BAGIAN 1: CORRESPONDING LETTER

Gmail **Muhammad Alif K. Sahide <alif.mksr@gmail.com>**

Revision Requested - FORPOL_2019_366 for Forest Policy and Economics

2 pesan

Forest Policy and Economics <EviseSupport@elsevier.com> 7 Mei 2020 12.25
Balas Ke: sarah.burns@forst.uni-goettingen.de
Kepada: alif.mksr@gmail.com

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Ref: FORPOL_2019_366
Title: The boom of social forestry policy and the bust of social forests in Indonesia: A power heuristic for assessing implementation outcomes
Journal: Forest Policy and Economics

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[Kutipan teks disembunyikan]

Gmail **Muhammad Alif K. Sahide <alif.mksr@gmail.com>**

Revision requested for FORPOL_2019_366

1 pesan

Lukas Giessen (Forest Policy and Economics) <EviseSupport@elsevier.com> 28 Februari 2020 04.30
Balas Ke: lgiesse@uni-goettingen.de
Kepada: alif.mksr@gmail.com

Ref: FORPOL_2019_366
Title: The boom of social forestry policy and the bust of social forests in Indonesia: A power heuristic for assessing implementation outcomes
Journal: Forest Policy and Economics

Dear Dr. Sahide,

Thank you for submitting your manuscript to Forest Policy and Economics. I have completed the review of your manuscript and a summary is appended below. The editorial board recommend reconsideration of your paper following major revision. I invite you to resubmit your manuscript after addressing all reviewer comments.

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I look forward to receiving your revised manuscript as soon as possible.

Kind regards,

Dr. Giessen
Editor-in-Chief
Forest Policy and Economics

Comments from the editors and reviewers:
-**Editor**

- please revised manuscript based on reviewers comments, especially for definition of key words, reference, introduction, methods, analysis and discussion, etc.

-**Reviewer 1**

-

This manuscript examines the determines of success in social forestry policies in Indonesia though there is no definition of “success” in social forestry. Clearer definition is needed.

The authors argue that external actors and advisers are surprised by the results from implementation and unintended consequences. This needs references and explanations of what the unintended and intended consequences are.

My main concern is that I cannot understand what analysis the authors did. In other words, it is not clear how the results are obtained from the analysis. The considerations stated in table 3 might be known as conditions for successful forest management. In addition, it is difficult to understand how the results link to case studies and the authors' experience. Clear what the authors’ experiences are.

Section 3. The theory of access (Ribot and Peluso, 2003) seems not related to the analysis in this manuscript. This section should be removed or needs more explanation of how it links methods of the manuscript. Otherwise, I hardly believe that section 3 is meaningful.

In section 4.2, the authors explain that they conducted field observation in some sites, however, it is not clear why these sites are selected and I am concerned that these sample sites may suffer from the problem of lack of representativeness in social forestry policy in Indonesia. In addition, the authors mentioned that this research is based on participant observation. I cannot find the results of observation or explanation of what the participant observation is.

In result section, state only the results obtained from the analysis. For example, in 5.2, the authors introduce some examples. I do not imagine that these introductions come from the authors’ analysis.

Page 2, line 10. Maryudi et al. may be Maryudi et al. (2012)?

Insert tables in places right after statements.

-**Reviewer 2**

- Please find my comments--general and specific--attached.

MethodsX (optional)

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FORPOL_2019_366_Comments.pdf

Gmail **Muhammad Alif K. Sahide <alif.mksr@gmail.com>**

Your manuscript FORPOL_2019_366_R1 has been accepted

4 pesan

Lukas Giessen (Forest Policy and Economics) <EviseSupport@elsevier.com> 17 Agustus 2020 13.44
Balas Ke: lgiesse@uni-goettingen.de
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Ref: FORPOL_2019_366_R1
Title: 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
Journal: Forest Policy and Economics

Dear Dr. Sahide,

I am pleased to inform you that your paper has been accepted for publication. My own comments as well as any reviewer comments are appended to the end of this letter.

Your accepted manuscript will now be transferred to our production department. We will create a proof which you will be asked to check. You can read more about this here. Meanwhile, you will be asked to complete a number of online forms required for publication. If we need additional information from you during the production process, we will contact.

Thank you for submitting your work to Forest Policy and Economics. We hope you consider us again for future submissions.

Kind regards,

Lukas Giessen
Editor-in-Chief
Forest Policy and Economics

Comments from the editors and reviewers:
- **Editor**

-
- **Reviewer 1**

- The authors revised the manuscript, responding to my concerns about the original draft. The revision is substantially improved over the original. While the manuscript became longer, it was written well and easy to read. The manuscript can be published in the current form.

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Muhammad Alif K. Sahide <alif.mksr@gmail.com> 3 September 2020 20.01
Kepada: lgiesse@uni-goettingen.de
Cc: Lukas Giessen <lukas.giessen@efi.int>

Dear Lukas

I hope you are doing well, I just would like to ask about the production progress on the accepted paper "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" (FORPOL_2019_366_R1). Please let me know if there are any thing we need to complete.

Thank you ver much

Best regards
Alif
[Kutipan teks disembunyikan]

Lukas Giessen <Lukas.Giessen@efi.int> 3 September 2020 20.51
Kepada: "Muhammad Alif K. Sahide" <alif.mksr@gmail.com>

I do not know details in production, sorry

Lukas

PD Lukas Giessen, PhD
- **Principal Scientist** "Forest Governance"
European Forest Institute (EFI), Bonn Office
- **Adjunct Professor, IPB Indonesia**
- **Editor in Chief, *Forest Policy and Economics* (Elsevier):** http://www.journals.elsevier.com/forest-policy-and-economics/

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Muhammad Alif K. Sahide <alif.mksr@gmail.com> 3 September 2020 20.53
Kepada: Lukas Giessen <lukas.giessen@efi.int>

Thank you Lukas for your quick reply :)

All the best
Alif
[Kutipan teks disembunyikan]

SUBMITTED MANUSCRIPT:

The boom of social forestry policy and the bust of social forests in Indonesia: A power heuristic for assessing implementation outcomes

Abstract

Social forestry has in recent years emerged across a broad set of development policy interests for recognizing the role of local communities in managing landscapes. As a result of such policy, initiatives, governments around the work are passing national legislation promoting social forestry as part of their stated commitments for sustainability and social justice. Social forestry policies represent various objectives, including: recognizing access to rural and forest-dwelling communities, supporting decentralization, enhancing livelihood opportunities, and striving for community-based conservation. Since 2014, social forestry policy in Indonesia has boomed, expanding land area commitments from just 1% of the total area of Indonesia's vast state forests to targeting over 10% designation as social forests, or up to 12.7 million hectares. As part of this rapid expansion of formalizing social forestry, external actors are playing a crucial role in identifying, selecting, preparing, and approving sites. However, external actors and advocates are often surprised by the implementation of social forestry initiatives, and the unintended consequences that can result from implementation. On a policy level, more recent critiques are asking: has the boom of social forestry gone bust? In this paper, we seek to identify the various stages of contestation that determine social forestry outcomes while also developing a framework to help external actors better assess implementation conditions. We ground our research in theories of power, based on framings of access and exclusion to examine the existing institutional mechanisms and their effects, juxtaposing bureaucratic processes with the experience of facilitating traditional land use management practices. We believe our resultant heuristic not only functions as a strategic framework for researchers to assess the various stages and implementation considerations of social forestry, but also provides a handy tool for external actors to approach implementation.

Key words: social forestry; community based natural resource management; socio-ecological systems; access; inclusion; exclusion; influence; external powerful actors; Indonesia

1 Introduction: Making sense of the boom in social forestry permits

Social forestry in Indonesia is increasingly serving as an avenue for expressing populist policy ideals and contesting rural development and conservation programs (Fisher et al., 2018; 2019; Moeliono et al., 2018). Alliances of political actors and advocacy groups promoting social forestry believe this shift represents an opportunity to contest large scale land enclosures taking place across Indonesia. Meanwhile, the idea of social forestry also encapsulates various other social justice and conservation movement interests, including local livelihood empowerment initiatives, recognition of rural Indonesians' right to land, support for vulnerable populations, and increased local authority in support of more sustainable forest management (Sikor et al., 2013). Indonesia's forests in the past decade have also garnered significant international political attention due to the high carbon stocks therein (Boyd, 2010., 2017), and social movement actors have further utilized REDD+ as a means to promote community and indigenous land rights

recognition in Indonesia's state forest lands (Afiff, 2016). Social forestry policy design and designation in Indonesia therefore represents an umbrella mechanism to promote a commitment to a variety of ideals, such as agrarian reforms, addressing land degradation and forest fires, poverty reduction, and reducing violent land conflict (Kane et al., 2018). Indeed, social forestry in Indonesia has boomed as a policy mechanism.

As policy ideal has moved to various applications in the form of social forestry permits, research has begun to make sense of its effects, examining more closely the extent to which social forestry fulfill its stated goals (Maryudi et al., 2012; Fisher et al., 2017; 2019). Maryudi et al. (2012) provides thematic guidelines for evaluating social forestry in a three-part set of principles, which are rights recognition, livelihoods empowerment, and conservation goals. Fisher et al. (2018) applied the Maryudi et al. framework to the early experience of social forestry implementation in Sulawesi and found historically problematic land enclosures, such that the resultant administration systems shape what is possible at any given site, suggesting that the rush in implementation is focused more on bureaucratic outcomes rather than meaningful mechanisms for devolution of authority. Moeliono et al.'s (2018) comparative study of Indonesia and Vietnam also examines social forestry policy implementation empirically, showing the types of policies that developed, and who benefits from implementation. More recently, Sahide et al. (2018) has shown that social forestry is useful as a political tool and can take on new shapes depending on the powerful networks and interests of various actors. Studies across Indonesia are beginning to show the complexity of implementation in many contexts, leading many to critique the transition from policy ideal to project implementation, asking whether the ideals of social forestry have gone bust.

In this paper, we seek to extend the line of inquiry about what determines success in social forestry, or rather pinpoint the various stages that create risks in implementation. In more systematic ways, we aim to support researchers, NGOs, and policymakers that are closely involved in designing, drafting, approving, and evaluating social forestry permits, to help cultivate a better understanding about the extent to which efforts meet desired outcomes. By laying out the different stages of social forestry engagement and incorporating a rich background of case studies, we develop a framework for external actors to develop ways of seeing the stages of social forestry implementation. Through these distinct stages, we thus introduce a clear methodology for assessing social forestry outcomes that is steeped in a strong tradition of theories of power. In short, amidst the boom of policies supporting social forestry designation, we aim to provide ways for assessing whether policy implementation has succeeded, or whether they go bust.

In this paper we begin by laying out the current conditions of social forestry in Indonesia, including the types of schemes and figures, as well as the bureaucratic mechanisms for implementation (Section 2). After this more contextual section, we draw from theories of power to help us develop a framework for application in the context of social forestry in Indonesia (Section 3). In this section we engage on more critical theoretical foundations of *access* and *exclusion*, combining with a more processual theory of actor-centered power, to highlight the changes of authority that underpin land dilemmas shaping social forestry. After a brief section on methods (Section 4), we establish a framework based on actors, interests, and other power formulations to examine decision making processes relative to social forestry implementation (Section 5.1). Thereafter, we draw on a set of cases from social forestry sites in Sulawesi, Kalimantan, and Java, which help us to reflexively test the heuristic and connect empirical examples to the

confounding trends amidst policy implementation (Section 5.2), concluding on the implications and directions of the next generation of social forestry projects.

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

Social forestry policy in Indonesia has historically been promoted, supported, and implemented by external actors (Maryudi, 2011). In and of itself, social forestry is part of a broader resistance against the historical enclosure of forests in Indonesia, which set aside 65% of its territorial area under state designation (Peluso and Vandergeest, 2001). Therefore, those that promote policies for rural development on behalf of marginalized communities view their success in terms of tenurial access, and one key struggle for achieving this outcome has long been embodied by securing formal recognition of state forests for communities. The international development community has also played an important role, especially in supporting the growing influence of national activism groups for community land rights recognition (Maryudi, 2011; Schusser, 2016). As a result of this longstanding advocacy, recent formal political developments and populist sentiment among certain state actors have begun to incorporate ideals of community recognition into their regulatory frameworks. As social forestry is being translated into more concrete implementation arrangements, the advisory and implementation role of external actors have been significant.

As social forestry policy became entree to the many policy interests listed above, implementation mechanisms emerged involving various institutions. The Indonesian bureaucracy has retrofitted to implement a variety of schemes, including community forests, village forests, community plantations forests, community partnerships, and customary forests.[1] President Joko Widodo (Jokowi) and his administration, who came to power in 2014, and again re-elected in 2019, has 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). As of August 2019, the Ministry of Environment Forestry's (MOEF, or MoFor for references before 2014) published social forestry permit figures covering an area of 3,369,583 hectares (see Table 1). In just five years, the area of social forestry permits has more than quadrupled. The rapid pace of implementation however, has also been accompanied by discontent among external actors that observe implementation of social forestry has not achieved what it set out to do.

On the one hand, the ambitions of achieving targets have received criticism from activists and researchers that the imperative is merely skewed towards printing permits (Royo and Wells, 2012). On the other hand, others argue that achieving permits is a long term strategy, in that achieving designations today can provide legitimacy for future desired impacts (Sahide and Giessen, 2015). Others still, point to examples that have succeeded in challenging local power structures, while critics express that social forestry permits have remained business as usual (Maryudi, 2014). The latter point to the ineffectiveness in creating any meaningful change, or worse, that implementation has led to regressive outcomes that instigate new corrupt practices under the banner of social forestry. Such negative outcomes are also documented elsewhere in the social forestry literature, in which policies compel the creation of new formal institutions that

[1] The various terms reflecting social forestry scheme (e.g. HD, HA, HKm, HTR, etc) is presented in Table 1

undermine existing traditional institutions of authority (Kamoto et al. 2013). Nevertheless, groups are trumpeting examples of success. In one case in South Sulawesi, for example, a network of NGOs claimed that the village forest designations helped to negate land claims among powerful local elites, provided access to credit opportunities for local institutions to expand businesses within social forestry sites, that in turn resulted in better purchasing power for their local products, and furthermore, supported hydropower micro-dam projects for electricity in rural areas (Personal communication with NGO Balang Institut). Given that policies are still new, a mix of of early research combine with rumors, providing both legitimate and illegitimate challenges to the difficult work of praxis. To develop a more systematic framework for assessing implementation, we first turn to theories of power, which help us to build our proposed heuristic.

Table 1. Boom Social Forestry (SF) policy: comparison before and after Jokowi era on printing SF permits[2]

Before and After Jokowi*	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	**	670,828.00	**	1,367,503.0	**	338,060.00	300,608.00	2,734,272,00
Total	**	309,332.47	**	760,878.21	**	250,271.74	94,378.28	3,369,583

*: Using MEFOR regulation 83 of 2016 as the timeline (August 2019)

**: Jokowi's era do not use separated designated area, they used indicative map area that can change each 6 months.

[2] Citing data from the Directorate General of Social Forestry and Environmental Partnerships in February 2018 that total social forestry area permits has reached only 1.42 million hectares. The bureaucracy deems it too ambitious to reach the stated policy goals of 12.7 million hectares with the remaining time leading up to the 2019 election, a political moment for reconsideration. Aware of these challenges, MOEF has 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 have included the main changes in policy approaches before the influential ministerial decision 83 of 2016 as Table 2 to highlight the ways that permits are obtained.

Table 2. Bureaucratic schemes of several social forestry in Indonesia

	Before MOEF 83 of 2016	After MOEFor 83 of 2016
Scheme* 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 MEFOR 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

* 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

3. Land and power: Access, exclusion, and influence

Changing philosophies towards the role of communities in managing land and natural resources resulted in distinct changes among the approaches to governing land and property rights (Ostrom, 1993; 2002; Brosius et al, 1998; Larson, 2010). This has more recently led to an emphasis on rights-based development policies (Cornwal and Nyamu-Musembi, 2004). 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,b). 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).

A theory of access provides a heuristic that helps develop an understanding of the powers conferred in resource politics in various ways (Ribot and Peluso, 2003), including through 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. Using Ribot and Peluso's definition of access as an "ability to benefit from things" Hall et al. (2011) engaged in a more critical framing by examining land and power in terms of exclusion. Within exclusion, or the corollary of access, they showed that "Exclusion is the normal rather than the exceptional state of affairs, and that the very widespread aspirations for access to land implicitly include the wish for a degree of exclusionary power" (2011:6). Exclusion thus allowed for a range of more critical entry points to examining land dynamics, providing a way to understand large scale plantation enclosures, land titling schemes, conservation projects, and "intimate" exclusions from capitalist relations among families. The powers of exclusion are thus shown to manifest in four heuristic categories, namely regulation, the market, force, and legitimation. Theories of access and exclusion therefore draw our attention to who benefits and who loses in land politics.

Although our analytical framing begins with access and exclusion, which indeed provides depth in examining land and development policy applications, we also turn to theories on power dynamics that more specifically explore process. We introduce Actor Centered Power (ACP), which specifically examines the *influence* of *key actors* in the process, particularly how power works in terms of who holds, withholds, and lacks power (Krott et al. 2014). ACP provides a mechanism for understanding why certain actors are powerful and why they are powerless, explained in terms of access to information, incentives and decentives, and processes of coercion. Unlike other applications of ACP (Schusser et al., 2016, Maryudi et al., 2016; Prabowo et al. 2017; Movuh and Schusser, 2012), we do not apply the detailed mechanics of ACP per se to measure power, but rather apply the principles of influence among actors (through dominant information, incentive and coercion), relative to access and inclusion in social forestry policy in Indonesia. Therefore, as we build our framework in the ensuing sections, such theories provide the precursors for generating a heuristic across the stages of social forestry policy formulation and through the stages of application.

4 Method

4.1. Methods of developing the heuristic

In developing a heuristic we have chosen to incorporate three considerations based on the theoretical framing of land and power above. First, we focus on the powerful actors that implement social forestry. Maryudi (2011) has clearly shown the phenomenon within social forestry indonesia that powerful external actors have undue influence in mobilizing and establishing social forestry. Therefore, the notion of external actors is a key part of our framing. By external actor we mean 'outside facilitators,' which can consist of both state or non-state actors. In other words, these individuals and institutions are non-locals that seek to deliver programmatic support, either long term or sporadic, through: (i) providing grants and other financial support, (ii) advocating particular social forestry policy schemes and internalizing them at target locations, (iii) facilitating participatory local planning agenda such as community mapping, (iv) assisting administrative procedures and proposal development, (v) actively forming new, and/or empowering existing local institutions, (vi) networking and advocating with decision making actors elsewhere, (vii) broader policy advocacy and involvement in designing regulations, and (viii) livelihoods assessment, support, and marketing of products.

The second consideration is that upon identifying the external actors, we focus on the interventions that they are mandated to perform. We are thus interested in the intervention as a process because it presents an avenue for investigating the way that power works in directing the implementation of social forestry. Within a particular intervention external actors exert their *influence*, and thus determine the terms for the way *access* operates, and the implications for *exclusion*.

Our third consideration is to simplify our approach into three distinct facilitation phases whereby the external actors work. We thus separate social forestry into its component stages of engagement. To identify these stages in the Indonesia context we draw from the work of Devkota (2010) in Nepal, which he has divided into phases that include: i) initial stage, ii) formal hand over, iii) implementation, and iv) normal operation. Given that the boom in social forestry is still relatively new however, we tailor Devkota's phases for the Indonesia context to focus on the preparation and implementation stages, distinguishing across the three main areas of political contestation, namely: i) initial stage, ii) formal hand over; iii) [combining] implementation / normal operation.

4.2. Methods of selecting the case

Development of the heuristic is based on in depth discussion among the various authors about the key inflection points of SF implementation. Each of the authors also carried out field observations at social forestry sites from across Indonesia, with in depth engagement on sites in Sulawesi, Java, and Kalimantan, which guided the considerations that led to the sequencing and content of our heuristic. The research is based on participant observation, policy analysis, and active involvement in SF policy and implementation across Indonesia. By participant observation, we mean that the authors were actively involved with external actor interventions, as either facilitators, or at the very least as observing facilitations of SF development and implementation in Indonesia.

To draw from more in-depth case study analysis for testing the framework, the author team selected a representative set of sites. We also focused on the key priority areas of social forestry regulatory engagement. Table 1 shows that the initial emphasis on social forestry was geared towards HTR. In particular the designated area of HTR in the pre-Jokowi era was 44.48%, which accounted for almost half SF designations. Therefore, for our analysis of the initial stage we selected the overall national experiences of HTR. Furthermore, Table 1 also shows that very few HTR designations received management rights (6.11%). After Jokowi became president, SF schemes reoriented towards SF approaches emphasizing village and community forests (accounting for 89.05% for management rights). In examining the formal handover of management rights, we selected a compilation of cases from Bantaeng, South Sulawesi, a region well-known for its ambitious targets for designating village and community forests. For the final stage of our heuristic, implementation, we selected an example from Konawe Selatan, Southeast Sulawesi. This case provided a useful example whereby numerous external actors were involved in supporting SF outcomes. The Konawe Selatan case also helps to highlight power contestations during implementation.

Observations based on Van Evera (1997) also helped guide us on the application of our research, drawing from critical theories but taking them to the field, making observations to generate data without imposing external stimulus on the situation. We thereafter questioned whether observations were compatible with our heuristic.

5 Results

5.1 Proposing a "boom-bust" framework: A heuristic power assessment for delivering policy commitments

Based on the theories of power described above and the reflexive methodology -- which goes from framework to case study, and further refines the framework -- we have developed a heuristic model that provides an analytical tool for assessing the extent to which external actors can influence processes at different stages. In line with the broader aim of this paper, we have called our heuristic tool the "boom-bust" framework to clearly distinguish between implementation risk and corrollary opportunity. Furthermore, we present the framework in this way in order to support external actors efforts to avoid the potential unintended consequences of advocating exclusionary effects that further marginalize the beneficiaries intended social forestry programs are envisioned to support. Table 3 provides a brief narrative summary of the power contestations and considerations that are anticipated to arise through social forestry implementation, which we arrive at from the case studies described in the following section as well as our longstanding experience and engagement in the field.

Table 3. The boom-bust heuristic power assessment of external actors relative to their power considerations

Code	Intervention Considerations by External Actors	Contested Power Considerations and Examples
	A. Initial Stage	

A1	**Selecting SF Schemes:** Based on local needs and aspirations, and ensuring appropriate schemes meet local ecological conditions	Program mandates influence scheme selection without proper consideration of alternative options, often due to donor driven requirements, subjective assessments, or fulfilling target areas. These considerations can result in coercion from specific actors imposing specific schemes, which can intern result in incentives/disincentives to support one scheme over another
A2	**Inclusivity:** - Ensuring that target populations (e.g. local stewards and selected members based on need) are incorporated **-** Key local actors with decision making powers in the village, and bureaucratic support/facilitation of the process (e.g. forestry extension officers and forest rangers, district government actors, and local Forest Management Unit (FMU) support) - Other local vulnerable actors	Insufficient and partial facilitation can result in dominant information only for elite groups or create specific alliances. This can create incentives/disincentives for involving only specific actors based on motives to benefit from project resources. As a result, coercion can negatively impact vulnerable groups
A3	**Conflict prevention, management, and resolution mechanisms:** Iin place in order to avoid any new conflicts created prior to SF scheme proposal	Conflict prevention mechanisms are rarely explicitly conducted at the outset. They are generally developed as a response mechanism after a conflict occurs. However, greater attention and considerations of conflict mapping can provide a powerful tool for developing better understanding of actors and potential points of friction that can lead to conflict.
A4	**Initial Participatory Planning:** - Participatory assessment of livelihood-market-environment-institutions - Participatory mapping ensuring clear discussion of border areas and potential management considerations of selected SF schemes in particular areas, (including, e.g. boundaries of individual or farmer group management responsibility)	External information tend to be driven by normative/regulatory document plan requirement. On the one hand, this results in the development of plans without local understanding or buy-in. On the other hand, new institutions are formalized due to planning requirements, rather than strengthening existing local management actors and groups. The short mandates for intervention and requirements to quickly develop plans result in external actors selecting activities based on programmatic incentives that do not reflect local needs. Therefore, external actors select information for their own interests in achieving programmatic targets, rather than toward long term SF goals.
	B. Formal Handover	
B1	**Administrative proposal and SF scheme approval:** Further to the planning stages in A4, the approval of administration processes are the main mechanisms for obtaining management rights.	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.
B2	**Reinforcing local institutions and continued involvement of external actors:** - Local institutions have a clear understanding of the rights and responsibilities of SF management. - External actors express the extent of their continued support in the process and clearly understand shared responsibility between local stakeholders and management institutions	As SF approval has become the key target during the recent policy boom, opportunities to benefit for SF schemes can end here. A project mentality often weakens agreements, undermines planning documents, or supersedes regulatory processes. In such cases, local institutions do not receive any additional support on their management responsibility and may still be confused about their rights to do so, and are expected to fulfill land management expectations without necessary resources. A key question at this stage also revolves around the facilitator, and the extent to which the effort has created a new dependency towards intervening actors, either facilitators for reporting requirements or external actors for land management responsibility. Finally, the question of upward accountability is also important, in that local institutions can demand requisite support from external actors, be it state or non-state.
	C. Implementation	

C1	**Developing, approving, and implementing management plans:** - Traditional land use management is reflected in the formal local forest management plans - Local actors empowered to develop normative plans and have the authority / capacity to implement, evaluate, document, and report	Similar to B2, above, management plans are often developed during interventions by consultants and external actors. Professional consultants follow templates from other sites and expose local institutions to interpretations and authority from elsewhere. If the local institutional context is not reflected in the management plans, and if it is not actively developed by key local actors, this can weaken local roles and authority to understand, undertake, and benefit from their responsibilities. To expedite the development of complex planning documents however, consultants and NGOs have become strategic at drafting management plans by conducting consultations through focus group discussions. However, this does not ensure that plans are created based on local needs and local management interests, rather reflecting trends from other places to fulfill documentation, or justification for meeting programmatic targets.
C2	**Livelihood benefit and management:** - Maximizing utilization of forest products (timber, non timber, ecosystem services) for local livelihood in individual and group farmers, or other cooperative/management mechanism - Implementation of fair benefit sharing mechanism - Fair market value for local actors.	Adequate assessment of existing resources and potential development for a given market are the most important element of successful SF schemes. Livelihood benefits should reflect local interests and have the existing resource potential, as well as adequate information sharing about the market. Local political economic considerations and power actors are prone to manipulating the revenue generating benefits of SF schemes. This can lead to external actors making suggestions on the cultivation of particular crops, or manipulating price collection, potential entry of loan sharks and unfair practices by middlemen, and others taking undue benefits from particular cultivation or harvest plans. Furthermore, recent trends on socio-entrepreneurship risk external actors involving themselves in the benefit sharing mechanisms in unfair, manipulative, and coercive ways. Finally institutional requirements on revenue generation from village enterprises and SF management responsibilities (e.g. the village law and creation of BUMDes) also demand revenue collection within a small window, affecting successes and limiting the potential for longer term investments among local institutions.
C3	**Ensuring conservation and forest protection:** Local empowerment and institutional support on protecting SF area, and also incorporating SF management as part of broader landscape approaches. Institutions of common property management should also be closely examined and carefully understood to identify appropriate incentives	SF policy interests have largely focused on rights, conflict resolution, and the social elements. However, conservation actors in particular have grown distrustful of devolving management authority. Meanwhile, biodiversity and ecological data collection and monitoring systems remain largely undeveloped, and local knowledge remains unincorporated in resource management decisions. Are external actors in support of conservation actors, or geared towards policy trends that are interested in the social elements, or are there ways to bridge these elements into new, site specific, carefully designed, co-management innovations? In some cases, SF implementation leads to greater restrictions, such as committees imposing stricter rules on their members (coercion) to foster conservation and forest protection. This leads to disincentives among members and can splinter into new localized conflicts.

5.2 Contested power in the context of external actor interventions: Examples from each heuristic level

5.2.1 Initial stage example: Rushing Community Forest Plantations (HTR) trials

In this example we will explore the national case of HTR, or community forest plantation schemes. The case of HTR across Indonesia provides an ideal example for highlighting how power contestations unfold during the initial stage. In this section we will briefly describe the background of the case, present empirical information on the various ways that interventions influenced scheme selection, inclusivity, conflict resolution considerations, and participatory planning. In this way we show how a popular scheme ultimately became a clear example of SF permit preparation gone wrong.

The HTR scheme became popular in the early 2000s. It was one of the most popular schemes among forest farmers for various reasons, as follows: (i) It is the only SF scheme that can be accessed by the individual farmer [3]; ii) the scheme provides individual farmers access to

[3] Although individual farmer rights have to be integrated as part of a group management plan

financial support by the forestry ministry for a revolving fund that can be used for community plantation management; and (iii) the scheme also had the least requirements and formal procedures for obtaining logging permits. Due to these assumptions, the local forestry management unit (BP2HP) in preparing for social forestry programs did not provide information on the various schemes available to communities. This encouraged communities to accept HTR schemes and prepare proposals quickly. Furthermore, the revolving fund became a key incentive of designation, and the focus became local interests in obtaining these funds, often which were not used for their targeted purposes.

Scheme selection also impacted the potential inclusivity of local stakeholders. The local management issues were not well identified as part of SF scheme preparation. For example, the information and incentives were closely dependent on BP2HP. Therefore the local extension officers and the facilitators to connect program information with local actors were limited. Secondly, there was lack of identification of the stakeholders that require program support, and any opportunities were controlled by local elite actors that may not have had any involvement in land management at target sites. Third, elite actors also sought to gain access to revolving funds for purposes that might not have been clearly connected with the sites in question. Conflict resolution mechanisms were not considered and there were no initial signs that conflict might occur. However, once the HTR logging permits (IUPHHK-HTR) were issued inconsistencies and unfair practices became apparent, exposing patron client networks seeking to benefit from state-sponsored programs. Those that were targeted for the program did not receive benefits and at times the locations were incorrect. This created tension among local actors that received significant attention.

Initial participatory planning engagement rarely took place in any deliberative or meaningful way. One exception is in Konawe Selatan, discussed below in section 4.2.3. However, for the most part, due to the rush to obtain logging permits, participatory planning elements were overlooked. Our analysis of HTR schemes found settlements and village centers located within HTR Permit areas (example from *Guliling Selatan* Farmer Group, Mamuju). In numerous cases, indeed almost all districts in South and West Sulawesi provinces, included differences between community management sites and the location of HTR permits. We even found sites that did not distribute their maps, whereby information were shared only between local elites and program facilitators, and provided numerous opportunities to manipulate the program (cases from local farmer groups in *Assamalebbuang* and *Ranga-Ranga*, Mamuju District).

Our observation is also supported by Hendartin (2012) who investigated revolving funds in Riau, South Kalimantan and West Java provinces. Hendartin found that these HTR programs have main implementation problem of "the right location," "the right actors," "the right activity," and, the "proper disbursement and repayment of loans".

In sum, the rush to implement SF schemes created skewed incentives that resulted in actors seeking to benefit from program mechanisms. Potential economic benefits led to numerous cases of elite capture and patron-client arrangements that have been widely criticized of HTR schemes. Acceptance for the HTR schemes were aggressively pursued by external actors without considerations of other types of schemes that may have been more appropriate. Facilitation processes were either overlooked or conducted in a limited fashion negating opportunities at cultivating inclusivity of stakeholders. External actors were too dependent upon one agency and did not have the requisite accountability mechanisms. Preparation also favored networks with

local elites that created skewed incentives, especially geared towards simply achieving formal targets for issuing management rights (IUPHHK HTR). We also observed that support for local government is very weak.

5.2.2 Formal hand over example: Emulating bureaucratic requirements and unintended effects

In 2010, village forests (HD) began to receive more widespread policy interest, and cases in Bantaeng, South Sulawesi received national attention as a good example from the eastern part of Indonesia. Bantaeng became a site that other places would come to learn about how to emulate HD. Upon success at three sites in Bantaeng (Labbo, Pattaneteang, and Campaga), eight other communities sought to implement the same schemes and was supported as part of a district initiative to achieve 100% SF coverage. To highlight power contestations within the formal handover process, we examine these eight communities from Bantaeng and show the ways that initial stages were overlooked and rushed to fulfill ambitious targets in formal handover processes. It also exposes the creation new and unexpected arenas of power contestations. Cases from Bantaeng are representative of various sites across Indonesia in this respect, seeking to achieve SF targets by quickly securing formal handover, which also initiate new political possibilities. Herein we highlight how several villages came to learn from existing HD examples in Bantaeng and emulated them at their sites. Although the cases eventually lost their management rights, the cases show how the formal handover process gives rise to its own power contestations, specifically related to administrative processes governing scheme approval and the lack of reinforcing institutions without corresponding facilitation support.

Upon gaining attention for three HD sites in Bantaeng, eight other communities became interested in making similar claims (A *Pabbumbungan, Bonto Lojong, Bonto Marannu, Bonto Daeng, Bonto Tangnga* and *Bonto Karaeng*, and two additional villages proposing community forestry schemes in *Kayu Loe* and *Onto*). Their claims also received support from the district government and MoFor's influential watershed management committee that sought to achieve national attention on progressive SF policies. In 2011 these 6 HD and 2 community forests (HKM) were approved by MoFor through administrative support by a local university and NGO. Each village scheme proposed also included state forest maps as an attachment for each proposal but had not undertaken the careful planning that went into securing permits at the three initial sites. Proponents -- including village leadership, district and provincial officials, as well as the university and NGO facilitators -- argued that this is a long process to secure management rights from the governor. Proceeding to administrative proposals and achieving spatial area recognition first, would allow for discussions on internal arrangement thereafter.

One of the most political elements that such formal handover processes created was the power of the map that emerged from administrative approval. The map included spatial boundaries of forest zones and village boundaries, and when complemented with participatory mapping, numerous inconsistencies were exposed. Without a robust land cadastral system in Indonesia, the map unsurprisingly contained numerous overlapping boundaries with other databases. Such overlaps are common and are a source of significant conflict, but the formal handover process and the inclusion of accountability mechanisms like maps, allowed for new considerations to emerge. A local NGO, Balang, sought to conduct participatory mapping to generate more accurate field data once inaccuracies in the formal maps were identified. As

Balang identified these issues with national actors however, remaining bureaucratic inconsistencies resulted in pending designations for formal handover. As of 2018, none of sites never received management rights. Continued facilitation by external factors to address inconsistencies in administrative systems could create a major breakthrough in governance reforms in Indonesia towards policy accountability, but also show that forcing interventions can run up against new administrative rules that preclude further engagement.

5.2.3 Implementation example: Success to what ends?

As mentioned in the cases described in 4.2.1 above, HTR received concerted policy support for its simplicity and ability to provide timber harvest rights. Currently, social forestry policy observers consider HTR as a policy that did not live up to its expectations of quickly handing over rights to individuals and community groups. One site that is often described as a HTR success is the case from Konawe Selatan, Southeast Sulawesi, which we explore in this section. Herein we show that this site had a strong and well known traditional land use management plan of *jati muna.*[4]4 We highlight how a strong coalition of external actors came together to showcase the site as a success in formal implementation. Within the formalization process however, we show how power contestations emerged in light of the defining successes of social forestry.

In 2000, external actors began concerted efforts to facilitate local community actors around their Jati Muna groves. Local forest farmers in Konawe Selatan have a long, and well-known history of traditional experience in managing '*jati muna*' stands as part of an intricate forest landscape system (Azhar, 2007). These systems were undermined during past centralized forest management systems. With the potential for introducing social forestry programs local, forest farmers were enthusiastic to share their experiences on expanding jati muna management areas. A large group of external actors were involved throughout the initial stage and formal hand over, including: International NGOs like the Tropical Forest Trust (TFT), national and local NGOs including JAUH, Telapak, Forest Watch Indonesia, Samdhana Institute, and the Sulawesi Community Foundation (SCF), quasi-governmental organizations such as the regional commission on social forestry (Komda SF), MOEF civil society committee (Working Group Pemberdayaan), as well as state bureaucracies, such as MOEF water resource agency of the Sampara region, Provincial forestry agency, and the Konawe Selatan district agency. These groups were committed to working together over the longer term to conduct participatory planning, capacity building, and even supported creation of local institutions, followed up with livelihood empowerment programs, and establishing and supporting local economic ventures / cooperatives. These groups partnered together in part due to their interests to fulfill successful social forestry examples, one that could provide specific examples of local engagement innovations for national policy contexts, creating precedence on new mechanisms and guidelines.

Initially the site was set up as a working area of social forestry (AKSF) and received a permit for timber production (IUPHHK). To receive this permit, several steps were required. The NGO JAUH served as the core local facilitator for site preparation and supported communication between farmer groups. They received the formal IUPHHK-AKSF designation of 38,595 Ha through MoFor letter S.405 of 2004 with 8,464 member households. At that time social forestry

[4] Jati muna is a specific Teak (Tectona grandis) variety from the Muna region of Southeast Sulawesi**.**

initiatives under AKSF in Konawe Selatan had far exceeded efforts at other sites in Indonesia that ran up against regulatory challenges. Be that as it may, the permit never achieved formal authority for implementation and thus precluded any follow up efforts. Faced with these regulatory hurdles, the international NGO Tropical Forest Trust refocused facilitation efforts on private lands to develop community forest schemes. The program sought to convene jati muna farmers to gain Forest Stewardship Council (FSC) certification, which would significantly increase the value of their products. District governments were also enthusiastic of these arrangements due to the revenue generation potential from such certification and also began listing figures for this added value at IDR 256 million. It is important to emphasize that such revenues came from private lands among forest farmers because social forestry initiatives on state forest lands were still hampered by regulatory considerations.

In 2009, attempts re-emerged for addressing social forestry designation on state forest lands, with MoFor designating an area of 4,640 ha in Konawe Selatan as HTR (through MoFor degree No. 1353 Tahun 2009). However, new issues came to the fore. There were overlapping claims between local community members and FMU (Gularaya). There were also Tolaki indigenous rights claims with state forest lands that both sides considered illegitimate. Furthermore, internal conflicts also began to take place between the cooperative group (KJHL) and the IUPHHK-HTR group membership for social forestry. There were also boundary disputes that had not yet been addressed. Finally, there was also ex-industrial forest plantations, which had not received detailed and technical guidelines about their future management direction. Therefore due to numerous outstanding complex and contentious issues, people focused on their own forest lands and achieving high-value certification. Because HTR became so difficult to manage as the intended jati muna stands, potential claimants decided to develop less invasive cultivation systems, such as non-timber forest products in the form of ginger groves.

While this case is often described as a success of social forestry, actual social forestry implementation never took place on state forest lands as had been intended. This site benefited from intensive cooperation and interest by external actors that were interested in staying engaged over the long term. Success in terms of forest management did take place on private lands, empowering jati muna farmers to access new markets through certification schemes. When compared with other sites in Indonesia, this case had a strong basis for traditional forest management sites. This is unlike many other places in Indonesia that set up institutional structures by following guidelines set forth in MOEF documents.

In Konawe Selatan, there were indeed livelihood benefits with those that were able to access certification schemes, and to some degree, for those that took up ginger cultivation in state forest lands. External actors had a hand in achieving those goals. External actors also acted as a strong advocate in the initial stage and formal handover stages, but as this case has shown, implementation could not proceed further. External actors were largely powerless to ensure that plans moved forward after a certain extent.

6 Conclusion

In this paper, we have clearly shown how the implementation of social forestry schemes have the potential to result in unintended consequences, with the potential for eroding the traditional and local land use management systems they were intended to empower and protect.

Worse, social forestry can initiate new relations of inequality and create new forms of inequality. Other social forestry research in Indonesia have already been pointing to similar results. The focus of this study rather, has been to develop a framework that assists external actors in identifying the extent to which a social forestry is at risk, and in what ways interventions present new opportunities for empowering local communities. Our framework, which we have described as the short-hand the “boom-bust” framework supports new ways of identifying the ways that risks might emerge at various stages of an intervention. We believe that the boom-bust framework also offers ways for various external actors to evaluate a social forestry initiative, whether individuals interested in conducting more analytical research on power analysis, or among those responsible for crafting and implementing social forestry projects.

The boom-bust framework is innovative not only for its practical applications for assessment, it also attempts to combine theoretical engagement around power regarding land and natural resources. In this way we have begun with theories of access as our starting point, which is further critiqued by the powers of exclusion, to highlight not only who can gain access to land, but also who loses. Meanwhile, we have also turned to the process elements of power, drawing from research on power dynamics encapsulated by actor-centered power. For the purposes of our heuristic however, we have zeroed in on identifying the ways that external actors exert and negotiate their influence over a given intervention.

Furthermore, we have not limited our engagement on theoretical dimensions of creating a framework, but rather have reflexively introduced three distinct case studies based on different external types of external actors to help further sharpen our analysis. In the first case presented, in South and West Sulawesi provinces regarding HTR, we pinpointed how government agencies (BP2HP and the District Forestry Agency) facilitated the initial stages of implementation and unwittingly created the potential opportunities for elite capture by omitting key accountability mechanisms. This case highlights how the influence of the formal bureaucratic elements were utilized as the primary means for negotiating outcomes without any meaningful engagement on the existing traditional land management systems that social forestry had intended to empower.

In the second case, we focus on efforts by a local NGO to support a bottom up initiative. In this case from Bantaeng, the local NGO succeeded in mobilizing efforts in the initial stages through processes of participatory mapping and community engagement. However, as articulation of social forestry designation evolved to the formal handover processes it quickly became clear that project preparation was heavily contingent on the role of the local NGO. The corresponding capacity to fulfill the management plans prepared by the NGO had not been transferred to local community actors. As a result, the local community was unable to fulfill the reporting requirements nor undertake the management responsibilities that had been described in the terms of the social forestry permit.

Finally, we also consider that each stage has its own unique power contestations. External actors tend to think of social forestry as a distinct and singular category within various permitting options. In this paper we have shown that they emerge in very different ways across various different phases of an intervention. Rather than lumping all SF cases into the same category external actors need to beware of the power elements that emerge in distinct ways across these phases, and the corresponding capacity required to influence outcomes and avoid unintended consequences. For example, in the third case we presented from Konawe Selatan, we saw how external actors had undue influence in selecting the site for designation, but once implementation

took place, they were sidelined by the forest estate, only able to work on private lands or faced with a completely different set of implementation options (non-timber forest products).

Social forestry has indeed come to embody various strands of development policy ideals, that range from rights recognition and social justice, to livelihood opportunity, and conservation outcome. Nevertheless, our cases show just how difficult it is to move from a broad set of national strategies to the realities of project preparation, day-to-day management, and the overall enabling conditions that must be present to support the empowerment of local communities. In this way, this article has shed light on the overall boom of social forestry and the bust of social forests. In a more proactive sense however, we have also moved towards developing a framework that can help to more systematically address these confounding analytical considerations, which we also associate with the broader theme of this paper under the heading of the "boom-bust" framework. The framework thus provides a clear and methodical approach for those that remain committed to the policy ideal of social forestry, and is willing to more critically engage in the difficult work of working towards realizing such ideals.

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Response to the reviewers/editor's comments revision for manuscript revision

Thank you very much for these excellent reviews. We are delighted that both reviewers saw the merits of the paper and encouraged us to be more ambitious in our scope. We have heartily taken on this challenge. Our responses are therefore contextualized with two broader points. The first is that we have significantly deepened our engagement on the access-exclusion framework. We feel this is a major improvement of the paper and we believe could provide a significant contribution to theories of access and exclusion. This is particularly timely as a recent revisit/review of a theory of access has pointed out the shortcomings of deeply engaging with the theories and applying it as a rigorous framework. We feel the current version of this paper meets this challenge. The second major challenge that we have taken very seriously by commentary from the reviewers was to go into more depth in applying the framework to the case studies. We have therefore improved our paper both methodologically and were much more systematic in showing how the framework relates to the case studies. The only shortcoming on significantly expanding on these two aspects is that the paper has also gotten longer. However, we believe that based on the reviewer comments the length is adequate for what it delivers in content.

1	Please revise the manuscript based on reviewers comments, especially for definition of key words, reference, introduction, methods, analysis and discussion, etc.	Thank you very much for this review that allowed us to significantly improve our paper.

Response to Reviewer 1

1	This manuscript examines the determination of success in social forestry policies in Indonesia though there is no definition of "success" in social forestry. Clearer definition is needed.	Thank you for this comment. We have clarified this point throughout the paper, engaging with the normative elements of success in social forestry, and going into more depth in the literature review about what consists of success in social forestry.
2	The authors argue that external actors and advisers are surprised by the results from implementation and unintended consequences. This needs references and explanations of what the unintended and intended consequences are.	We have also significantly addressed and reworked this point, clarifying in much more detail the references and the outcomes of social forestry implementation to date, foregrounding theories from Indonesia, Southeast Asia, and around the world.
3	My main concern is that I cannot understand what analysis the authors did. In other words, it is not clear how the results are obtained from the analysis. The considerations stated in table 3 might be known as conditions for successful forest management. In addition, it is difficult to understand how the results link to case studies	See header explanation above. This is a great comment by the reviewer and it has provided us the motivation to conduct a much more detailed and rigorous study, which is detailed in the current version. Table 3 has especially undergone restructuring, incorporating

	and the authors' experience. Clear what the authors' experiences are.	two distinct columns of access and exclusion.
4	Section 3. The theory of access (Ribot and Peluso, 2003) seems not related to the analysis in this manuscript. This section should be removed or needs more explanation of how it links methods of the manuscript. Otherwise, I hardly believe that section 3 is meaningful.	Theory of access is fundamental to this research as we hope we have now been able to convincingly show.
5	In section 4.2, the authors explain that they conducted field observation in some sites, however, it is not clear why these sites are selected and I am concerned that these sample sites may suffer from the problem of lack of representativeness in social forestry policy in Indonesia. In addition, the authors mentioned that this research is based on participant observation. I cannot find the results of observation or explanation of what the participant observation is.	Indeed any case study suffers from the issue of representation and generalizability. Nevertheless, we have taken on this challenge to be more specific on our selection of sites. We have also selected new sites for this paper, and highlighted we selected the sites that we did. In addition, we also show that the authors triangulated findings with cases in Papua, Kalimantan and Java, due to our research team's breadth of experience across numerous social forestry sites in Indonesia
6	In result section, state only the results obtained from the analysis. For example, in 5.2, the authors introduce some examples. I do not imagine that these introductions come from the authors' analysis.	This was an important question for the previous version. It has also helped us to redraft a significantly improved draft and we believe that this comment is now thoroughly addressed.
7	Page 2, line 10. Maryudi et al. may be Maryudi et al. (2012)?	Yes, fixed!
8	Insert tables in places right after statements.	Hopefully the spacing and re-outlining makes for an easier and smoother reading experience.

1	Overall notes: I think that this piece has several strong contributions to make, after it is significantly revised for resubmission. First, it provides empirical examples of how social forestry has been, and is being, implemented. Most of the literature on Indonesian Social Forestry lacks empirical evidence. This is the strongest contribution this manuscript can make. Second, the heuristic it uses to examine Social Forestry in Indonesia has promise, though it is not yet sufficiently explained or operationalized. Considering who implements Social Forestry and how is crucial to understanding when and where projects occur and with what outcomes. Drawing attention to access, exclusion, and influence is important for assessing the shift from policy to implementation. Clarifying the heuristic, ensuring that cases clearly indicate how they are drawing on it, and providing a succinct summary table will strengthen this manuscript. Please find my more specific comments, below. All the best.	Thank you very much for this review, that allowed us to significantly improve our paper.
2	Abstract: - Typo: "As a result of such policy, initiatives, governments around the **work"** - "We believe our resultant heuristic not only functions as a strategic framework for researchers to assess the various stages and implementation considerations of social forestry, but also provides a handy tool for external actors to approach implementation." o Better: "Our analytical method functions as a strategic framework for assessing the implementation of social forestry as well as a tool practitioners may use to implement social forestry."	The abstract has been rewritten to address these points. The edits were much appreciated!
3	Highlights: Grammatical issues	Thanks, we have conducted several additional editing for the current version and hope we have addressed these grammatical issues.

4	Abstract: "We apply the framework to two emerging cases in Sulawesi Selatan to examine whether Essential Ecosystem Area policy *anticipates a new future of conservation management or remains tied to existing rigid bureaucratic structures*. Findings from the two cases, point to the latter". Can policy anticipate – or perhaps better to rephrase as what the authors anticipate of the policy outcomes.	Language has been changed. Thank you for pointing this out.
5	Introduction: - "As policy ideal has moved to various applications in the form of social forestry permits, research has begun to make sense of its effects, examining more closely the extent to which social forestry fulfill its stated goals (Maryudi et al., 2012; Fisher et al., 2017; 2019)" o This sentence is grammatically problematic, and it is too awkward. o Better: "Recent research examines the extent to which Indonesian social forestry policy is fulfilling its stated goals."	Thanks for the recommended edits. We accepted them all and then made further changes as the content and analysis of the paper changed.
	- "In short, amidst the boom of policies supporting social forestry designation, we aim to provide ~~ways~~ **a method** for assessing whether policy implementation has succeeded, or whether they go bust." o I like this sentence. It's clear and catchy.	Thanks
6	2. The rise of Indonesian social forestry policy and current policy approaches - "Social forestry policy in Indonesia has historically been promoted, supported, and implemented by external actors (Maryudi, 2011)." o Actors external to what? Are you suggesting that local and indigenous people are external actors? If so, this is problematic. Please rephrase for clarity. o This term is clarified in the "Method" section. However, it is too unclear to use without clarification from the beginning. Either rephrase this sentence or clarity or provide the definition of external actors from the beginning and repeat it in section four.	The previous version included significant attention on external actors. This is not such a central focus of the paper any longer. The methods has also been split into two distinct new sections, one detailing how we came up with the framework, and the second showing how we applied the framework and the context of each of the case study sites.

7	- "As social forestry policy became entree to the many policy interests listed above, implementation mechanisms emerged involving various institutions." o Better: "As social forestry policy increases in scale and scope, many different administrations, organizations, and individuals become responsible for its implementation."	Thanks for the edits!
8	- Problems with Table 1 o Formatting o Table 1. Boom Social Forestry (SF) policy: comparison before and after Jokowi era on **printing** SF permits2 § Printing permits is a strange choice of words o Footnotes contain grammatical problems	Fixed, thanks!
9	- For "Table 2. Bureaucratic schemes of several social forestry in Indonesia" o Please list the individual regulations from which the information on "Before MOEF 83 of 2016" comes.	We have followed this suggestion and also included a pre- and post- distinction
10	3. Land and power: Access, exclusion, and influence "The paradigm shift on the role of local actors in the management of natural resources" o Use of the words "paradigm shift" are problematic. Substitute "Growing recognition of the important role local actors play in the management of natural resources." o Explanation: The existence of more rights-based development policies is not sufficient to justify the claim of a "paradigm shift" regarding the role of local actors in natural o resource management. Most of the world's forests—much less land—remains controlled by the state, without any attempt to include local or indigenous people. Indeed, even in Indonesia, moving the needle from 2% to 10% of the Kawasan Hutan to be managed or co-managed by user-groups represents a major change, but it still falls short of a paradigm shift. o This may seem pedantic, but a significant number of studies examine policy change for evidence of paradigm shift. - ~~"Therefore, as we build our framework in the ensuing sections, such theories provide the precursors for generating a heuristic across the stages of social forestry policy formulation and through the stages of application."~~	Thanks for all these detailed comments. It was really helpful for us in improving the manuscript.

	○ Delete		

11	4. Method 4.1. Methods of developing the heuristic - ~~In developing a heuristic~~ We ~~have chosen to~~ incorporate three considerations based on the theoretical framing of land and power **to develop a heuristic to understand the implementation of Social Forestry** ~~above~~. - I find the notion of "external actors" playing an outsized role in Indonesian Social Forestry to be true not just of Indonesian Social Forestry, but of forest resource management in general, within and outside of Indonesia. o This might not be problematic for the heuristic, but it at least needs to be addressed, since the text seems to frames this involvement of "external actors" as novel to Social Forestry. o Literature that examines the technocratic and professionalized nature of forest management would be good to highlight briefly as evidence of this point. A recent starting point (as there are countless examples) is : Lund, J.F., 2015. Paradoxes of participation: The logic of professionalization in participatory forestry. For. Policy Econ. 60, 1–6. https://doi.org/10.1016/j.forpol.2015.07.009 o That said, is there anything about Indonesian Social Forestry that draws external actors in, more than other forms of forest management or even participatory/community forest management in other contexts?	This comment has been addressed above regarding the methods. We have also included Lund's paper in the current version and engaged with this study in several ways. We also addressed the point on external actors above, as it is no longer a central piece of the paper.
12	- I think that deleting "external" might help. I keep getting caught-up on that word. Actors may not even be external! Think of social forestry liaisons and extension agents—they aren't always external.	External issue addressed, thanks!

13	4.2. Methods of selecting the case - General comment on this section: ○ Section 4.2 seems a bit disjointed and undeveloped. I suggest reorganizing like so: § Move the second paragraph to the first, describing where case study locations are and why, based on their relevance to different stages of Social Forestry implementation § Streamline the other paragraph, focusing it on how participant observation was carried out in the field. Use the citation from Evera (1997) to substantiate this. Perhaps provide more information on authorial involvement (difficult in a peer review process, I know, but keeping information anonymous should be sufficient).	This point addressed above. The methods section is much more detailed now and fully engages with these considerations.
14	- "Development of the heuristic is based on in depth discussion among the various authors about the key inflection points of SF implementation. Each of the authors also carried out field observations at social forestry sites from across Indonesia, with in depth engagement on sites in Sulawesi, Java, and Kalimantan, which guided the considerations that led to the sequencing and content of our heuristic." ○ Delete this. You mention authorial involvement below, which is important and valuable. However, this text reads as anecdotal.	Done!
15	- "**[Case]** research is based on participant observation, policy analysis, and active involvement in SF policy and implementation across Indonesia. By participant observation, we mean that the authors were actively involved with external actor interventions, as either facilitators, or at the very least as observing facilitations of SF development and implementation in Indonesia."	Agreed, fixed!
16	- "for our analysis of the initial stage we selected the overall national experiences of HTR." ○ I will admit to being doubtful at the asymmetry between choosing a "national experience" as a case, and two specific case studies.	We have selected new cases to address this issue.

17	- "Observations based on Van Evera (1997) also helped guide us on the application of our research, drawing from critical theories but taking them to the field, making observations to generate data without imposing external stimulus on the situation. We thereafter questioned whether observations were compatible with our heuristic." o Reincorporate this into a paragraph that defines, specifically, how this occurred.	This was deleted and we reintroduced this methods section differently.
18	5. Results 5.1. Proposing a "boom-bust" framework: A heuristic power assessment for delivering policy commitments - I don't think the heuristic should be titled a "boom-bust" framework. Rather, it captures the process of moving from policy to implementation. Perhaps there is evidence of a boom-bust phenomenon, but the heuristic itself goes beyond that. It should be able to organize knowledge of social forestry implementation beyond a "boom-bust" example, no?	The framework is now the access-exclusion framework. Thank you for your suggestion.
	- I am again fixating on this idea of "external actors." Is this heuristic only for those seeking to implement social forestry from outside, or can it be used by local actors (despite the fact that this is not often the case)? I tend to think this heuristic is instructive beyond external actors, and would suggest (again) deleting "external."	Ok!
	- As provided, I don't think Table 3 works for this heuristic. o The different elements of the heuristic need to be explained. As a reader I wonder: why are they important? What are the citations that provide evidence for this importance? How are these elements reflected in other studies? o A table that summarizes the heuristic would be helpful. Perhaps consider including the following elements: § Code, Considerations, Risks and Opportunities § In Considerations, keep the titles of the current "Intervention Considerations by External Actors" § In "Risks and opportunities," highlight, in general, the "implementation risks and corollary opportunities" represented by this consideration.	Fixed and completely changed to address this point.

	5.2 Contested power in the context of external actor interventions: Examples from each heuristic level 5.2.1. Initial stage example: Rushing Community Forest Plantations (HTR) trials - I think this would be a much more powerful case if there was one, site-specific example being analyzed. - The third paragraph is important, but it contains too much generality for a publishable "case." Please substantiate the claims with research evidence or ground them in a specific example.	We have selected a new case and provided a better rationale.
	5.2.2. Formal hand over example: Emulating bureaucratic requirements and unintended effects - "As of 2018, none of **the** sites ~~never~~ received management rights." - You may want to read this quick but well-written source on the importance of cadastral systems for forest monitoring, in general o Gaveau, D.L.A., Pirard, R., Salim, M.A., Tonoto, P., Yaen, H., Parks, S.A., Carmenta, R., Mcelwee, P., 2017. Overlapping Land Claims Limit the Use of Satellites to Monitor No- Deforestation Commitments and No-Burning Compliance 10, 257–264. https://doi.org/10.1111/conl.12256	Ok thanks for the suggestion. This was helpful.
	5.2.3 Implementation example: Success to what ends? - There is a great deal of interesting, important information in this section, but it doesn't tie back to the heuristic. Or, if it does incorporate important elements of the heuristic, it was not clear to me how they helped interpret this case.	This has been thoroughly addressed. This point has helped us to rewrite the paper.

	6. Conclusion - "Finally, we also consider that each stage has its own unique power contestations. External actors tend to think of social forestry as a distinct and singular category within various permitting options. In this paper we have shown that they emerge in very different ways across various different phases of an intervention. Rather than lumping all SF cases into the same category external actors need to beware of the power elements that emerge in distinct ways across these phases, and the corresponding capacity required to influence outcomes and avoid unintended consequences." ○ This is a very good point	Thanks, we have also rewritten the conclusion

	The boom in Indonesian social forestry has generated a related boom in scholarship on Indonesian forestry. The revision of this article should discuss and contain the following citations, most of which are recent contributions: Suharjito, D., Wulandari, C., 2019. A reflection of Social Forestry in 2019: Towards inclusive and collaborative government approaches. For. Soc. 3, 137. https://doi.org/10.24259/fs.v3i1.6099 Galudra, G., 2019. Focusing on facilitation: Issues and challenges of capacity development in Indonesia's social forestry reforms. For. Soc. 3, 133. https://doi.org/10.24259/fs.v3i1.5995 Peluso, N.L., Poffenberger, M., 1989. Social Forestry in Java: Reorienting Management Systems. Hum. Organ. 48, 333–344. https://doi.org/10.17730/humo.48.4.a4r82227p5065638 Erbaugh, J.T., 2019. Responsibilization and Social Forestry in Indonesia Author: For. Policy Econ. 109, 102019. https://doi.org/10.1016/j.forpol.2019.102019 Resosudarmo, I.A.P., Tacconi, L., Sloan, S., Hamdani, F.A.U., Subarudi, Alviya, I., Muttaqin, M.Z., 2019. Indonesia's land reform: Implications for local livelihoods and climate change. For. Policy Econ. 1–14. https://doi.org/10.1016/j.forpol.2019.04.007 Race, D., Suka, A.P., Irawanti, S., Surati, Oktalina, S.N., Bisjoe, A.R.H., Muin, N., Purwanti, R., Sumirat, B., 2019. Smallholder forestry: the role of commercial forestry in rural livelihoods in Indonesia. Int. For. Rev. 21, 225–237. https://doi.org/10.1505/146554819826606568 In particular, Galudra (2019) and Erbaugh (2019) discuss issues with the implementation of Indonesian social forestry.	We have added these and other additional studies and are now up to 80 citations.

ACCEPTED MANUSCRIPT:

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

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 hectares to around 3,369,583 hectares 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.

Key words: social forestry; access; exclusion; Indonesia

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 (Moeliono et al., 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; Kane et al., 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 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 (Fisher et al., 2018; Moeliono et al., 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 (Sahide et al., 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., 2020). 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, 2019). 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 (Fisher et al., 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 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, 2018; Wulandari and Kurniasi, 2018), the clash with the forest management unit model undermining local communities (Tajuddin et al., 2018), and regional concerns of indigeneity versus conservation in Papua (Fatem, 2018). While some continue to trumpet cases of success, others point to serious breaches of

[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 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

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).

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

Before and After Jokowi*	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	**	670,828.00	**	1,367,503.0	**	338,060.00	300,608.00	2,734,272,00
Total	**	309,332.47	**	760,878.21	**´	250,271.74	94,378.28	3,369,583

*: Using MOEF regulation 83 of 2016 as the timeline (August 2019)

**: 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

	Before MOEF 83 of 2016	After MOEF 83 of 2016
Scheme* 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

* 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

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, 1993; 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,b). 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.

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.

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.
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 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.	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 processes of lodging a complaint is very likely unknown by vulnerable populations	Conducting deep analysis of tenure arrangements, authority, and historical analysis provides the strongest insights into this dimension. Formal planning documents also provide notations about conflict and conflict resolution.
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 stakeholders and management institutions.	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 resources or markets for a particular venture.	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
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.			

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.

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 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

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

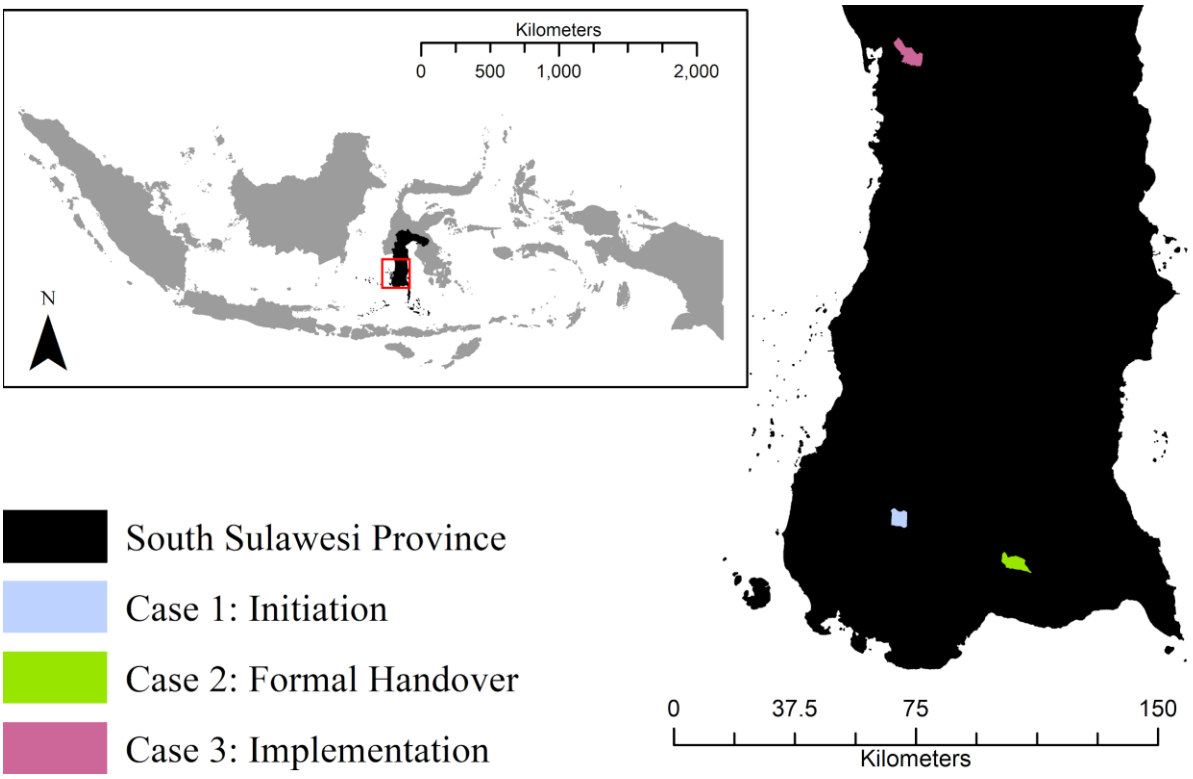


Table 4. Location and SF selection and methodology deployed

Case for each stage	Scheme and location	Method
Case 1 for initial stage	Kemitraan Kehutanan - Gowa, Forestry Partnership Representation: 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

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 hectares, part of which was located in and around the village of Manuju (see Map on Figure 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.

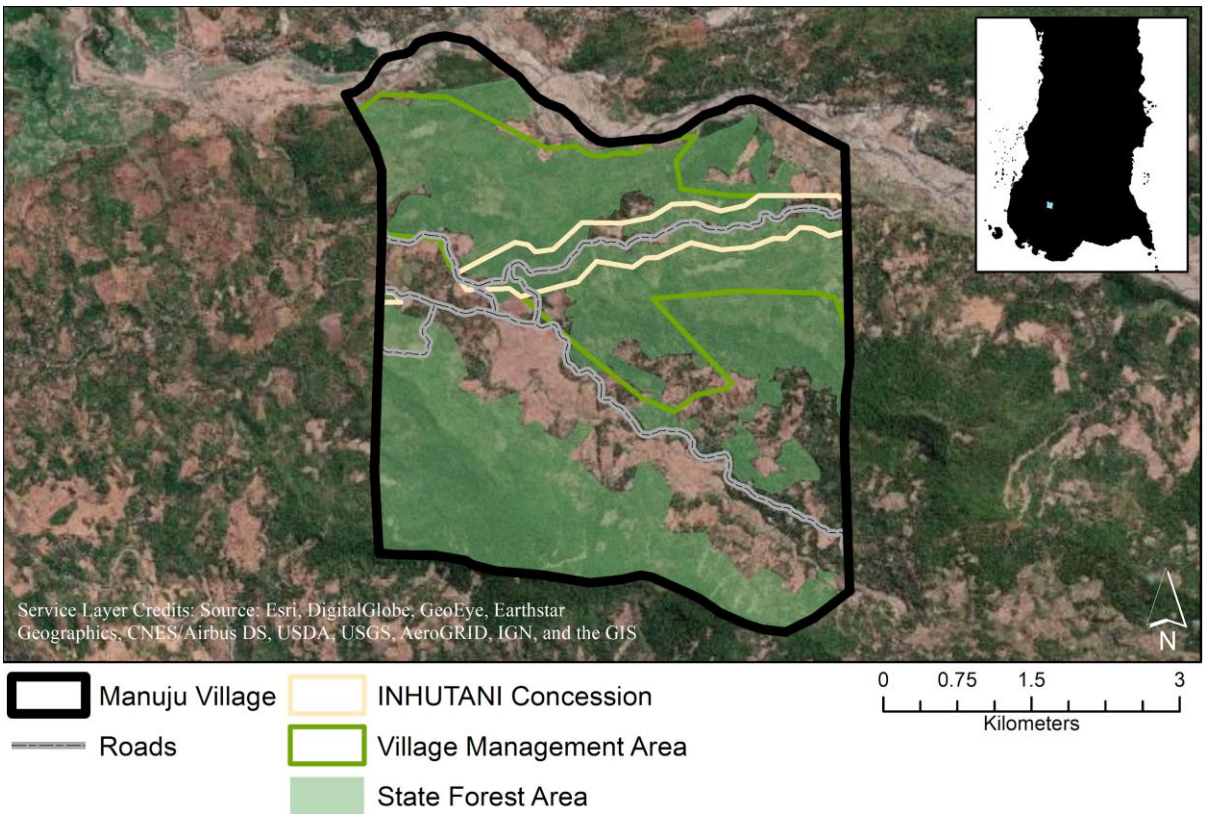
PT INHUTANI,[5] a state forest company, took over the concession lands previously managed by PKG, and began planting acacia and albizia throughout the concession area. By 2012, the total area under PT INHUTANI claims amounted to 18,350 hectares and included areas of Manuju village under its concession. 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 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.

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

[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.


Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS
N
Manuju Village
Roads
INHUTANI Concession
Village Management Area
State Forest Area
0
0.75
1.5
3
Kilometers

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.

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, 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.

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 Figure 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.

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 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 hectares (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]

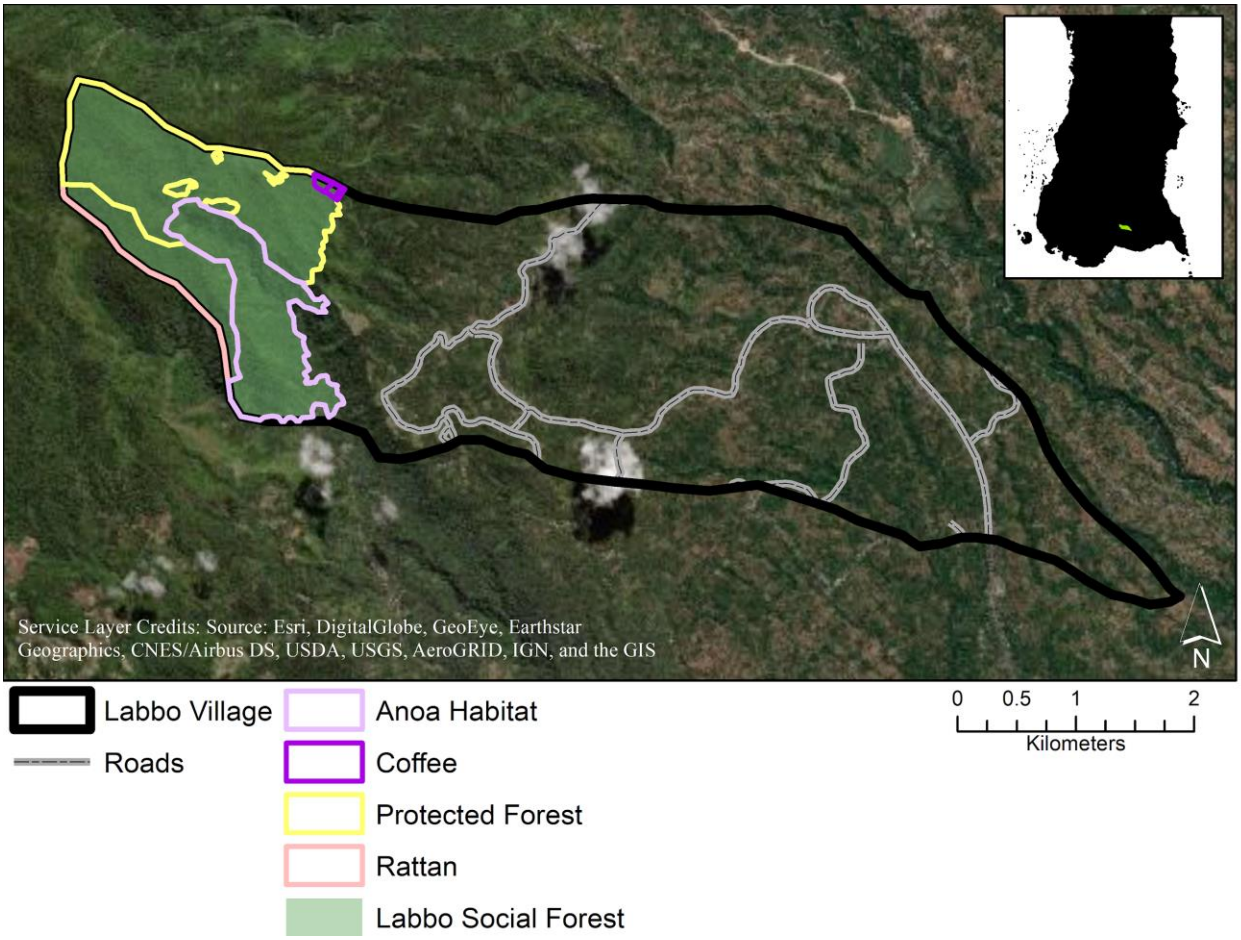
The timing for the selection of the village forestry scheme in Labbo is significant. In 2008, national interests were eager to showcase, influence interpretation, and implement village forestry for various reasons.[8] Abdullah, as the topmost elected official in Bantaeng seized on this opportunity to 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 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

[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)

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.

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



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.

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.

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

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

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 hectares 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.

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 1,000 hectares, 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 1,000 hectares, the permitting process reduced adjacent lands to a total contiguous HKm area of 755,23 hectares. Throughout this area, 14 farmer groups each received a HKm permit (see Table 5 and Figure 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 licence number (all issued in 2012)**	**Amount of forest farmer member**	**Coverage (Ha)**
Mamminasae	343/XI/2012	42	74.05

[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.

Samaenre	340/XI/2012	86	89.08
Massabirin	334/XI/2012	48	69
Massumpululoe	342/XI/2012	17	32.7
Sipakamase	335/XI/2012	20	36.7
Bunga Desa	332/XI/2012	23	29
Sipatuo II*	337/XI/2012	35	49.25
Padaidi	339/XI/2012	37	72
Sipakainge I	338/XI/2012	24	42.5
Mattirowalie*	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

*: These two groups were successful in building common arrangements between cattle herding and cashews, which were integrated into the HKm Program

---------- Insert Figure 4----------

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 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.

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. Labelled 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.

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 et al., 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.

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