidst the boom of policies supporting social forestry designation, our broader goal is to provide a method for assessing whether social forestry is successful at a given site, and help to better articulate why so many cases are considered to be going bust. Our research is limited however, to applying the heuristic at a site by site basis, and does not examine the effects of the discursive influence of policy at a broader governing scale, a focus of much of the existing research.

We begin this paper by laying out the current conditions of social forestry in Indonesia, including the types of schemes and total allocation figures, as well as the bureaucratic mechanisms for implementation (Section 2). After this more contextual section, we draw from theories of access and exclusion to develop a framework in the context of social forestry in Indonesia (Section 3), highlighting the rise of social forestry policy and the dilemmas that influence social forestry applications. Section 3 also presents the overall methodological framework, as well the approach to site selection, data collection, and analysis. After describing our methods (Section 4), we draw on a set of cases from social forestry sites in Sulawesi that test the heuristic and connect empirical examples to the confounding trends in policy approaches (Section 5), offering our conclusions about the future of social forestry in Indonesia.

2. The rise of Indonesian social forestry policy and current policy approaches

Although social forestry and land rights claims are often envisioned discursively as organic initiatives where rural communities rise up to demand rights from formal actors, in Indonesia, this is rarely the case. Indeed, the articulation of social forestry is contingent upon external agents and organizations, such as NGOs and government actors (including ministerial representatives, extension officers, etc.) (Li, 2002; Maryudi, 2011; Sahide et al., 2020; Galudra, 2019; Rahayu et al., 2019). The political ideal of social forestry remains a fundamental part of the broader resistance strategy among civil society – and also drives reformist bureaucrats – against the historical enclosures of forests in Indonesia (Afiff and Rachman, 2019), a legacy which translates to 65% of the state's territory under state forest designation (Peluso and Vandergeest, 2001). Therefore, those that promote policies for rural development on behalf of communities living within and adjacent to forest boundaries, increasingly view their success in terms of areas allocated to community land rights, discursively envisioned as protecting from state or corporate enclosures. The boom of social forestry is therefore increasingly translated into indicators of formal recognition on hectarage secured for communities. This conceptualization can be problematic however, as it can mischaracterize interests of vulnerable populations (McDermott and Schreckenberg, 2009), has been shown to provide management responsibilities without the authority or resources (Erbaugh, 2019), and furthermore, extends state control and further undermining indigenous authority (Agrawal, 2005; Fisher and Muur, 2020). Critiques of neoliberalism are also common amidst social forestry, whereby the state willingly confers rights amidst reducing responsibilities of resource allocations (Lake, 2002; Gilmour, 2016).

Nevertheless, as social forestry policy increases in scale and scope, many different agencies, organizations, and individuals are contesting and translating implementation. The Indonesian forest bureaucracy has retrofitted to implement a variety of schemes, including community forests, village forests, community plantations forests, community partnerships, and customary forests (Firdaus, 2018).[1] President Joko Widodo (Jokowi) and his administration, who came to power in 2014 and re-elected in 2019, have shown strong commitments to achieving targets, and anticipate significant expansion in the near future (see Table 1 for comparisons of the pre-Jokowi era contrasted with current achievements).[2] As of August 2019, the Ministry of Environment Forestry (MOEF, or MoFor for references before 2014) indicated that social forestry permits cover a total area of 3.37 million hectares, a five-fold expansion since the beginning of the administration's tenure, and anticipates adding another million hectaers by 2024 (see Table 1).

On the one hand, researchers and rights activists critique the printing of permits as driving formal policy implementation, without enough consideration of the higher order policy goals of community empowerment, development, and conservation (Firdaus, 2018).[3] Literature on social forestry programming from outside of Indonesia also provides instructive critique on formalized state program initiatives, whereby policies tend to require new institutions that undermine existing traditional forms of authority, have not found consistent mechanism to support the most vulnerable, and are woefully inadequate in providing capacity building or resources for administrators and extension agents (McDermott and Schreckenberg, 2009; Kamoto et al., 2013; Galudra, 2019; Cummins and Yamaji, 2019).[4] On the other hand, others argue that providing permits is part of a longer term strategy, and that achieving designations today can provide legitimacy for future demands of local authority (Myers et al., 2017).

Meanwhile, empirical examples are confounding, whereby some findings point to cases that challenge local power structures, reinforce unjust power relations, or fuel new corrupt practices (Maryudi, 2014; Sahide et al., 2020). In one case in South Sulawesi, for example, a

[1] The various terms reflecting social forestry scheme (e.g. HD, HA, HKm, HTR, etc) is presented in Table1. Details on the schemes are included in the P.83/2016 regulation that presents an overhaul of social forestry policy, laying out concrete operational definitions for the various schemes.

[2] Citing data from DG-SFEP from February Firdaus, 2018 that states the total social forestry area permits has reached only 1.42 million hectares. The MOEF thus deemed it too ambitious to reach the stated policy goals of 12.7 million hectares and during the writing of this paper, revised policy targets MOEF lowered the target of 12.7 million hectares to only 4.3 million hectares, and created new partnership schemes from IUPHPS for a qualifying partnership scheme. It is beyond the scope of this paper to examine these issue in detail. However, we included the main changes in policy approaches before the influential ministerial decision 83 of 2016 as Table 2 to highlights the ways that permits are obtained.

[3] In the evaluation of social forestry, led by MOEF's Directorate General of Social Forestry and Environmental Partnerships (DG-SFEP) there was concern that among longstanding permits, many of the social forestry goals had not been met.

[4] See also Myers et al. (2017) and Fisher and Muur (2019) for indications of similar outcomes in Indonesia

Table 1
Social Forestry figures: A comparison of permits before and after the Jokowi era.

Before and After Jokowi[a]	Community forestry (HKm)		Village forests (HD)		Community plantation forests (HTR)		forest partnership (Kemitraan)	Total of management rights (ha)
	Areal designated (ha)	Management rights - IUP HKm (ha)	Areal designated (ha)	Management rights-HPHD (ha)	Areal designated (ha)	Management rights-IUPHHK HTR (ha)	Management rights -MoU (ha)	
Before Jokowi	432,598.86	175,250.67	471,451	216,781.21	768,859.73	203,738.29	57,542.09	653,311
After Jokowi	[b]	670,828.00	[b]	1,367,503.0	[b]	338,060.00	300,608.00	2,734,272,00
Total	[b]	309,332.47	[b]	760,878.21	[b]	250,271.74	94,378.28	3,369,583

[a] Using MOEF regulation 83 of 2016 as the timeline (August 2019).
[b] During the Jokowi era, MOEF replaced designated areas with an indicative map updated every 6 months.

Table 2
Bureaucratic schemes of several social forestry in Indonesia.a

	Before MOEF 83 of 2016	After MOEF 83 of 2016
Scheme[a] and area characteristics.	Rights rules, and bureaucracies involved	Rights rules, and bureaucracies involved
Community Plantation Forest (HTR)	a. 60 years (extent once) b. Individual farmer, forest farmer group, cooperative c. Central government (MOEF) designated the potential area d. BP2HP (local unit of directorate general of production forest of MoFor) support proposal and implementation e. Bupati (district head) f. For production forests only	a. 35 years possible to extend b. Individual farmer, forest farmer group, cooperation c. Central gov MOEF designated the dynamic map of Social Forestry Indicative d. BPSKL (local unit of directorate general of social forestry) e. Governor f. For production forests only
Community Forest (HKm)	a. 35 years, possible to extend b. forest farmer group c. Proposed to central MoFor authority for designating the potential area d. BPDAS (local unit of directorate general of watershed) serving proposal and implementation e. Bupati (district head) f. For protection and production forests	a. 35 years possible to extend b. forest farmer group c. Central gov MOEF designate map of SF PIAPS d. BPSKL (local unit of directorate general of social forestry) e. Governor f. For protection and production forests
Village Forest (HD)	a. 35 years possible to extend b. Village institution (designated by village government) c. Proposed to central MoFor authority for designating the potential area d. BPDAS developing proposals and implementation e. Bupati (district head) f. For protection and production forests	a. 35 years possible to extend b. Village institution (designated by village government) c. Central MOEF designated the dynamic map of Social Forestry Indicative e. BPSKL (local unit of directorate general of social forestry) d. Governor f. For protection and production forests
Forestry Partnership (KK)	a. Based on the conflicts between farmers institutions and rights holder b. Individual farmer within at least 2 ha for each household, within local farmer institution c. Area proposed in the right holders area d. BP DAS mediate MoU e. Agreement between farmers institution and rights holder f. For all forest zone category	a. Based on agreement between farmers institutions and rights holders b. Individual farmer within at least 2 ha for each householder, within local farmer institution c. Area proposed in the right holders area d. BPSKL mediate and or register the MoU e. Agreement between farmers institution and rights holder f. For all forest zone category

a. Period; b. Rights holder; c. Bureaucracy for area designation; d. Local central bureaucracy work for proposal and implementation; e. management rights issue by; f. Applicable in the forest function zone category.
[a] There are also other (two) new SF schemes offered, such as the Permit on social forestry management (IUPHPS)* and forestry partnership recognition and protection (Kulin KK), but we do not include this in the analysis since it is still very new and not applicable for this paper.

network of NGOs claimed that social forest designations helped smallholders demand redistribution of land away from powerful local elites, yielding additional benefits that include access to credit opportunities for local institutions to expand businesses and resulting in better purchasing power for local products, and furthermore, supported community demands for small electricity extension into previously inaccessible rural areas (Personal communication with NGO Balang Institut). The most comprehensive empirical research on contemporary social forestry in Indonesia, published in *Forest and Society,* pointed to various critiques of Indonesian social forestry, such as the lack of extension officers to support livelihoods and conservation (Galudra, 2019; Wulandari and Kurniasih, 2019), the clash with the forest management unit model undermining local communities (Tajuddien et al., 2019), and regional concerns of indigeneity versus conservation in Papua (Fatem, 2019). While some continue to trumpet cases of success, others point to serious breaches of implementation undermining what social forestry is intended to deliver. This paper therefore extends the research imperative to the ground level, and establishes a rigorous framework for assessing social forestry through the lens of examining who benefits (theories of access), and who loses (powers of exclusion).

3. Land and power: envisioning access and exclusion together

Foundational research on the conditions under which user-groups successfully manage natural resources generated international interest in community resource management (Ostrom and Gardner, 1993; Ostrom, 2002; Brosius et al., 1998; Larson, 2010). This led to the emphasis of rights-based development policies (Cornwall and Nyamu-Musembi, 2004) and redefined many national approaches to forest governance (Agrawal et al., 2008). The paradigm shift on the role of local actors in the management of natural resources also connects with a long lineage of studies on governance (Maryudi and Sahide, 2017; Maryudi et al., 2018), citizenship (Brown et al., 2002), social justice (Prasad Timsina, 2003), neoliberalism (McCarthy, 2005),

decentralization (Agrawal, 2001; Ribot and Larson, 2012), and recentralisation (Sahide et al., 2016a, 2016b). Theories of power and political ecologies examining property rights have gone one step further, expanding concepts of property rights to distinguishing power relations across actors, strategies, processes, and subjectivities of resource politics (Agrawal, 2005; Maryudi and Sahide, 2017; Giessen and Sahide, 2017).

A theory of access provides a heuristic that helps develop an understanding of powers conferred in resource politics (Ribot and Peluso, 2003). Ribot and Peluso define access as the "ability to benefit from the things," highlighting various dimensions to include, among others, technology (Peluso, 1995; Fox et al., 2009), capital (Nevins and Peluso, 2008), markets (Hall et al., 2011), labor (Ribot, 1998), knowledge (Agrawal, 2005), authority (Peluso and Lund, 2011), identity, and social relations. More recently, Hall et al. (2011) engaged in the corollary of access in terms of exclusion, defined as the "inability to benefit from things." It is expressed through powers that include regulation, the market, force, and legitimation. Exclusion "… is the normal rather than the exceptional state of affairs, and widespread aspirations for access to land implicitly include the wish for a degree of exclusionary power" (2011:6). Analyzing exclusion thus enables a range of critical entry points for examining land dynamics that are often overlooked or forgotten, which are particularly germane to understanding large scale plantation enclosures, land titling schemes, conservation projects, and "intimate" exclusions from capitalist relations between households. While Hall et al.'s work applies to these numerous projects, we apply them to social forestry. Taken together, theories of access and exclusion draw our attention to who benefits and who is removed from forests through the processes that render them "social." Through the development of a theoretical framework and its application to understand the dynamics of access-exclusion to specific cases of Indonesian social forestry, this research moves beyond the "superficial" engagement some critics find typical of these theories (Myers and Hansen, 2020) to advance a method that critically assesses the implementation of social or community forest management.

3.1. Method: Developing an access-exclusion framework

Developing the access-exclusion framework began by describing social forestry across its policy stages. Drawing from social forestry engagement in Nepal, Devkota (2010) provides a pathway by identifying four different stages in terms of: i) initial stage ii) formal handover iii) implementation, and iv) normal operation. We follow this precedent, but given the new and rapid development of social forestry in Indonesia, we combined implementation and normal operation into a single stage. We further placed the bureaucratic requirements of social forestry formulation within each overarching category (normative policy process citation). Specifically, the initial stage was further divided into its constituent requirements, including scheme selection (A1), inclusivity (A2), conflict prevention/management (A3), and participatory planning (A4). Formal handover was divided into administrative proposal and approval (B1), and reinforcing local institutions and involvement of external actors (B2). And the implementation stage included forest management in terms of livelihoods (C1) and conservation (C2).

A policy stages framework for analyzing social forestry is subject to two important critiques. First, identifying stages does not provide information on how social forestry policy is created or implemented (Nakamura, 1987). We address this general critique by supplementing the framework with bureaucratic requirements related to the formulation and implementation of social forestry within each stage. This provides a "bottom-up" approach to understanding how and by whom social forestry policy is implemented within discrete stages (Sabatier, 1986). Second, in defining discrete stages of social forestry, the framework overlooks moments of overlap and iterative processes common in policy formulation and implementation (Sabatier and Jenkins-Smith, 1993). Creating and implementing social forestry is a fluid process, negotiated by groups of actors over years or decades (Fisher et al., 2019). By dividing this process into discrete stages defined by bureaucratic processes, our framework carefully organizes analysis by reducing complexity of real-world processes, similar to other research that draws upon the policy stages concept (Erbaugh, 2019; Jokinen et al., 2018). Specifically, we organized our framework to focus on who gains access to, and who is excluded from, social forestry projects across different stages of their development.

Applying the theory of access and the powers of exclusion to each of these stages helps not only assess the processes that benefit some and exclude others, it importantly shows what benefits accrue or are taken away at key junctures of social forestry engagement. Applying theories of power to a specific category however, is not straightforward, and indeed Hansen et al. (2020) has shown the superficial way that studies have sought to apply these theories. To be exhaustive and list out every mechanism of access for the purposes of this paper was too unwieldy, and indeed was never intended by the original formulation in the theory of access. Similarly for Hall et al.'s powers of exclusion, which lists out four overarching powers (regulation, markets, violence, and legitimation) determining the differences between exclusionary regulations and legitimation often led to overlapping manifestations. For these reasons, we developed the frameworks as a tool to think, and we collectively engaged on the notion of powers across each stage of social forestry, identifying the key actors, powers, and processes that fell into what we designated as an access or exclusion category in Table 3. (See Table 4.)

Finally, keeping in mind applicability for future researchers or monitoring considerations among policymakers and practitioners, we listed out the data collection opportunities across these stages. As we applied the framework to the three cases in this paper, we engaged in a reflexive inductive-deductive process across the writing team, cross-checking whether the heuristic supported the case material, and vice-versa. Although the in-depth cases presented in this paper are limited to three sites from Sulawesi, the writing team are rooted in deep empirical engagement from case studies in Kalimantan, Java, and elsewhere in Indonesia, ensuring that findings are not only limited to the South Sulawesi region.

3.2. Method: Case selection, data collection, and analysis

The access-exclusion framework emerged through engagement across the authors extensive experience across Indonesia, and was applied to three comparative contexts in South Sulawesi. Developing the framework was a reflexive process, going back and forth inductively and deductively to cross-check the framework with real case applications. The cases are selected at sites within a single province to provide enough comparative context between them. Each case also derives from what Fisher et al. (2019) have identified as three distinct but overlapping generations of social forestry. The first case is from the third generation of social forestry, namely the latest iteration of the regulatory framework from P.83/2016, which is indicative of schematics and project implementation. The second case is from the second generation of social forestry, while the third case is from the first generation of social forestry. Indeed, examining implementation requires a long timescale to meaningfully engage on findings.

In applying case studies to the framework, given space considerations, we had two options. The first option was to go into depth at one case study site, while the second option involved comparative engagement by providing depth at different stages across research sites. For the purposes of this paper and to engage with an additional number of cases studies we elected for the latter (See Fig. 1).

Case 1. As the initial stage only began since the P.83 regulation, it is difficult to identify a case that fully represents the entirety of the most contemporary policy formulations guiding social forestry

Table 3
The access-exclusion heuristic power assessment of facilitating social forestry implementation in Indonesia.

Policy process	Land and power		Monitoring and investigation
Normative stages of Social Forestry Policy (component parts)	Access dimensions	Exclusion dimensions	Data collection options
A. Initial stage of determining the formal SF schematic			
A1: Selecting SF Schemes: SF sites are framed with the intended purpose of supporting local needs and aspirations, as well as ensuring that schemes support local ecological conditions. As of P.83/2016 a site will be included into the indicative maps (PIAPS) for consideration as an SF site based on evaluation criteria assessed by proponents.	In practice, selection in the indicative maps has taken place in an extremely ambiguous process. Although the perception is that communities are the ones that decide their scheme for the PIAPS, in most cases the SF scheme is proposed by intermediaries (what we have described as external actors). This includes NGOs, local government agencies, and extension officers that introduce the idea or define the impetus for a particular SF scheme. On a broader scale, those invited to take part in the PIAPS designation process consist of external actors that gain access to information. They benefit from these internal discussions and are able to take part and shape the type and allocation of sites under particular schemes. These external actors are also able to access potential resources as part of the PIAPS selection process, and negotiate increasing interest among potential funders to implement SF. Furthermore, at the target sites, external actor engagement converges with networks of key informants that structure the way forest farmer groups are established, and also shapes who benefits and in what ways they get to benefit as part of their participation.	Programmatic mandates determine the type of scheme selection and often fail to consider alternative options. This is due to formal bureaucratic driven processes, which influence subjective assessments that are often driven by meeting target total area designation. Therefore, the external actors shaping the schemes serve to gain access to influencing the terms of engagement while many others are often left out. The network alliances are usually shaped by local political situations, either those that are in local leadership posts or placed as head of farmer groups, often at the exclusion of others, particularly competing political alliances. In other words, though social forestry may suggest redistributing land to the land-short or the landless, indeed those without channels to formal decision making authority often have little recourse to advocate for themselves, and numerous research has confirmed this is true of social forestry as well (cf. McDermott and Schreckenberg, 2009). These networks that determine site selection tend to overlook the most vulnerable as they have the least amount of access to influencing formal channels, which have resources attached to implementation. This initial scheme selection and the farmer groups established to implement schemes could serve to exclude from opportunities to gain land access far into the future, rendering some forest cultivators illegal.	Examining access is a much more direct process. Access can be determined through the PIAPS processes, project documents, and engaging the institutions, stakeholders and individuals that are involved in the process. It also serves to highlight ways that people do benefit from social forestry. On the other hand, exclusion is more challenging because these groups are necessarily if not purposefully left out. When assessments of farmers interacting with the forests are conducted rigorously, information can be obtained on ways to identify those excluded. However, exclusion is highly political and without close engagement with the local sites, it will be difficult to determine the oft-overlooked dimensions of exclusion.
A2: Inclusivity: the inclusivity dimensions of the policy set out approaches to ensure that those included in the process are selected according to the targets of the SF scheme. The formal policies articulate that the selection criteria are based on targeting individuals or communities historically or geographically with claims to a certain area, which can thus be considered eligible under the corresponding SF scheme.	Similar to above the access dimensions are negotiated by external actors and their networks with local individuals or groups with the requisite decision making powers in the village and the bureaucratic support/facilitation of the process. For example, those involved in this process are set by the forestry extension officers, forest rangers, district government, and local FMU. For additional guidance on this dimension see also the overall regulated requirements for participation in Indonesian policies (e.g. Suhardjito and Wulandari, 2019	Though the normative language of inclusivity seems holistic in its formal articulation, the implementation of convening stakeholders is often more tokenistic and pro forma. Our extensive research at social forestry sites yields evidence that forest farmers and target individuals can be unaware of the social forestry policy scheme, its implications, or their stated responsibilities in the management plan. As a result, the partial or lack of meaningful facilitation can result in dominant information only among elite groups or between specific alliances.	Participant observation is an especially strong approach to collecting data, particularly on access. The exclusion dimensions are much more difficult however, and would be enriched by field level data among communities that are potential claimants. Particular attention should also be devoted to vulnerable groups. For example, ongoing research with an NGO has indicated that of all the forest farmer groups in the millions of hectares of forests across Indonesia, only two of them are women's groups. Careful observation on the way local key actors decide who is invited, who is considered, and who can claim benefits and resources provides important insights into how social forestry are likely to unfold across the other stages. Conducting deep analysis of tenure arrangements, authority, and historical analysis provides the strongest insights into this dimension.
A3: Conflict prevention, management, and resolution mechanisms: As SF is framed as an intervention that helps to address conflict, there are specific normative requirements for anticipating and addressing conflict. In the formalization of a SF scheme, central and regional handling bureaucracies are expected to identify tenurial conflict and various mechanisms for dispute resolution. In practice however, this requirement is combined with the general proposal plan as described in A4 below.	Close attention should be directed to the ways that tenure is documented. As land tenure is complex, the explanations in the formal documentation of tenure rarely capture the complexity of local historical land relations. Therefore, the ones that are included can serve as important identifiers of which local interests are able to gain access. On the other hand, the formal institutional mechanisms for conflict resolution also provide important signifiers of access. Are these determined through local informal authority, and	The way that tenure is described in such documentation and the local authority that negotiates tenure can vary greatly. Here are where the powers of exclusion take shape, particularly if formal documentation is applied to resolving conflict. In practice, tenure, conflict, and conflict resolution are rarely articulated in the formal planning documents. They are generally developed as a response mechanism after a conflict occurs. As a result, not only do these ex-post processes privilege stronger parties and serve to exclude weaker ones, the very	Formal planning documents also provide notations about conflict and conflict resolution.

(*continued on next page*)

Table 3 (*continued*)

Policy process	Land and power		Monitoring and investigation
Normative stages of Social Forestry Policy (component parts)	Access dimensions	Exclusion dimensions	Data collection options
	which formal authority has final say? A key dimension of access could be the upward accountability that is introduced by the facilitation of the conflict resolution process.	processes of lodging a complaint is very likely unknown by vulnerable populations	
A4: Initial Participatory Planning: The formal SF regulation requires a community-based and participatory planning process. The formal requirement is minimal however, and provides open interpretation for those leading the process.	The open interpretation of this initial participatory stage provides the opportunity to convene in-depth engagement, however it also means that in other cases, the process is often overlooked in the initial stage. Because of the open interpretation of this process, the terms of access are negotiated through the level of intensity and inclusivity that this process is undertaken. In more inclusive approaches, participatory mapping usually indicates greater levels of participation and can be the basis for commons arrangements to emerge and the new establishment of access mechanisms.	Because of the open interpretation arrangements, generally the formal institutions are focused on the bureaucratic dimensions, particularly in the push to expand social forestry permits in recent years. Therefore, indicators of exclusionary effects are likely to be reflected in the details of the formal documentation and the intensity with which local facilitation takes place. This can mean that village leaders–rather than all participants–negotiate the terms of management among themselves, rather than including all or most of the participants in social forestry.	The General Plan for SF management. Indicators are likely to emerge in the ways the maps were generated (e.g. village borders, MOEF maps, community mapping), the individuals and farmer groups convened to generate the document. Observations and/or participation in the discussions and meetings during which the General Plans are completed.
At the end of the initial stage, there are key documents produced to indicate that all stages have been completed. There will be i) Proposal Letter (*surat pengusulan*; ii) General plan (*rencana umum*); iii) Map (*peta*), and some additional depend on the scheme e.g. KTP or KK. Once this documentation and requirements have been approved, the process transitions to the Formal Handover stage.			
B. Formal Handover			
B1. Administrative proposal and SF scheme approval: The overall approval process for different types of SF permits vary slightly and Firdaus (2018) provides schematics on how the approval process takes place. In general the management rights are provided by the Governor (*hak pengelolaan,* and depending on the scheme can be issued by Perhutani, National Park, BKSDA, and FMU). Meanwhile, the formal handover of permits are approved by MOEF, overseen by DG-SFEP and signed directly by the Minister.	Formal approval of social forestry includes a constellation of province and ministerial actors. Different approval routes are possible, depending on the location of the SF site. Some of these routes may occur through the MOEF (Social Forestry Directorate) as well as through the provincial government (before requiring ministerial approval). Formal access to SF designation is provided by the right to use forests (provided by province governments) and the license for social forestry use by MOEF. In practice however, although the formal permits are important it is contingent on various actos being able to articulate the utility of such documents, shaping relationships with formal institutions. For access considerations, this step is especially key for being able to negotiate the way that formal processes are implemented.	In the past SF administration was extremely bureaucratic, especially in state forests. Therefore permitting proposals were largely handled by external actors. In the current policy boom, state interests are expediting formal handover to meet targets. As a result, at the time of approval local actors may not have proper understanding of policy and plans. This can create new conflicts between internal and external actors. Assumptions among external actors expediting SF scheme approval can result in local communities misunderstanding of mutual responsibilities. The asymmetries of the information are heavily skewed towards bureaucracies and external actors. This results in power concentrated among those that have strong influence and likely to the exclusionary effects of informal forest users.	Application tracing is possible through online platforms, but the communication of when and why application packages are approved is unclear. There is often a limited opportunity to identify how long processing is supposed to take, but there are few opportunities for transparency and oversight of this bureaucratic process. Local perspectives are particularly important to consider in the data collection on exclusionary practices, by juxtaposing their involvement with formal documentation.
B2: Reinforcing local institutions and continued involvement of external actors: This refers to the process that the site undergoes to formalize the SF management plan. In the plan, there must be clear zones established between protection and utilization areas. For this reason, complete documentation is developed on livelihood plans, boundaries of cultivation parcels, forest protection plans, and that there is evidence that local institutions have a clear understanding of the rights and responsibilities of SF management. There is general language guiding the involvement of external actors but widely open to interpretation, in which external actors can provide continued support in the process, and can provide shared responsibility mechanisms between local	The facilitation process and the actors convened during this process get to map out and negotiate, which sections of the forest are assigned different types of access and responsibilities. The information compiled during this process also resolidifies the possibilities of who gains access, whether this is in the collection of more detailed information about resources, more formalized acknowledgement about the management of a particular parcel, as well as the knowledge about what types of resources are available for certain activities. Various external actors also get to negotiate new terms of access. For example, the extension officers, local NGOs, and potentially the private sector, get to identify the potential resources to be developed at a site and connect	This is perhaps the most important step where exclusion occurs. Pending the level of intensity that takes place in the initial stages, and the legitimacy the formal processes are given among various key actors, the opportunity to solidify claims is greatest during this step. Forest management plans allow for some forest farmers to gain a plot for cultivation relative to those that are excluded. This has several implications. On the one hand the formalized plans can take on greater meaning, or it can also undermine the formal processes whereby local traditional mechanisms exclude the formal ones. Usually the traditional tenure systems of how forest management takes place at these sites are most at risk from being erased from the formal planning processes, as new formal land management institutions are established and resources directed towards them.	Observations from the preparation of the forest management plans are extremely important for identifying actors that are likely to gain access. Formal documents include the detailed maps and forest management plans. It would also be useful to identify who among the community knows about the these documents, the extent to which they were involved, and comparing the plans with existing conditions at the site

(*continued on next page*)

Table 3 (*continued*)

Policy process	Land and power		Monitoring and investigation
Normative stages of Social Forestry Policy (component parts)	Access dimensions	Exclusion dimensions	Data collection options
stakeholders and management institutions.	resources or markets for a particular venture.		
Formal handover occurs through the approval and receipt of several key documents. First, the person or group who holds the social forestry rights (*Surat keputusan pemegang izin*) receives legal permits that define the social forestry rights. Second, upon receiving the legal permits, the group who has received social forestry rights develop a forest management plan, which contains annual as well as comprehensive (often 35 years) objectives and strategies. It is important to note that there are neither formal requirements for who keeps the social forestry management plan nor for providing or presenting it. It is often the case that social forestry management plans are difficult to locate, as they might be kept by village heads, extension officers, or archived at district or province government offices.			
C. Implementation			
C1: Forest Management (livelihood benefit) Local institutions (forest farmer groups)allocate resources, implement their plans, modify plans (when necessary), and thus provide sustainable livelihood opportunities to maximize the utilization of forest products (e.g. timber, non timber, ecosystem services)	Local groups gain access, according to the rights afforded them through the sanctioned SF permit. This extends to the provision of training, new technologies, various support programs for small industries, connections to new markets, credit, and access to grant programs.	Those not afforded social forestry rights through the sanctioned SF permit are excluded from SF programming and land. This further reduces the availability of local land or livelihood opportunities available to excluded groups. As a result, such groups may have to find other locations for cultivation or risk illegally cultivating sanctioned SF land. Access to markets also becomes more challenging, given that certain individuals or groups are excluded from those that gain formal resources. This could mean finding new industries that put pressure on the forest system, or perhaps forced to migrate given the loss of livelihood opportunity. On the other hand, with fairer resources, previously exploitative activities like loan sharks can find themselves excluded given that new mechanisms to provide capital are being introduced.	Livelihood data based on local surveys are most valuable. Changes in before and after provide interesting methods for deepening understanding about the influence of SF programming. The following questions across the supply and production chain provide some key indicators to explore: Are there new markets or industries that are emerging and who benefits from these new dynamics? Are there new middle-men emerging replacing the previous market dynamics? Indeed the question of livelihoods and SF remains an under-explored question and new innovations for data collection and analysis are still required relative to the current approach to SF.
C2: Forest Management (conservation and forest protection). There is a clear requirement for any SF institution to protect the forest. This can be done through the mapping of specific zones, and this can take the form of species identification, protection and monitoring, the conservation of water sources, and other means.	When it comes to conservation dimensions, communities now have a unique opportunity to apply their longstanding practices, and also to engage with new information about species protection. This could also provide access to new conservation experts to work with, or on behalf of communities to conduct conservation initiatives. Some have also facilitated resources from well-funded organizations to conduct joint monitoring schemes, to use this as a basis for potential ecotourism, and new livelihoods for locals around conservation and tourism.	Conceptually, SF conservation dimensions allow for communities to reassert and exclude external conservation experts and to place on par their knowledge about local biodiversity and conservation management. Nevertheless, local exclusionary practices may also take place. For example as Agrawal (2005) has written, the establishment of local environmental subjects to protect areas on the basis for conservation could also serve to exclude livelihoods for others.	Formally, data can be obtained through the conservation management plans of SF schemes. However, formalized plans are often unknown to local farmers (or they are unfamiliar with them) so direct surveys on species conservation forest management, satellite imagery on land use changes, the emergence of re-emergence of institutions on the way they monitor, sanction, incentivize actions in the field are sure to provide insights into conservation dimensions of SF. Research is also increasingly integrating species perspectives on access and exclusion, which could also provide unique insights into the terms for which some species are privileged, while others are excluded.

Implementation requirements include the submission of annual plans. However, it is very rare for communities to draft and submit their annual plans. As these documents are likely unavailable, is there a system for setting reminders or delivering sanctions that these requirements are not being met. One possible way to check for implementation progress is also through the Ministry requirements to conduct evaluations of implementation progress, which are also a useful way to identify information.

Table 4
Location and SF selection and methodology deployed.

Case for each stage	Scheme and location	Method
Case 1 for initial stage	Kemitraan Kehutanan - Gowa, Forestry PartnershipRepresentation: represent the third generation of social forestry in Indonesia	Participant observation: ● The sixth author is act as facilitator and consultancy with relevant state bureaucracy and involve o SP preparation, involve on the policy dialogue, and mediating interests among actors
Case 2 for formal handover	HD in Bantaeng District ● Representation: represent the second generation of social forestry in Indonesia	Participant observation. ● The first author is actively involve as the member of Universitas Hasanuddin team that HD in Banteng ● The second author conducted his field research in this area as part of his dissertation research
Case 3 for implementation	HKm in Sidrap Representation: represent the first generation of social forestry in Indonesia	Non Participant Observation, interview, and document analysis

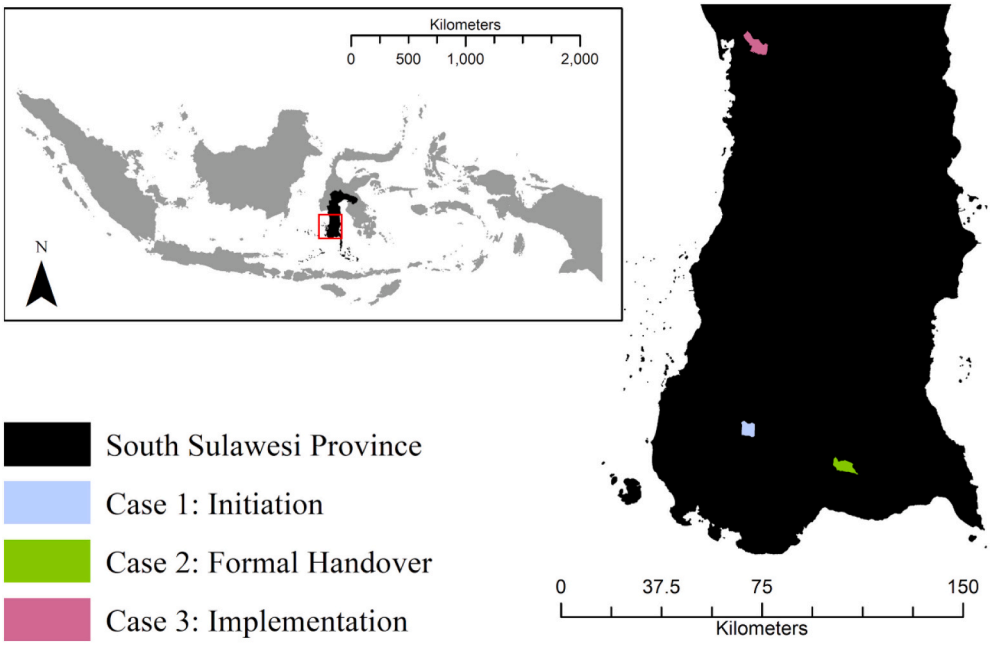

Fig. 1. Location of three social forestry cases analysed in the paper (Central Statistics Agency, 2019).

implementation. For the initial phase, we select a case from Desa Manuju because the kemitraan (partnership) scheme was selected for implementation. The partnership scheme, which emerged in the post P.83 regulation, is the newest of the social forestry schemes, which provides greater flexibility between parties to decide on implementation arrangements and the timescale of the partnership.

Case 2. For the formal handover stage, we selected a site for its potential to examine the administrative proposal process, particularly the extent to which institutions evolved amidst formal handover and the role of external actors. We selected a case representative of the landscape of social forestry sites in a particular region. The case selected is the village forest from Labbo, Bantaeng.

Case 3. We chose the HKm case, because HKm was the most who had entered the implementation phase in Indonesia. HKm is the first PS scheme project in Indonesia, even representing the first generation of PS as indicated through projects supported by international donors.

4. Results

4.1. The initial stage: Reshaping access to, and exclusion from, information in Manuju Village

4.1.1. Context for Manuju and its forestry partnership scheme with INHUTANI

The village of Manuju is foregrounded by land conflicts between state-supported plantations and local claims to land. In 1966, the district of Gowa began to establish a local paper industry facility. *Pabrik Kertas Gowa* (PKG, literally the Gowa Paper Factory) was established alongside a process of mapping out lands that would feed raw materials to the factory. In this case, land allocations initially for bamboo plantations included a total of 30,000 ha, part of which was located in and around the village of Manuju (see Map on Fig. 2). Reflections among local community members indicate that forest farmers participated in planting bamboo on their lands without compensation for their labor or for the land. Over time, the bamboo on these lands resulted in PKG asserting their claims to the land, formalizing them into state maps, and securing the support of local elites to function as intermediaries in legitimizing these claims. In 1993 however, facing financial hardship, PKG was forced to close. As the company halted their operations, local communities reclaimed parts of the land, legitimizing their claims based on ancestral and inheritance rights. They planted subsistence crops like corn and peanuts. Meanwhile, state planning processes set out to repossess and allocate the land for other plantation production.

PT INHUTANI,[5] a state forest company, took over the concession lands previously managed by PKG, and began planting acacia and albizia throughout the concession area. By 2012, the total area under PT INHUTANI claims amounted to 18,350 ha and included areas of Manuju village under its concession. The company worked with local people, contracting them to plant trees, and hiring some as staff at the company. Nevertheless, according to locals, they never considered areas they willingly planted for PT INHUTANI as concession lands. Rather, they claim to have planted on their legitimately inherited lands, and could therefore choose to harvest, plant a different commodity, or use the land for something else based. To formalize rights, in 2011 local villagers began to organize to formalize land claims. They hired a local land surveying company KPP Pratama Bantaeng to map out land parcels and gained formally issued tax receipts (called SPPT, a common surrogate for legitimizing land claims) approved by the village government.[6] Though inherently contradictory, the village governments willingly issued SPPT on PT INHUTANI forest concession lands.

In 2013 tensions began to escalate over these dual claims, as PT INHUTANI refused to recognize individual land claims and viewed the harvesting of the trees as destruction of state property. Two incidents took place at the height of this conflict. The first began when PT INHUTANI reported theft and destruction of property to the police. The second, involved conflict that escalated after a prominent figure in the community (with the local status of Karaeng) was let go as a staff member at PT INHUTANI. While the former incident discouraged and frightened local claimants, the latter emboldened them. Several conflict

[5] PT INHUTANI was established under the same model as the more prominent PT PERHUTANI, which oversees industrial plantations in Java. There are key differences over their management mandates however.

[6] SPPT are a common approach to proving ownership to land in rural Indonesia. See van der Eng (2016) for a historical explanation of land ownership and tax systems in Java and the outer islands, and the problematic ways that a system with a prerequisite of sedentary agriculture gets applied to regions with shifting cultivation practices.

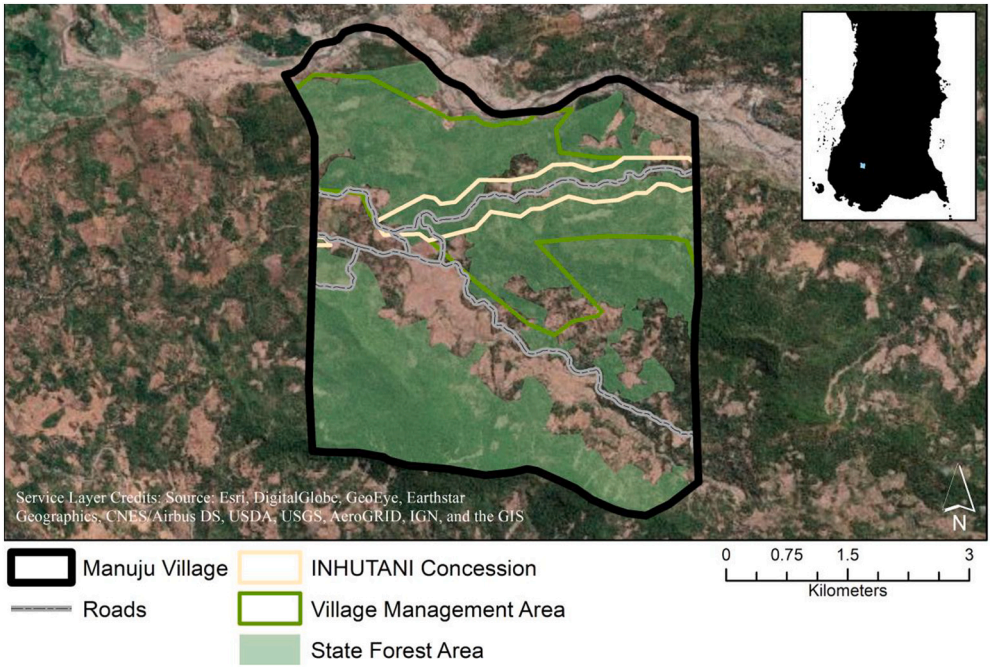

Fig. 2. The map of Manuju Partnership Area (Source MOEF, 2019).

resolution attempts ensued to de-escalate tensions, one in which PT INHUTANI agreed to hire several community members onto their workforce. Social forestry emerged as a potential mechanism for compromise, and the Sulawesi Community Foundation (SCF), supported by international donor funds and administered by the Asia Foundation, began outreach to stakeholders, explaining the various mechanisms and terms of social forestry.

4.1.2. Initial stage scheme selection in Manuju (A1)

SCF began to facilitate discussions between PT INHUTANI and the local community about the social forestry partnership scheme. The partnership scheme does not specify a timeframe, nor does it prescribe specific arrangements between parties. Unlike the other social forestry instruments, the partnership scheme allows parties to come up with their own rules. In July 2017, SCF worked with the local village government and forestry extension officers assigned to the site. From the outset, the village government functioned as a key gatekeeper for any externally supported initiative, requiring close consultations with them. Four forest farmer groups (KTH) were initially included in the process, but only two of them followed through to the subsequent stages. The two KTH that refused to proceed cited irreconcilable differences, stating that the lands were their ancestral rights and given that settlements were already established within their areas, meant they were unwilling to negotiate partial rights to their land. These two groups elected to continue to fight for legal individual claims against PT INHUTANI. The two groups that were willing to proceed with the partnership scheme, included KTH Pattompongan, and proposed a total land area of 15.29 ha involving 24 households; and KTH Asamaturu with a total of 51.9 ha, including 75 households.

4.1.2.1. Access and exclusion in A1. From an access lens, there are several key actors that benefited from social forestry scheme selection. Given that SCF served as the facilitator, an organization equipped with the regulatory interpretations of social forestry, thus placed them in a unique position of authority over information. It also marked their legitimacy - both locally and in the region - by establishing networks locally, collecting databases about local conditions, such as farmers and their fields, and concession lands. Meanwhile, SCF also benefited beyond the site, developing their empirical expertise in social forestry, gaining invitations to attend state initiatives on social forestry while advocating for inclusion in the nationally mandated PIAPS. It also established their role as a mediator of forest conflicts, a claim that is increasingly attractive to both the state and outside donor sponsors seeking to implement social forestry. Meanwhile, SCF quickly learned of the important role of the village head in Manuju, who also asserted his position in the process. He used his office to facilitate the arrival of external actors like SCF, and also acted as a hub for future project initiatives, and positioned his office to gain from other state-supported initiatives. Finally, the two farmer groups that agreed to partake in the process also gained access through their ability to articulate interests on their potential involvement in the scheme. Nevertheless, at this stage this is a precarious form of access, and could potentially be a damaging calculus. For the two farmer groups that elected to not partake in social forestry could either serve to lose completely, or if successfully, could one day enjoy fuller rights to land. PT INHUTANI is also experiencing the corollary of this acces-exclusion gamble. On the one hand, their participation indicates a willingness to participate in a process that negotiates themselves out of full control over their claims to exclusive concession land rights.

4.1.3. Initial stage: Participatory mapping for inclusivity, conflict prevention, and planning in Manuju (A2-A4)

The farmer groups that came together for the social forestry initiative in Manuju were not a collective institution prior to facilitation by SCF. The Manuju landscape is shaped mostly by long-established plantation crops, either managed by the company or as individual household plots. Therefore, much of the initial stage preparation activities centered around identifying farmers, their associated plots, and cross-checking overlaps with PT INHUTANI. In addition, the actors (PT INHUTANI, the village government, and the villagers) had low comprehension on the terms of social forestry, as well as its implications. For example, when initial discussions began to address the cost-benefit sharing arrangements between farmer groups and PT INHUTANI, some farmers suggested all proceeds should go to the cultivator.

The many uncertainties about the terms of the partnership scheme created the impetus for a participatory mapping process facilitated by SCF as means to fulfilling the A2-A4 phases. SCF set out to map farmers that cultivated lands within the area as well as those that were in need

of land. On December 15th, 2017 the multi-stakeholder group began jointly mapping out land uses. The participatory mapping included five individuals to highlight the path of the transects, and then each of the groups were requested to wait along the path to identify the extent of their land claims. SCF facilitated the technical aspects of mapping using GPS units, two individuals from PT INHUTANI joined in the field, two representatives attended from the village government, and all involved farmers participated. The participatory mapping facilitated discussions about types of land uses and potential joint management arrangements under the social forestry designated areas, while also proposing potential farmer roles. Mapping took place over the period of one week. Follow up consultations were thereafter conducted on December 27th between PT INHUTANI and the farmer groups, and again on January 4th Firdaus, 2018 with the forestry extension officers. At the end of these meetings the two farmer groups were formalized through decision letters by the village head. The participatory mapping process therefore served several functions at once. SCF identified different claims among each individual cultivator and the company, listed out tenure perceptions, explored local desires for land management, listed acceptable terms by the company, identified tensions between parties, and initiated the early planning processes that could potentially govern the partnership scheme in Manuju.

4.1.3.1. Access and exclusion in A2-A4. Access in this case is most prominent in terms of the information collected by SCF, as well as the networks established among key actors. Farmer groups expressed relief at finally understanding the extent of the forest concession, and at times were surprised by sites included within and beyond the state forest boundaries. The Map on Fig. 2, shows half the village within the concession area. On the one hand, farmers claimed to have benefited from an improved legal understanding of the issues, while on the other, the maps reinforced company ideas about legal boundaries. One particularly revealing aspect of the assessment was a greater awareness among parties about the value of the trees on the land, and the key negotiation dimensions at this point revolve around the determination over access to harvest over the existing timber at the sites. At the time of writing, the company has not yet agreed to the terms of the partnership, and could be weighing the implications of entering into binding social forestry agreements. There are also indications that lobbying could go above PT INHUTANI. As the Ministry continues to push for more social forestry schemes, the company could receive pressure from above (i.e. through MOEF responsible for guiding concession land use and planning) through lobbying by SCF to press for social forestry approval. For now, access and exclusion are contingent upon this collected information and how the parties may decide to use them going forward. The farmers feel that advocacy by SCF could potentially prove beneficial, but for the time being, they are unaware and unclear about the outcomes.

4.2. Formal handover: Access to, and exclusion from rulemaking and legitimacy in Labbo Village

4.2.1. Context for Labbo and its village Forest

The village forest in Labbo, alongside other social forestry sites in Bantaeng, has a unique political background. In 2007, an assessment of Bantaeng state forests published findings that identified over half (54%) of the district's state forests in critical condition (Supratman and Sahide, 2013). This finding is not unusual for state forests in Indonesia, reflecting a common story of land use change, whereby political decentralization took place alongside severe economic pressures across rural Indonesia. Many upland villages in Bantaeng and neighboring Jeneponto, began widespread conversion of state forests by planting vegetables. Although an open secret about the condition of state forests in Bantaeng, the study about its forest condition gained attention and political traction (See Fig. 3).

The forest assessment thus led the district governments to take a strategic and populist approach by identifying forests that were still standing as sites to protect while committing to empowering livelihoods of those living on the boundaries of these forests. The remaining intact forest stands in Bantaeng were due to their geographic location, at higher elevations with difficult road access. As the Bantaeng district government committed to community empowerment and forest protection by 2008, partnerships with an NGO (RECOFTC) and Hasanuddin University (UNHAS) began to assess the possibility of implementing social forestry pilot schemes for village forests in Bantaeng. Armed with the regulatory expertise on social forestry at UNHAS, supported by well-funded community facilitation by RECOFTC, and having the strong support of Nurdin Abdullah (the Bantaeng district head, or *Bupati*), led to the unique conditions for showcasing a precedent-setting social forestry example.

Indeed, Bantaeng came to be a showcase for social forestry in Indonesia, and numerous NGO programs began to visit and learn from its village forests. The Village of Labbo was among these village forests, and was the site of a ceremonious visit by the Minister of Forestry in 2009 to highlight the success of social forestry. The head of Labbo village was thereafter regularly selected as a community representative invited to attend and speak at national forums on social forestry. The attention led to additional international donor and NGO support, such as a large Canadian-funded program on agroforestry and livelihoods, supported by ICRAF and CIFOR, Birdlife International, and others. In terms of regional politics, the Bantaeng *Bupati* (Abdullah) also began to receive attention for his populism on rural empowerment and efforts to protect forests, later fueling his campaign to an unlikely victory as governor of South Sulawesi in Firdaus, 2018. For these reasons, Bantaeng social forestry sites, and the village of Labbo in particular, provides a unique opportunity to highlight the formal handover dimensions of social forestry designation, and an ideal site for applying the access-exclusion framework.

The Labbo village forest is small, covering a total area of 285 ha (just over a square mile). There are two main land uses in this forest, which predominantly consists of natural forest cover [*hutan alam*], while the area includes a group of agroforestry plots cultivated by 12 farmers with coffee groves covering approximately nine hectares. The forest includes important water sources and is in the habitat range for the endangered Anoa, also known as the midget buffalo. Labbo is also known regionally for its honey, where as opposed to harvesting among nests in trees, cultivators harvest from bees that nest in a formation of rocks in the forest. The farmers identified to be encroaching on forest lands, do so because they lack access to land, influenced by a social structure that revolves around three types of farmers classes (land owners, subsistence farmers, and laborers).[7]

The timing for the selection of the village forestry scheme in Labbo is significant. In 2008, national interests were eager to showcase, influence interpretation, and implement village forestry for various reasons.[8] Abdullah, as the topmost elected official in Bantaeng seized on this opportunity to define the scope of village forests amidst populist sentiment for protecting forests and empowering rural communities. One of the unique ways the Abdullah gained attention was due to his willingness to support social forestry through multiple government agencies. As lines of authority and jurisdiction are often limited to a

[7] For more on the class structure in this region of South Sulawesi see Gibson (2005)

[8] In 2008 the Forestry Ministry P.49 Regulation was issued to provide guidance on village forests in Indonesia because there were so many different interpretations and applications for implementing social forestry. This was a new scheme that previously the scheme consisted only with HKm and HTR. Three interpretations, is that it was the compromise for hutan adat, another interpretation for strengthening the old practices like *tanah bengko'* where the village government could use the land for common needs of the village, and in Bantaeng there was a different technical interpretation by the BUMDES that it would be helpful to strengthen the farmer groups)

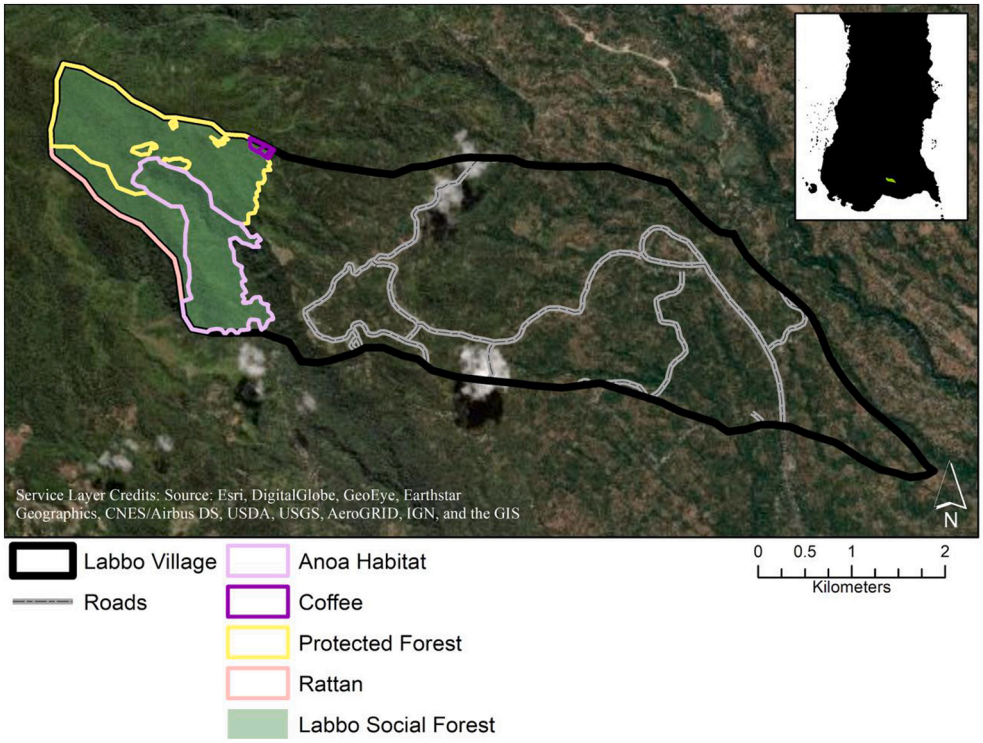

Fig. 3. Map of Labbo and the Village Forest (Source MOEF, 2019; Supratman and Sahide, 2013).

single sector where forestry only works with forestry, Abdullah instructed additional support from agricultural and other local agencies to provide additional support. By mobilizing resources across development and conservation-oriented agencies, Abdullah gained attention for his progressive policy approach in village forestry, lending him credibility among a growing reform-minded civil society movement in Indonesia. Meanwhile UNHAS and RECOFTC mobilized support from international donor funds and supported the capacity building process through several trainings, workshops, and public consultations that were conducted throughout 2009.

4.2.2. Administrative proposal and SF scheme approval (B1)

As village forests were a new mechanism during that time period (2008–2009), gaining approval helped to establish a precedent for NGOs working elsewhere. Guided by ministerial regulation P.49/2008, the Labbo village forest helped to articulate policy formulation on regulatory and administrative mechanisms for proposing village forests. Success in Labbo was made possible through the close facilitation and legitimacy of UNHAS and RECOFTC, which oversaw all the letter-writing and administrative forms, commonly applied as a template for implementation elsewhere. Labbo was well-financed to convene local actors and fund requirements. Over several months in 2009, a series of meetings convened at the village office and the local mosque to establish the mechanisms for the village government in working with the farmer groups and land managers. The outcome from these discussions determined the management institution would be established as a special unit of the village enterprise (BUMDES). A presiding individual overseeing the BUMDES would then work with the forest farmer unit to coordinate revenue generating opportunities, which ranged from managing water resources for distribution and sale, overseeing forest honey and coffee collection and marketing. The meetings also discussed the relationship between the BUMDES, forest cultivators, and external actors. A draft Bupati regulation was drafted with UNHAS support to formally propose the village forest permit, and provided a basis for various government agencies to support forestry-related ventures.

Upon the completion of administrative proposals on village forest management and establishing partnerships with external organizations and agencies, guidelines for village forestry establishment require the completion of four key documents.[9] An official letter was sent on January 12th, 2009 by the Bupati to the Minister to make the formal request to approve the village forest, appending all completed requirements, which included proposed recommendations on village forest managers, their institutional structure, a map, and a general management plan. Just over a year after the submitted request, on January 21st, 2010, the proposed village forest in Labbo was approved without any revisions. After receiving the approval permit on the working area by the Minister of Forestry, several follow up meetings were convened to finalize documentation for submission to the governor on proposing management rights (*hak pengelolaan*) of the village forest. These meetings focused on the 35 year planning document RKHD [*Rencana Kelola Hutan Desa*], which provides the basis for obtaining the full permit (discussed in more detail in B2, below). A year later the village forest permit was officially obtained.

4.2.2.1. Access and exclusion in B1. The story of village forests in Labbo transcends well beyond the site. As Brosius et al. (1998) have said about social forestry, models of success are exemplary sites for examining the idealized conceptualization of a policy involving people and forests. The Labbo case clearly shows that access dimensions were driven by multiple external interests eager to establish precedence of administrative rulemaking. Providing a model for implementation presented access to expert interpreters of social forestry to guide village forestry policy while also supporting the overall populist messaging of Abdullah's government. This not only provided material resources from the multiple agencies tasked with supporting successful site preparation, but also provided a powerful narrative from district leadership on commitments to empowering people and protecting forests, which extended to various external actors claiming legitimacy as institutional interpreters of village forestry policy.

[9] See Firdaus Firdaus (2018) for a more recent legal interpretation of social forestry permitting mechanisms

4.2.3. Reinforcing SF scheme approval and continued involvement of external actors (B2)

The B2-stage is not necessarily sequential, because even during permitting preparations, institutional arrangements take place in parallel, the intensity of which is usually contingent upon funding availability. This stage re-examines the new institutional expectations relative to the permit and therefore solidifies the formalized working arrangements going forward. In the Labbo village forest, most institutional planning processes took place within the B1 stage because of intensive support by external actors UNHAS and RECOFTC, and with additional formal mandates from local government agencies tasked by Abdullah's administration, there was no difficulty convening meetings, drafting plans, and conducting bureaucratic functions.

Discussions on institutional management plans for the village forest resulted in farmers agreeing to establish the business management unit under the purview of the BUMDES. As an established formal entity, the BUMDES already has a local manager [*pengurus*], receiving regular professional training from local agencies tasked with building local village cooperatives. However, reinforcing the institutional relationship between the BUMDES and the farmer groups created a source of friction between them. Farmer groups work in the forest to harvest coffee and collect raw materials like honey, while local elected elites oversee village economic development opportunities that connect with markets and formal institutions. In this light, the BUMDES manager, accustomed to managing formal bureaucracy functions, resulted in very different expectations about management and administration of the village forest. He viewed his role as increasing the revenue for the village. Meanwhile, the business management unit established under the BUMDES specifically for managing the village forest viewed its role as representing the farmers and managing a joint resource. In other words, while the BUMDES was accustomed to the processes of formally managing an institution to seek revenue for the village, the village forest business unit that consisted of the farmer groups were driven by different interests and had less capacity for the reporting aspects of the bureaucracy. This is unsurprising as the local politics of revenue generation at the BUMDES are closely safeguarded among alliances of the locally elected leadership, and a new unit under the institution geared towards fair distribution across farmer groups presented a very different view of the form and function of the village forest.

This source of tension requires a closer examination of access and exclusion relative to local land relations. The context for land ownership in Labbo is that the Karaengs (cultural elites) own much of the productive land outside of the forest estate. Those facilitating discussions for village forest preparations (the NGOs) recognized the potential land grabbing by local elites on the emerging terms for village forest lands. Working with the farmer groups, parameters for village forest land access were limited to individuals without existing lands or for those already cultivating land in the state forests without any other access to land. A specific stipulation in the village decree stated that only those without access to land could be included in the state forest area. By the end of stage B-4, the 12 previously labeled encroachers on nine hectares expanded formal access to a total of 131 villagers originating from the two Labbo hamlets with overlapping boundaries with the state forest (*Dusun Bawah* and *Dusun Panjang*), as well as Kampala and Bontotampalang villages, amounting to a total of 80 ha divided into different farmer group blocks. These individuals were considered for inclusion to cultivate coffee agroforestry plots under three criteria: those already cultivating plots within the forest boundary, people in need of land / low-income households, and areas amounting to no more than one-half hectare. In addition to coffee cultivation, other cultivators were also considered, including individuals harvesting honey and rattan.

Upon confirming the forest farmer group, subsequent negotiations revolved around institutional aspects, namey placing the special unit of the village forest within the BUMDES structure. The key negotiation involved the benefit-sharing ratio, which resulted in an initial agreement to split proceeds at the ratio of 75/25 between the coffee farmers and the BUMDES. However, the arrangement remains a general agreement as it did not specify key details, such as the types of benefits to be shared, and the stage on the supply chain in which benefits were to be evaluated. For example, it was unclear whether benefit sharing was to be evaluated at the raw harvested seed, or the already "processed" product. Due to this lack of clarity, arrangements in the end fell apart. The farmers stated that the mechanisms in the BUMDES were yet to be established, while the BUMDES cited that the yield from harvests did not provide anticipated outcomes.

A key part of the B2 stage also involves the exit strategy of external actors and establishes continued relationships going forward. This exit strategy involved commitments for continued facilitation by the local NGO called Balang Institut to support the village forest institutions and farmers to continue to achieve their targets listed in the management plan. In parallel, the *Forum Rembuk* [convening forum] for the village forest was also established to ensure regular meetings between local government agency representatives and the farmers. The overall intent of this continuing engagement with external actors sought to deliver on the commitments of empowering forest farmers and meeting conservation targets. The Forum however, was only established as a formality, and after permitting, follow up commitments waned.

4.2.3.1. Access and exclusion in B2. In the context of social forestry development of the years 2008–2010, it is easy to see why Labbo, a small village forest involving a limited number of forest farmers, came to be seen as such a success story. On the one hand, the site conveniently supported the narrative of a progressive elected leader in Nurdin Abdullah, whereby close facilitation by external actors helped to legitimate interpreters of the legal dimensions of village forestry. Legitimacy was founded on the support of a well-known NGO, with additional capacity building conducted by a local NGO that would continue working at the site for the long term. Labbo could continue to show continued success in that already secure forests would continue to be protected, while also showing concrete measures for providing land to farmers that actually needed it. But if we extended the timeline of analysis to the implementation stages, the overwhelming focus on the formal handover to the village institutions established the mechanisms for negotiating access and exclusion. As formal handover focused so much on establishing the institutional support mechanisms through the BUMDES as a village enterprise, it would therefore continue to structure outcomes long after receiving the permit. Agencies and their support programs targeting the village forest would henceforth continue to structure their programs through the village office and its BUMDES. The effects, of course, is that the access the BUMDES received also overshadowed interests among the forest farmers.

4.3. Implementation: Access to, and exclusion from, resource use and benefits in Mattirotasi Village

4.3.1. Context: A complex of 14 community forests in Mattirorasi, Sidrap

To adequately address a case for the implementation stage of the access-exclusion framework (C1 and C2), we reached further back in time to provide more longitudinal engagement. However, this also means that the case was established in a very different regulatory framework from the existing policy mechanisms governing social forestry.

Mattirotasi village was established long before the area was included in state maps and designated as forests. The landscape was commonly used among locals as cattle grazing land because of the flat terrain, and when regularly burned, creates shoots of young grasses that cattle especially enjoy grazing. Because of the geographic and topographical conditions, a Suharto family-affiliated corporation overseen by then first lady Tien Suharto, took note of the site and also began early investments to expand cattle production operations. The project was short-lived due to the assessment that it was ultimately considered not profitable enough.

In 2000, following the drastic changes that brought on democratic decentralization and reshaped political and administrative systems in Indonesia, new development paradigms became possible, and a project entitled the Community Forestry Development Project (that would serve as the precursor to the *hutan kemasyarakatan*, or HKm scheme) was formed to organize farmers and rehabilitate state forests. Amounting to approximately 1000 ha, the project received funding from the OECF[10] and involved a local NGO to serve as facilitator.

The basic contours of the community forestry scheme involved the 70/30 concept, which refers to the ratio of tree crops relative to multi purpose tree system (MPTS). In Mattirorasi, MPTS translated mostly to the introduction of cashews. At the beginning of the project, the land was identified as an arid and degraded landscape, and OECF promoted the site as an early pilot site for HKm and land rehabilitation. The initiative at that time was not designed or intended to provide land access to state forests for local villagers but rather to involve them in a land rehabilitation scheme to reforest the site. The project was therefore a showcase for the Sulawesi region, in that as opposed to previous reforestation schemes planting tree crops, the intent in this case was to diversify tree crops with livelihood options in ways that could also provide benefits to locals. Indeed, the local villagers did not have high expectations for the project beyond the labor reward for planting, transplanting, and replanting seeds in the first and second year of the project.

Given that Mattirotasi a showcase site, receiving close oversight from the OECF project and the then-MoFor (today's MOEF) ensured the ease of completing the formal handover process. Both supportive local and national government actors provided the requisite regulations to complete administrative permitting aspects, which was finalized within one year. Although the initial project site involved 1000 ha, the permitting process reduced adjacent lands to a total contiguous HKm area of 755,23 ha. Throughout this area, 14 farmer groups each received a HKm permit (see Table 5 and Fig. 4 for land area and list of farmer permits). At the end of formal handover, however, the local villagers involved in the scheme were unclear about their rights, and did not believe they had obtained rights. Their perception of forestry departments at that time were such that the agency merely enforced violations or provided funds for reforestation, not that they could provide rights to land. Understanding among farmer groups were such that they would no longer be intimidated by forest rangers for entering the forest estate, not that they would be conferred partial ownership and land management responsibility. Upon reflection, villagers stated that if they were provided permits, the most important right would be to harvest the more valuable timber stands, especially the main tree they were involved in planting (*Gmelina arborea*, commonly called *Jati Putih* in Indonesia). Finally, the main management question related to the issue of cattle. The most valuable aspect of local livelihoods, farmer group highest priority revolved around questions whether the permits would allow grazing.

The imaginary of a social forestry scheme tends to invoke local groups engaging with a resource involving rules long established among local people interacting with a resource. The farmer groups in Mattirotasi established for the HKm scheme, however, were by no means a tight knit group, and were unaccustomed to developing rules to govern resources that on paper were now legally transferred to them. The farmer groups, rather, consisted of individuals from the surrounding village hamlets, brought together as part of their personal interest to benefit from the labor opportunity afforded by the project funds as daily wages for planting and maintaining the land rehabilitation and reforestation components.

Table 5
List of 14 HKm in the village of Mattirotasi.

List of 14 HKm in the village of Mattirotasi	Permit license number (all issued in 2012)	Amount of forest farmer member	Coverage (Ha)
Mamminasae	343/XI/2012	42	74.05
Samaenre	340/XI/2012	86	89.08
Massabirin	334/XI/2012	48	69
Massumpuloloe	342/XI/2012	17	32.7
Sipakamase	335/XI/2012	20	36.7
Bunga Desa	332/XI/2012	23	29
Sipatuo II[a]	337/XI/2012	35	49.25
Padaidi	339/XI/2012	37	72
Sipakainge I	338/XI/2012	24	42.5
Mattirowalie[a]	331/XI/2012	28	39.5
Massenreng Pulu	341/XI/2012	12	30
Sipatuo I	336/XI/2012	18	34
Makkaresoe	330/XI/2012	64	39.5
Mappasitujue	333/XI/2012	27	49

[a] These two groups were successful in building common arrangements between cattle herding and cashews, which were integrated into the HKm Program.

4.3.2. Forest management (livelihood benefit) (C1)

Among the 14 farmer groups receiving permits, implementation was overseen by the Forestry Department arm of BPDAS, which also included periodic support from a local NGO. The farmer groups had very different ideas about land management from the approved 70/30 scheme and initially asked permission to plant corn, or even that the ratio could be overturned to 70% MPTS to 30% timber. Farmer groups were also eager to incorporate cattle into the scheme, but at that time, livestock was outside of the purview of forestry agency support. Given the different perceptions and rules about land management, one local extension officer [*penyuluh*] named Rusdiansyah, also listed himself as a farmer in the Mattirowalie group. Although his involvement as officer and member is formally prohibited, his rationale to list himself as a farmer was so that he could lead by example, showcasing a model for success and replication across the HKm sites. Strategically positioned in a state agency, he could also visit the various government offices to drum up additional support for the site. He began farmer trials with a limited number of members, implementing different combinations of commodities and crops. At the outset gaining support for agricultural development was difficult and cross sectoral coordination between forestry and agricultural rare, given that the agriculture agency was not allowed to support activities in the forest estate. However, because of Rusdiansyah's persistence in continuing to ask, the agricultural agencies began to provide seedling support for agriculture so long as it was not explicitly stated for distribution in the forest estate. Cattle, however, was a more difficult challenge to obtain government support, and so he and other villages began to pursue livestock development on their own.

At the outset of social forestry implementation, the agency was suspicious of Rusdianyah's initiatives and motives. Furthermore, his farmer trials also yielded experiments that were not common among other farmer practices, and which did not endear him to their support at the outset. Only two heads of farmer groups initially agreed to participate, and a handful of other farmers joined him in the field trials. Meanwhile, other members outright ignored the HKm management plans, equating permits as access to land that they could do with what they pleased. They openly burned fields to clear lands or let the *Gmelina arborea* stands die, replacing them with other commodities of their own choosing. Rusdiansyah's experiments continued, however, with the overall objective to create a combined land management approach prioritizing corn, cashews, cattle, while still maintaining the gmelina

[10] The Overseas Economic Cooperation Fund (OECF) is the implementing agency for loan aid furnished by the Japanese government, now known as the Japanese International Cooperation Agency (JICA). Founded in 1961, it is the Japanese government's development financing arm that extends low-interest, long-term funds to support community efforts in developing countries. Since its establishment, the number of countries receiving yen loans has grown to reach 90 worldwide as of the end of March 1998.

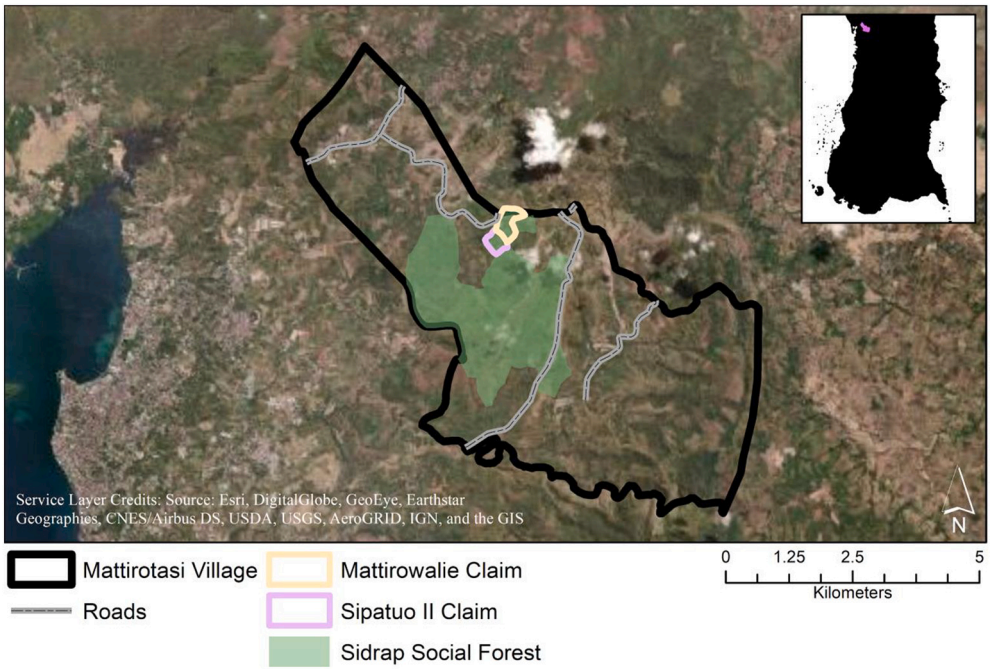

Fig. 4. Map of Mattirotasi HKm (Source MOEF, 2019).

stands. Accommodating all four of these commodities failed for various reasons. The first reason was that the prohibition against harvesting the gmelina caused the farmers to present a barrier for conducting other meaningful livelihood activities, particularly for the main interest of supporting their cattle. Second, corn and cattle were also incompatible. Third, several of the areas were too steep to allow for successful combinations. Amidst these overall failures however, Rusdiansyah's trials also made an important discovery that made the cattle and cashews compatible with one another. The cattle could graze in the rainy season when the grasses were abundant, and in the dry season when the grasses were sparse, could enjoy feeding on the shedding of failed fruits [*buah gagal*] from the cashews. Not only was this beneficial for the cattle, but Rusdiansyah noticed the benefits from cattle naturally fertilizing the base of the cashew trees, over time yielding better harvests. As other farmers began to notice the approach succeeding, members from across two adjacent farmer groups (Mattirowalie and Sipatuo II) began to follow Rusdiansyah's persistence and leadership, incorporating his model as a common land management practice.

They also began to create new locally driven institutions to manage the area. For example, they began to institute an annual membership fee and also accepted voluntary donations. Each year, the fee included a payment of 30,000 rupiah (approximately US$2.5) per mature branded cow, and voluntary donations were accepted during the sale of cashew harvest as a way to re-invest in their farmer group. These mechanisms were never formalized in the HKm permits or plans, premised on trust established between members. The collective fees and funds were used as a way to build boundary fencing for the outer boundaries, as well as limited internal fencing that helped to manage their permit sites. Any additional finances were used to maintain and improve fencing, which consisted of a combination of barbed wire, bamboo, or natural hedges from fast growing shrubs and trees.

In national forums, these two farmer groups have become a success story of social forestry. The narrative among national and provincial groups always highlight the successes of the site for their establishment of cashews. DG-PSKL, the arm of MOEF assigned to administer social forestry and environmental partnerships, continue to support and expand cashew production and marketing for the site, through grants to develop refrigeration, packaging, and more. Engagement also expanded beyond the farmers themselves to support small grants for women's groups to develop the packaging and marketing initiatives. Nevertheless, although cashews are seen as the hallmark of success at this site, local farmers see things differently. They describe success not based on cashews, which they continue to view as secondary, but rather view their main motivations as driven by local farmer interests to protect and grow their cattle.

4.3.2.1. Access and exclusion in C1. At the outset, those that were involved in the initial planting stages of the OECF project all received wages for planting and maintaining the reforestation efforts in the first two years. Labeled as a showcase site from the outset, and therefore not allowed to fail, the institutional support continued in the form of administrative functions providing continued project-level benefits. In the implementation stages, there were those that gained access by outright ignoring the permit, and rather, began to use the permit as a reason to make use of short term gains. This was done mostly in the form of clearing land to plant corn. Meanwhile, Rusdianyah's leadership in two of the 14 farmer groups, over time began to yield continued support from government agencies for initiatives supporting their longer term vision of land management. Meanwhile, they were able to build institutions that prioritized their cattle grazing operations, and at the same showcased their successful cashew cultivation that was marketed as an attractive national example for improving livelihoods in forests. The third group excluded themselves. They received their daily wages by reforesting the landscape, which over time became too dense to plant anything else in the understory.

4.3.3. Forest management (conservation and forest protection) (C2)

There are several main land cover types at the Mattirotasi site. The first is the persistence of abandoned and degraded lands, which initially drew attention to the site and established the rationale for rehabilitation. These degraded lands are located on the rockier conditions and steeper slopes that have undergone repeated plantings of corn, and without applying soil conservation mechanisms, eroded nutrients from the soil. In other parts of the landscape, farmers keep areas clear to plant corn, which they ensured by allowing the gmelina and cashew stands to wilt. In yet other areas, the lack of attention with thriving gmelina stands have also resulted in overgrowth too thick to allow for cultivation in the understory.

The two HKm permits at Mattirotasi and Pattiro II were initially open to introducing conservation programming if they were allowed to also access the timber stands at various points. However, given that the gmelina was off-limits for harvest, these two groups began to slowly prioritize cattle and cashews, thus reducing the gmelina stands. Given that cattle were the priority, and that cattle like to eat the gmelina bark, the gmelina slowly thinned out.

4.3.3.1. Access and exclusion in C2. In degraded landscapes the initiation of the HKm project allowed for opportunities to introduce new conservation practices. However, the lack of trust between the local farmers, and the limitations placed upon them to decide what type of land management approaches to pursue resulted in 12 of the 14 farmer groups not following the broader terms of the permit scheme. Among the two remaining farmer groups led by Rusdianyah's vision of mixed management of cashew and cattle, resulted in a deeper land management ethic, even though it did not follow the general vision of the plan approved inb the formal permit. Across almost all of the other remaining areas of the landscape however, farmers saw opportunities to cultivate social forestry for short term gains, often depleting the soil and not taking into consideration other conservation practices like terracing or water conservation. Where the gmelina stands did grow large however, were a function of disinterest among farmer groups beyond their receipt of the initial wages for replanting. Though this element could be seen as a conservation success, for the regrowth of larger tree stands, the lack of engaged land management and stewardship could leave the stands vulnerable for future logging.

5. Discussion

The access-exclusion framework channels information from in-depth case studies to understand how actors create social forests, who benefits from those processes, and who does not. Using this framework to analyze social forests does not seek to replace in-depth historical, social, or anthropological study of the political-ecological dynamics that define community forest management. Rather, it highlights specific information from such studies to disentangle normative processes that simultaneously grant access to, and embed exclusion from, forest resources. In doing so, it demonstrates how social forestry is not a single policy, but a set of bureaucratic processes that unfold in different locations with unique historical backgrounds and power relations. We thus divide social forestry into distinct stages defined by specific bureaucratic practices, and consider how access and exclusion occur across each of these stages. Because these stages are common across all social forestry initiatives in and beyond Indonesia, and because the framework focuses on elements of access and exclusion within each stage, applying it enables a systematic comparison of different cases that illustrates the promise and perils of social forests. Applying the framework to the cases we selected reveals that specific stages of social forestry are defined by access to, and exclusion from, information, political legitimacy, and resource use.

5.1. Initial stage and access-exclusion of information

The case of social forestry initiation in Manuju demonstrates how access and exclusion are negotiated in reference to information about social forest resources. In this case, SCF served as a boundary institution that united PT. INHUTANI, a state-owned company, and community members from Manuju village. Working together, actors within these organizations mapped forest resources, finding valuable standing timber within the concession identified for a partnership scheme. Initially, it seemed that all actors received access to information; however, local actors were excluded from using this information, legally. At present, PT. INHUTANI retains rights to the concession, and it remains reluctant to share these rights until valuable resources are harvested. Meanwhile, community actors have no ability to harvest or legally benefit from the forest area for which they contributed information. It is unclear how social forestry licensing will proceed in Manuju, though it is likely that PT. INHUTANI will be able to harvest valuable timber before the forestry partnership plan is submitted, much less approved. By generating information through participatory mapping, SCF convened villagers and PT. INHUTANI, and generated useful information. Thus, members of Manuju Village remain excluded from the collection and use of information, though social forests are often enacted to primarily benefit local communities.

The access-exclusion dynamics of information are critical to initial stages in social forests beyond the Manuju case. Though they may serve as critical partners in gathering information, communities often lack the technology and professional capacity for systematically measuring valuable forest resources and overall forest cover (Anderson et al., 2015; Alam et al., 2019). The professionalization of forestry (Lund, 2015) serves to exclude many local actors from contributing actionable knowledge of forest resources, but grants access to such knowledge to NGOs, technocratic bureaucracies and professionals. After the process of gathering information, communities are often excluded from information regarding the processing of applications and permissions. Organizations that are in positions of authority–usually government ministries–have unique access to the process by which applications are reviewed and approved. In the Indonesian case, virtual platforms seek to provide greater transparency surrounding processing and processing times (Erbaugh, 2019), but asymmetries in informational access remain. Finally, because local communities do not hold rights to forest management and use during the initial stage, they are excluded from lawfully using any new information they helped collect. In the initial stage, information primarily benefits state-based entities and third-party professionals who have greater access to collecting and using it, in contrast to local communities who are often excluded from information on application processing and the use of information about forest resources.

5.2. Formal handover and access-exclusion of authority

The case from Labbo village highlights how formal handover excludes specific actors associated with land that is not deemed reasonable for social forestry, it grants access to rulemaking to communities and organizations in select locations, and in doing so it shapes who is and is not a legitimate authority. Labbo was selected as a location for social forestry due to its pre-existing, critically important forest area. The handover of social forestry rights to the people of Labbo Village provides them the formal authority to make rules for forest in an area that they managed long before the handover of formal forest rights. Thus, members of Labbo gained political legitimacy through the formal handover of social forest rights, rather than rulemaking authority.

It is important to note that Labbo was purposefully selected for social forestry because of the preconditions that led to forest conservation. In a related process, villages that contained degraded forestland were excluded from initiation and formal handover, and further denied the formal authority to engage in managing forest as well as the legitimacy in managing forests. The case of Labbo provides insight into a second type of legitimacy that formal handover produces: the legitimacy of actors and organizations that oversee handover processes. The NGOs, government administrations, and related actors seek to gain by claiming the “success” of creating a social forest. The current governor of South Sulawesi was intimately involved in the initiation and handover of Labbo's social forest. The legitimacy he gained through the successful handover of forest rulemaking rights provided a foundation for further political success and authority. Similarly, NGOs that successfully oversee the handover of social forestry rights can claim legitimacy through the successful handover of social forest rights. It is important to consider, however, the communities that are selected for formal handover and how they differ from those that are not included.

Through the legal provision of forest management rights, certain

groups and actors gain access to the legal as well as political authority, while others are excluded. In Labbo, where pre-existing forest management institutions protected critical habitat, political actors and organizations focused on the handover of social forest rights, not on developing management capacity. This represents a worrying pattern, where social forests are found, not made (Glasmeier and Farrigan, 2005). The pattern of focusing authority granting processes rather than capacity development is common among social forest projects (Fisher et al., 2018), and it serves to exclude communities that lack pre-existing institutional arrangements or critical forest habitat. By recognizing and successfully promoting social forests where pre-existing institutions occur, political actors and organizations are able to increase the likelihood that the handover of rights occurs, and are subsequently viewed as effective and legitimate community partners. The recent boom in social forest allocation across Indonesia should not be confused with equitable access to social forest rights., Many communities are excluded from social forests, either because their applications to implement a social forest were denied or because they were unable to begin the application due to a lack of human or natural capital. Future research on social forests–in Indonesia and elsewhere–would do well to focus on such exclusion.

5.3. Implementation and access-exclusion in resource use

The boom of social forests in Indonesia refers to heightened activity surrounding the initiation and handover of social forest licenses; the bust, as our third case from Mattirotasi demonstrates, occurs in the implementation and outcomes. In Mattirotasi, two farmer groups (kelompok pertanian hutan) of fourteen managed to successfully manage social forest areas for sustainable livelihood benefits. Through a process of adaptive negotiations and a dedicated extension agent, the social forest land provided sustainable income from the sale of cashews and beef in Mattirowalie and Sipatuo II. However, the access to livelihood benefits from this social forest occurred through adaptive management, not the original management plan. As this case demonstrates, the provision of forest management rights is not sufficient to guarantee environmental or livelihood benefits. Rather, when making villages and communities responsible for forest management, the authorities that transfer such responsibilities must attend to how management unfolds in the future (Erbaugh, 2019). In response to shortages, MOEF has made significant strides in hiring more extension agents to facilitate formal handover and implementation (Galudra, 2019). However, the lessons from this case demonstrate that social forest plans serve to generate access and exclusion dynamics for forest resources and benefits long after formal handover occurs.

The benefits a social forest is designed to deliver determines the access-exclusion dynamics that define resource use. Similar to how some communities benefit from timber certification (Molnar, 2004), social and community forests that focus on providing livelihood benefits from forest products may grant further access to supply chains, boutique product markets, and greater publicity (Harbi et al., 2018). Though communities without formal rights to a social forest may continue to harvest forest products, they are unlikely to receive additional market access and are often subject to high transaction costs common in informal markets (Tieguhong et al., 2015). Research on mangrove use in Ecuador challenges the concept of binary access-exclusion of resource use, concluding that communities prefer to choose and adopt their own rules about who is excluded from resource use (Maldonado et al., 2019). In contrast to product-based benefits, social or community forests that deliver livelihood benefits from PES grant access to monetary or in-kind benefits via formal agreement, and so they directly exclude all individuals or groups not explicitly contracted. Research from Costa Rica demonstrates that the national PES program systematically excludes rural smallholders while granting access to wealthier land owners with larger tracts of forest (Lansing, 2014). Common to nearly all forms of social forests, regardless of the livelihood access they provide, is a specific form of livelihood exclusion. As a "technology of the state" social forest rights are typically traded for the enhanced protection of a specific, often highly valuable, forest resource (Agrawal, 2005). For example, in India Joint Forest Management between the Forest Department and Forest Protection Committees provides communities the right to collect and manage non-timber forest products and a portion of timber sale profit, but in return they are excluded from managing timber and are charged with protecting the forest from fires, grazing, and other activities that might affect timber resources (Agrawal and Ostrom, 2001; Behera and Engel, 2006). Thus, granting some access to forest products or ecosystem services to communities often entails their exclusion from products governmental departments or ministries seek to retain and protect.

6. Conclusion

This research advances a framework to analyze the processes that create Indonesian social forestry, attending to the way in which they grant some actors access to, and exclude others from, forest management. We then apply this framework to three cases that represent different stages of social forestry implementation in South Sulawesi province. Using the access-exclusion framework to examine the initial stages of social forestry in Manuju, the formal handover of social forestry rights in Labbo, and the implementation of social forestry in Mattirotasi, we demonstrate that social forestry processes determine who is and is not able to generate and use information, gain political legitimacy, and use forest resources for economic and environmental benefit.

The application of the access-exclusion framework to additional cases of social forestry promises to improve understanding of who benefits from community-based forest management and who does not. Though Indonesian social forestry claims to be forest management in the name of local communities, there remains a disproportionate focus on planning and handover, and less attention paid to implementation. We refer to this as the boom of social forestry policy, and the bust of social forests. This, in turn, raises important questions about the usefulness of social forestry. Is it a method of resource management most concerned with conserving forests? Does it promote an agenda of social and environmental justice? Should it be measured by the livelihood benefits it provides local communities? Is it a policy fad to enhance the legitimacy of political elites? Examining the access-exclusion trends of Indonesian social forests shows that, at present, they can represent each of these considerations. Understanding the outcomes of social forestry demands future research that considers how access is granted, as well as how exclusion is reified, through processes that grant local groups rights to manage forests.

This paper promotes the evaluation of social forests on a case by case basis. The access-exclusion framework seeks to identify and analyze dynamics that unfold amid processes that generate social forests. Thus, this analysis does not engage with the broader questions about the politics of social forestry, which are much discussed elsewhere. For example, a social forestry license may be considered a success–despite extensive local exclusions–if the alternative is eviction of local communities and land degradation. The access-exclusion framework, as presented and applied in this research, does not consider these broader questions of land use and focuses only on the dynamics of social forests. Nevertheless, our analysis demonstrates how social forests produce conditions of access and exclusion for the local communities they are meant to benefit. The contemporary boom of policy and licensing demands that future research on social forests carefully consider who benefits, and who is excluded, across the different stages of their implementation.

Credit author statement

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Empirical, Writing. Micah R. Fisher: Conceptualization, Methodology, Empirical research (Case 2, Labbo), Writing, Editing. J.T. Erbaugh: Theoretical Framing, Visualization/Mapping, Writing, Reviewing, and Editing. Dian Intarini: Theoretical engagement, empirical triangulation, writing, and reviewing. Wiwik Dharmiasih: Methodological engagement and framework development. Mulyadi Makmur: Empirical field research and writing for case study 1 (Manuju). Fatwa Faturachmat: Empirical field research and writing for case study 3 (Mattirotasi). Bart Verheijen: Theoretical engagement and reviewing. Ahmad Maryudi: Theoretical engagement and reviewing.

Declaration of Competing Interest

he authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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