

Deadlock opportunism in contesting conservation areas in Indonesia

by Muhammad Alif K. Sahide

Submission date: 02-Apr-2021 03:28PM (UTC+0200)

Submission ID: 1548982276

File name: Deadlock.pdf (244.48K)

Word count: 12834

Character count: 74159



Contents lists available at ScienceDirect

Land Use Policy

journal homepage: www.elsevier.com/locate/landusepol

Deadlock opportunism in contesting conservation areas in Indonesia

Muhammad Alif K. Sahide^a, Micah R. Fisher^{b,c}, Ahmad Maryudi^{d,i,*}, Ahmad Dhialulhaq^e,
Christine Wulandari^f, Yeon-Su Kim^g, Lukas Giessen^{h,j}



^a Forestry Faculty, Universitas Hasanuddin, Makassar, Indonesia

^b University of Hawaii, Manoa, United States

^c Associate Editor in Chief for Forest and Society, published by Universitas Hasanuddin, Indonesia

^d Forestry Faculty, University of Gadjah Mada, Yogyakarta, Indonesia

^e Australian National University, Australia

^f Forestry Faculty, University of Lampung, Lampung, Indonesia

^g Northern Arizona University, USA

^h Goettingen University, Goettingen, Germany

ⁱ Research Center for Forest Policy and History, Yogyakarta, Indonesia

^j European Forest Institute (EFI)

ARTICLE INFO

Keywords:

Conservation politics
Community forestry
Bureaucratic politics
Geothermal

ABSTRACT

Conservation areas are designated to protect biodiversity and resources by limiting anthropogenic stressors. In Indonesia, conservation areas account for almost 23 percent of the state forest with extremely limited allowable uses. Previous policy interventions to support community and traditional uses have never been very successful due to the deep roots of bureaucratic politics originally defined to safeguard biodiversity. This deadlock created by the two major laws governing forestry and conservation areas has been broken with recent permits for geothermal projects in conservation areas. The rationale is to provide an environmental service (renewable energy) and to address global concerns for climate mitigation. This paper examines how the deadlock is broken at least temporarily for geothermal development and maintained for social forestry. Arguments and findings presented in this paper are drawn from content analysis, interviews, and long-term engagement among the authors observing operationalization of conservation policies in Indonesia, both in Java and outer islands. We propose the operational framework of *deadlock opportunism* as a way to highlight the processes of breaking a deadlock by legitimizing particular interests (geothermal development) through green and populist narratives, while hollowing out claims of other interests (social forestry). Although anticipation of breaking the deadlock through geothermal development has encouraged numerous policies and programs developed for social forestry, we argue these developments actually camouflage the underlying legitimacy of communities and keep them from accessing lands within conservation areas. We believe the concept of deadlock opportunism and the operational framework can provide new insights for understanding progress (or lack thereof) of certain policies in their lifecycles in other parts of the world.

1. Introduction

Conservation areas around the world have been politically contested due to overlapping and often competing management objectives. One of the most frequent conflicts is between conservation and development objectives, especially those framed around meeting the needs of local communities (Yusran et al., 2017; Ma et al., 2009; Setiawan et al., 2016; Fisher et al., 2017; Kane et al., 2018; Dhialulhaq et al., 2017; Fisher and Sablan, 2018) While these policies are typically to maintain nature protection and preservation of ecosystem functions, they also

minimize access or even completely prohibit human activities. Many countries applied zoning as a strategy to manage multiple interests within contested conservation areas, designating parts of the protected areas to accommodate both conservation and local utilization (Fearnside, 2003). Zoning activities do not take place in a vacuum (Maryudi et al., 2015). The creation and decisions over access and control of conservation areas are not always based on biophysical or scientific considerations. They are often results of political processes involving various actors, interests and power (Peluso, 1993; Adams and Hutton, 2017; Anderson and Jongruck, 2017; Myers et al., 2017; Susanti and

* Corresponding author.

E-mail addresses: muhammad.alif@unhas.ac.id (M.A.K. Sahide), micahrf@hawaii.edu (M.R. Fisher), ahmad_maryudi@ugm.ac.id (A. Maryudi), ahmad.dhialulhaq@anu.edu.au (A. Dhialulhaq), christine.wulandari@fp.unila.ac.id (C. Wulandari), Yeon-Su.Kim@nau.edu (Y.-S. Kim), lgiesse@gwdg.de (L. Giessen).

<https://doi.org/10.1016/j.landusepol.2018.05.020>

Received 4 June 2017; Received in revised form 9 May 2018; Accepted 9 May 2018

0264-8377/© 2018 Elsevier Ltd. All rights reserved.

Maryudi, 2016)

In Indonesia, about 22.7% of all forest areas (about 27.4 million hectares) has been designated as conservation areas (MOEF, 2014). Rules for managing these conservation areas evolved from strict preservation to conservation that allows some degree of utilization to serve human needs. In the Indonesian context, Wiratno et al. (2001) argue that the terms 'preservation' and 'conservation' should be differentiated.¹ While preservation implies static maintenance of natural ecological structure (i.e. protection from use), conservation for safeguarding ecological functions (i.e. "proper" use) opens up the possibility for utilizing natural resources.

In the last few decades, the vast areas of Indonesia's forest were designated for conservation and became a battlefield of competing interests (Nurrohmat et al., 2017). There is no clear definition for what constitutes utilization while maintaining ecological functions. Evaluating proposals and defining allowable uses often involve policy negotiations where political actors can inject their own interests. Thus, conservation is continuously being redefined and interpreted differently by the political actors involved. In this study, we examine this conservation-utilization nexus and the politics driven by various actors and interests across several levels of government.

Conservation zoning for multiple uses has been implemented in Indonesia since the 1990s for managing multiple stakeholder interests. Law 5 of 1990, Government Regulation (PP) 68 of 1998, and a Ministerial Decree (P.56/2006) on guidelines for zoning conservation areas provided the early legal foundation for allocating utilization zones within national parks. More recently, community forestry advocates and private mining companies have emerged as the two main actors promoting forest utilization in conservation areas. As public interests for geothermal energy grow, the Indonesian government began allowing geothermal developments in conservation areas under Law 21 (2014) and Ministry of Environment and Forestry (MOEF) regulation 46 (2016) (Bos and Brown, 2012). Although legally possible, utilizing natural resources in conservation areas has rarely been allowed because of the strict interpretations on conservation in Law 5/1990. The proposals for geothermal projects however, have gained a political momentum by justifying the development in conservation areas with an environmental service (e.g. renewable energy) that they provide.

Opening access for geothermal projects in conservation areas would allow what we call "liberal zoning", which may expand other development possibilities. Liberal zoning may also open up opportunities for local communities to negotiate more liberal uses, such as community timber management. Once the government allows geothermal projects in conservation areas, demands for community forestry also likely intensify for more access and utilization.

Although there is a wide array of political tools being used to serve various interests, this paper focuses on two: when and why a certain policy does not progress to the next step in the policy cycles (deadlock) and 'non-decisions' as a tool of power politics. We also further the concept of 'hollow (insubstantial or tokenistic) policy' by developing its typology. Historically, creating a deadlock has been an important tool in Indonesian politics. For example, new regulations can be formulated to allow some types of utilization in conservation areas, while being consequently hollowed out meaning that they become symbolic with little or no implementation. Theorizing the mechanisms of non-decisions can help us understand why some breakthroughs happen despite of historical deadlocks. Closely examining what discursive elements in the policy discourses camouflage particular interests can highlight how deadlocks can be broken and re-applied to meet those interests, while excluding others (Sammon, 2008; Bachrach and Baratz, 1962). We

propose the concept of 'deadlock opportunism' to understand the process of opening and closing policy windows allowing geothermal development in conservation areas in Indonesia. Our research questions are:

- 1) What are the factors that have maintained deadlock politics in conservation areas in Indonesia?
- 2) How did geothermal development proposals break through the deadlock and become allowable uses of conservation areas?
- 3) To what extent has social forestry been able to succeed in making similar claims and take an advantage of this opening of the deadlock?
- 4) Who benefits and who loses from the deadlock opportunism?

Deadlock opportunism highlights the potential openings that allow the re-interpretation of some policies only to serve certain interests. In the next section, we further define different concepts to theorize the process of deadlock opportunism. Then we use the geothermal development in conservation areas in Indonesia as a case example to examine the process with the historical contexts of Indonesian politics and answer the three questions above. We conclude with the implications of deadlock opportunism and future research areas.

2. Theoretical positioning: bureaucratic politics, deadlocks, non-decision, and hollow policy

2.1. Bureaucratic politics

The relationship between people and nature, in a conservation context, is highly political. It encompasses issues of rights and access to land and resources, the role of the state (and increasingly non-state actors in NGOs and the private sector), and the power of scientific and other understandings of nature (Adams and Hutton, 2017). The theory of bureaucratic politics acknowledges that policy decisions are not always made unitarily by rational decision makers. For example, those representing "the state" have little room for autonomous actions as individuals. Public policy outcomes often result from a process of bargaining among high-level decision makers (e.g. governmental actors) and those in different level of governments and other sectors with varying interests, preferences, abilities and power (Sahide and Giessen, 2015; Krott, 2005; Maryudi and Sahide, 2017; Prabowo et al., 2016). Conservation area policies viewed through the lense of bureaucratic politics have formal and informal mandates and objectives.² Agencies are formally mandated to serve the public and the existence of a particular agency itself can signify particular prioritization of an issue. However, bureaucracies informally have their own interests of enlarging staff and budgets, and strengthening their political influence (Krott, 2005; see also Wibowo and Giessen, 2015, 2018; Negi and Giessen, 2018).

Ideologies related to utilization in conservation in turn determine the actions that actors undertake within the realm of administrative functions and mandates. Viewpoints about conservation area management are multiple and continue to evolve. For example, while conservationists may define conservation areas as those without human interventions (Morelli et al., 2016), politics may allow new mechanisms for utilizing the areas for other purposes (Stutzin, 1975). As Sahide and Giessen (2015) have described, land use bureaucracies in Indonesia can be divided into two groups by their orientations- production and conservation (also see Hirsch and Warren, 1998; Giessen et al., 2014; Sahide and Giessen, 2015). Bureaucratic politics theory has expanded the recognition of eclecticism for studying public policy decision-making processes (Krott, 2005; Krott et al., 2014) and examining interests, orientations (for conservation or production), and behaviors of

¹ In the US, these concepts go back to Aldo Leopold (Land Ethics, 1949) and Gifford Pinchot (The Fight for Conservation, 1910). Pinchot was the founder of USDA Forest Service. "National Forests" allow multiple (sustainable) uses of forests vs. national parks are for preservation. This is almost the same 'concept' with conservation areas in Indonesia (e.g. differences between *Hutan Lindung* and *Hutan Konservasi*).

² See formal and informal interest bureaucracy in Krott (2005).

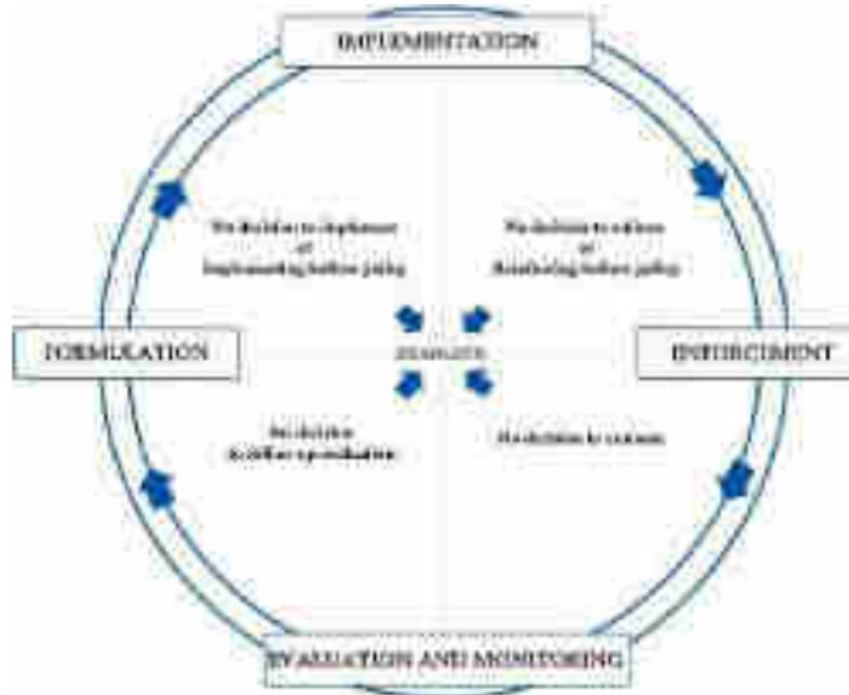


Fig. 1. How non-decision and hollow policy potentially leads to deadlock or blocking the forest policy cycle.

Table 1
Indicators of hollow policy and management leading to a non-decision.

I. The operational concept of hollow policy based on implementation and enforcement dynamics		
Policy - Rule Formulation Code	Explanation	Implementation/Enforcement Code Explanation
A1	High level rules (e.g. Laws) without medium level and detailed implementation rules	B1 No implementation
A2	Medium level rules, or rules without strong support from basic laws	B2 Implementation without enforcement
A3	Detailed rules, without support from medium or high level laws	B3 Implementation with enforcement
II. Gradation degree of hollow policy and its explanation		
No	Gradation degree	Codes' Combination
1	Non-hollow policy (toward effective policy)	
	First level	A1 + B3
	Second level	A2 + B3
2	Medium hollow policy	
	First level	A1 + B2
	Second level	A2 + B2
3	Pure hollow policy	
	First level	A1 + B1
	Second level	A2 + B1
	Third level	A3 + B1

bureaucracies at multiple levels (See Sahide et al., 2016 for a critical look at the recentralization trend in Indonesian forest bureaucracies).

2.2. Deadlock

We developed the ‘deadlock’ concept based on our reconstruction of the policy cycle theory introduced by Krott (2005), in that a ‘deadlock’

occurs when an actor or actors intentionally obstruct a policy cycle due to their particular interests. According to Krott (2005), a well-established policy program consists of three phases of problem-solving: policy formulation, implementation, and evaluation/ monitoring. We add one more element based on Yusran et al.(2017) that indicates an additional post-implementation step. Yusran suggested that decision makers have the option to enforce implemented programs or relegate them only to formal spheres of implementation without field applications and enforcement. We further describe this aspect in the discussion of hollow policies below. Therefore, we have four key elements in the policy cycles, which help us to identify deadlocks, non-decisions, and hollow policy. Fig. 1 shows the cycle beginning with policy formulation, which determines the issues to be resolved and standardized solutions in the form of programs; second, policy implementation, which entails the practical application of formulated programs to the issues; third, policy enforcement, which necessitates actors’ choice to enforce, making the policy solidly implemented; and the fourth is policy evaluation and monitoring, which assesses the effectiveness of the policy program to inform the next policy cycle.

Deadlocks can occur at various stages of a policy cycle. As highlighted earlier by Yusran et al. (2017) and Krott (2005), a policy could be blocked at any stage because the advancement in the policy cycle (formulation – implementation – enforcement – evaluation) is often left to the discretion of the related administrative actors. Deadlock may occur due to contradicting interests among actors. Political actors in a lower level of bureaucracy may not follow a policy recommendation from higher level (e.g. national or other sectoral interests). They can choose to provide effective application of a policy or render it as a symbolic gesture, i.e. a hollow policy. Powerful actors throughout the cycle could therefore institute non-decisions, potentially break non-decisions, or sustain existing non-decision by creating a hollow policy to meet their interests. We highlight the policy cycle utilizing Matland’s typology (1995) and include the various decisive points throughout the cycle in Fig. 1 below.

2.2.1. Non-decision

'Non-decision' is defined by Bachrach and Baratz (1963:632) as "the practice of limiting the scope of actual decision-making processes to 'state' issues by manipulating dominant community values, myths, and political institutions and procedures." Using this definition we can appreciate that non-decisions exist as a tool of power politics when dominant values among the most powerful actors forcefully and effectively manipulate the situation in order to prevent certain grievances from developing into full-fledged issues and forcing a decision.

Wolfinger et al. (1968) further expand 'non-decision' as a notion of 'power structures.' Non-decisions in public decision-making are often used by those with power and influence. Power here means the ability of an actor to shape a political agenda according to its own interests, even when facing resistance from opponents or other actors (Krott et al., 2014). In this paper, we focus on the coercive form of power as well as the (dominant) information power by looking at formal responsibilities and investigating basic interests of actors shaping the conflict over conservation area in the emerging claims between community forestry and geothermal development politics.

Seeing non-decision as a political tool is also rooted in non-regime studies of international relations (Singer and Giessen, 2017) emerged from hollow policy dimensions in public policy studies. One example of a persistent non-decision state maintained through hollow policies is negotiating long-term future of natural ecosystems with indigenous peoples (Fearnside, 2003). Indigenous lands are often seemingly rented to communities but still under bureaucratic controls of the state. Long term decisions depend on populist priorities competing with other bureaucratic interests and their powers of coercion and information at play, which can be translated into non-decisions.

2.2.2. Hollow policy

Decisions over access and control over forest areas (e.g. conservation areas) are often results of political processes involving various actors, interests and power (Peluso, 1993; Peluso and Vandergeest, 2001; Adams and Hutton, 2017; Anderson, 2017; Setiawan et al., 2017; Susanti et al., 2018; Giessen and Sahide, 2017) The hollow policy opens up the space for a policy initiative but foregoes the responsibility of actually fulfilling such commitments. In this paper we further develop the concept, dynamics, and heuristics of hollow policy, referring to the governance actions – either formal or informal – that are insubstantial, or tokenistic (Krott, 2005). We focus on **policy implementation and policy enforcement** elements as the key factors exposing the degree of a certain policy derived by actor interests (Yusran et al., 2017). Some empirical evidence from policy implementation literature can be seen as an early measurement of further and more detailed enforcement (Kaimowitz, 2003; Wertz-Kanounnikoff, 2005). We generated our own typology of hollow policy to explain what we mean, as detailed in Table 1. The table explains the varying degrees of rules (policy formulation) with the corresponding levels of implementation (policy implementation/enforcement). We divided policy levels into three: high-level, e.g. Constitutional Court ruling; medium-level, e.g. ministerial decree; low-level detailed rules, e.g. directorate general guideline; national park guideline and also level of implementation/enforcement into three: No implementation, Implementation with or without enforcement.

In the following sections we detail our methods for examining the emergence of deadlock opportunism in Indonesian politics with these indicators.

2.3. Operational concept: the flow of narrative explanation

To explain our findings and highlight our operational concept, we present our results using a conceptual framework depicting three periods of conservation politics in Indonesia (Fig. 2). Period A (~1998) is the early stage of Indonesian conservation policy discourses, leading to a deadlock between competing bureaucratic interests for preservation

and utilization. In Period B (1998–2014), bureaucracy governing national forests with limited political articulation beyond strict protection evolved into one that developed clear mechanisms that allows utilization with various zoning. In Period C (2014–), we can examine the potential consequences of deadlock opportunism, opening the avenues for conservation area utilization for social forestry schemes as well as geothermal development. We also examined where deadlocks are maintained and who are benefiting from.

3. Research methods

Data collection methods used in this research include content analysis, interviews, and observations from our long-standing experiences closely observing conservation policy operationalization in Indonesia, nationally at the Ministry of Forestry (MoFor)³ and regionally both in Java (third author) and outside of Java, in Sulawesi (first and second author) and Sumatera (fourth and fifth author). Direct involvement among these authors could reduce reliability. However, objectivity and validity are ensured through triangulation by our investigators that examine developments from outside the arena of Indonesian conservation (sixth and last author). Interviews and observation data are included as footnotes. Furthermore, data triangulation is also operationalized by cross-checking various supporting documents, official website information, news, and positional journals.

4. History of non-decision in conservation forest politics

4.1. Historical description of conservation bureaucracy politics

Growth of a bureaucracy is difficult to assess based on the quantitative indicators, such as budget. In this article we assess the political influence of a bureaucracy based on its level of organisational growth. Evolution of bureaucratic offices and the priorities assigned to their function indicate varying degrees of power and influence. For example the lowest level (a task unit) within a bureaucracy will have much less power and influence compared to programs in the highest level (director general). Overall, our approach to identify levels of prioritization in bureaucratic politics provides an entry point for observing power inherent in conservation bureaucracies over time. Fig. 3 shows the exponential growth of conservation bureaucracy in Indonesia.

4.1.1. The Dutch colonial era (1880–1942): the birth of a conservation tradition as small species protection

The root for current conservation strategy in Indonesia can be traced back the Dutch Colonial period, when conservation typically meant protecting certain species, particularly the ones with a relatively limited range and/or with the potential for exploitation (Setyowati et al., 2008; Peluso and Vandergeest, 2001). Although the main interest of the conservation bureaucracy had been on generating economic returns (MoFor, 2005), influence of the biologist movement in the Dutch East Indies expanded to establish 'small' natural reserves for protecting certain species. In this era, conservation approaches were typically shaped in the form of creating conservation zones which strictly prohibited human activity, known as the 'Yellowstone model' (Dunggio and Gunawan, 2009) and backed by various legal provisions such as *Staatblad* 1941 No. 167 (*natuurbeschermings ordonmantie*) (Setyowati et al., 2008), *Agrarische Reglement* for outside Java and Madura island (Nurjaya, 2005). The legacy of the Dutch colonial conservation can still be found in forms of Botanical Gardens (e.g. in Bogor) and Nature Reserves in Java, Sumatra, Kalimantan, Sulawesi, and Papua (Wiratno et al., 2001; MoEF, 2005; Goss, 2011)

³ We differentiate the forestry bureaucracy between the time prior to the Jokowi administration (i.e. until 2014) in which we use the terminology Ministry of Forestry (MoFor) with the period after, in which we use Ministry of Environment and Forestry (MOEF).



Fig. 3. Time line of conservation bureaucracy in Indonesia. Level of bureaucracy: as a task force (small committee unit) = 1, as the unit responsible for specific conservation task = 2, as the section under division of direcorate general = 3, as the division/direcorate under Direcorate General = 4; as the direcorate General focusing in conservation mix with other issue element and directly under Ministry = 5, as the Direcorate General focusing only on conservation issue element and directly under Ministry = 6.

No.	Year	Directorate/department
1	1980	Directorate of National Forest Park, under the lead by Public Forestry Unit
2	1981	Forest National Forest Conservation Biological Conservation National
3	1983	Department of Forest Conservation
4	1984	Part of general staff of Decon Agency, Under Ministry of Forestry
5	1986	Program office of Forest Agency, and Forest Conservation Bureau
6	1987	Under Nature Policy & Review
7	1987	Under Nature Policy & Review
8	1988	Assistant Director General under Forestry DC of Ministry of Agriculture
9	1988	Under National Conservation Commission, under the general order: Ministry of Agriculture
10	1988	Directorate of National Forest Conservation Office, under the DC of Forest Agency
11	1988	Directorate of National Forest Conservation Office, under the DC of Ministry of Agriculture
12	1989	Under Directorate of Conservation & Natural Resource Conservation
13	1989	Under Directorate of National Forest Conservation & Natural Resource Conservation
14	1990	Self-Organized Conservation Unit, under the management of Directorate of Forestry Agency
15	1990	Under Directorate of National Forest Conservation & Natural Resource Conservation
16	1990	Under Directorate of National Forest Conservation & Natural Resource Conservation
17	1990	Under Directorate of National Forest Conservation & Natural Resource Conservation
18	1990	Under Directorate of National Forest Conservation & Natural Resource Conservation
19	1990	Under Directorate of National Forest Conservation & Natural Resource Conservation
20	1990	Under Directorate of National Forest Conservation & Natural Resource Conservation

Law No. 5 (1990), and Conservation Law and PP 68 of 1998, formally mandated national park management through a zoning system which may consist of a core zone, a utilization zone, and other zones depending on a particular justifiable necessity. These zoning categories indicate that utilization in HK was possible, safeguarding potential future interests of the state. Zoning categories provides a marker into the tandem relationships between the central regulating law in forestry (termed the Basic Forestry Law) and Law 6 (1967) about domestic capital, as well as Law 21 (1997) on forest concession mechanisms (Tsing, 2005; Brosius et al., 1998). In real terms, the utilization zones for social forestry are guided by the Basic Forestry Law that was rewritten in 1999. However, the conservation bureaucracy has traditionally followed the stipulations in Law No. 5, 1990, which has a stricter interpretation of allowable uses in conservation areas. For example, the national park system, which is one of the most prominent institutions among the conservation bureaucracy, attempted to devise detailed guidelines for spatial zones such as traditional zones that allow for community uses. However, Law 5, 1999 does not allow any exception for timber extraction, even if they are part of traditional community practices, which hamstring what the national parks can do.

4.1.3.2. International influence on local utilization zones. Responding to the pressures from the international forest conservation regimes (e.g. The Convention on Biological Diversity), the New Order government sought to formally ally with, and attract international attention by expressing Indonesia's interests to kick start development in parallel

with a clear conservation agenda. The Ministry of Forestry officials at that time actively collaborated with numerous influential international actors, such as (1) the United Nations and the World Bank (FAO, UNESCO, UNEP) e.g. on national park programs, (2) Multilateral treaty organizations (Colombo Plan, OAS, EEC), (3) International NGOs (IUCN and WWF), and (4) Bilateral relationships (CIDA - Canada; DANIDA - Denmark; USAID; DGIS - Netherlands e.g. the School of Environmental Conservation in Bogor, Indonesia) (Dunggio and Gunawan, 2009; Retno, 1998).

With these strong international relationships and projects on conservation, numerous efforts and programs were undertaken to integrate conservation with development (Retno, 1998; Dunggio and Gunawan, 2009; Moeliono et al., 2017). During the period, community based natural resource management was promoted (also known as social forestry) (Gilmour, 2016; Zemer, 2000). Community engagement in conservation also began to take place in and around national parks, initiated by the 1993 World Commission on Protected Areas (WCPA) (Dunggio and Gunawan, 2009). WCPA recommended that protected areas should be managed with inputs from various stakeholders, especially people living in the area. Therefore, managing protected areas in Indonesia evolved to include participatory elements and joint management arrangement with communities.

In the 1980s and 1990s, influence of transnational NGO advocacy grew for nature and human society (Brosius et al., 1998). This has contributed to development of international conservation standards like High Conservation Value (HCV) and the involvement of communities

through mechanisms like Free and Prior Informed Consent (FPIC). The HCV standard was established as a management system to ensure crops are used or extracted in a sustainable manner, and to maintain the socio-cultural and environmental aspects of outstanding resources (see HCV standard in [Forest Stewardship Council \(2015\)](#)).

While setting aside conservation forests for international projects, concomitantly, logging exports began to boom in production forests, becoming the second largest economic income generator for Indonesia after the oil and gas sector during this era ([Sahide and Giessen, 2015](#)). Policy agenda was revolved around facilitating the necessary infrastructure development for the timber sector ([Sahide et al., 2015](#)). The New Order era also institutionalized social programming across these development landscapes by trying to homogenize ethnic groups ([Li, 2001](#)). Conservation projects in this era proceeded with the 'common sense' viewpoint is that "if there were no tigers and elephants then it was appropriate to proceed with mining".⁴ This is different from the contemporary conservation ethos, which promotes alignments with local indigenous values and the rhetoric of keeping local management to conserve forests and local communities.

International pressures after the Suharto era shifted its attention from strict preservation to acknowledgement of local community land rights in the forest estate. In response, Indonesian government started creating different zones in HK, such as special zones to accommodate villages that were already within forest estate boundaries and traditional zones to support customary and traditional forest uses. The projects to support such communities were located in buffer zone areas (programs were called model conservation villages, MDK). While communities in buffer areas benefited from the support, other communities within conservation areas were unable to access any government support programs. Meanwhile, these communities saw large concessions in HP being given to large corporations for timber and plantation expansion during this time.

4.1.4. Post-Soeharto era (1998–2014): hollowing out management responsibility in production and protection forests, while actively securing conservation forests

4.1.4.1. Effects of decentralization on HP, HL and HK. Although decentralization policies were applied across the Indonesian bureaucracy in the post-Soeharto era after 1998 (including in the forestry sector), the conservation bureaucracy became stronger and more centralized ([Sahide and Giessen, 2015](#)). For example, Directorate General (DG) under the Ministry of Forestry was created as a singular unit that controls all conservation areas and raised the profile of conservation bureaucracy.

Sudden absence of previous suppression of local communities by strong security forces (i.e. military, police) resulted in the emergence of conflicts that were previously 'latent' ([Yusran et al., 2017](#)). In the early reform years, numerous local actors demanded and successfully acquired unlimited access to the use of forest resources ([Resosudarmo, 2004](#)). In the early stages of the reform era in Indonesia (1998–2005), the state forest had become widely contested by new policies that expanded the authority of local governments (i.e. decentralization), which opened access for rural communities ([Resosudarmo, 2003](#)). There were two main actors that demanded and gained widespread access to forests at that time, which in turn led to significant deforestation. First, some local communities claimed access to the state forest ([Pumomo et al., 2010](#)). While strict enforcement did continue in conservation and protection forests ([Sahide and Giessen, 2015](#)), liberal zoning policies were negotiated, such as special or traditional zones in national parks under the discursive shift to social forestry. In this way, community members in those zones were able to gain access to various forest products, including timber, and also allowed to build in areas that were previously restricted ([Pumomo et al., 2010](#)).

⁴ Interview with one NGO working for conservation in Sumatera in 24 October 2016.

Second, private actors also gained wider opportunities under decentralized mechanisms, particularly through the district government's authority to legally grant small-scale concession licenses in forest areas (e.g. timber concessions and mining). This authority was curbed in 2002 however, due to widespread forest and land clearance ([Tacconi et al., 2004](#); [Sahide et al., 2016](#)). Local communities outside particular zoning, became to have even less legal power in utilizing forest resources, particularly in conservation areas ([Sahide and Giessen, 2015](#)).

Along with decentralization policy, the new Basic Forestry Law (Law 41), enacted in 1999 contained clauses and formal mandates for community empowerment and people's welfare. This presented the opportunity for indigenous and local community activists to redefine terms on community forestry. Decentralization also provided an opportunity for local governments to manage natural resources and forests without direct intervention from the central government. In 1997, an activist worked at the communication forum for community forestry (FKKM), Prof. San Afri Awang was appointed as the head of the DG of Planning at MoFor, and a new DG position was created for HK ([Hidayat, 2008:166](#)). The first formal DG-level conservation bureaucracy was also a response to the indigenous peoples movement making claims alongside community forestry activists and increasing demands by the alliance promoting social forestry ([Bettinger et al., 2014](#)).

Conflicts in HK were more acute because the conservation bureaucracy in MoFor was the only institution that enforced the law (e.g. restricted public access) (see [Yusran et al., 2017](#); [Dunggio and Gunawan, 2009](#)). HP and HL were under the jurisdiction of district governments. Massive 'illegal' access to HP and HL could not be hindered by the district government who had neither management capacity nor interests. HP was transformed by many 'small-scale' concessions for logging and mining concessions, while both HL and HP were flooded by unrestricted public access. We call the TGHK designation at this time a hollow policy. Although forests were designated as a particular type of forest to be managed with an associated set of procedures, in practice these procedures were largely ignored ([Sahide et al., 2016](#)). Changes in forest management responsibility through decentralization had become one of the most contested issues in Indonesia ([Wulan et al., 2004](#); [Purnomo et al., 2010](#); [Maryudi, 2014](#)). The central government have maintained their authority in HK. As a result, the conservation bureaucracy governing HK was the only forest institution that still maintained a high degree of functionality and management/protection responsibilities.

4.1.4.2. Hollow promises of community based forest management. The central government has maintained its control of conservation forests even through the rapid shift to decentralization since 1999.⁵ However, we argue here that the current shifts in bureaucratic politics are challenging the norm of conservation forest zones to allow full access for some, while remain hollow for others. We show how the narrative of environmental services was used as justification for geothermal projects, which in turn also opened up opportunities for community forestry to contest these zones.

[Table 2](#) highlights the ways that conservation politics are being contested in the post-Soeharto era and its implications. We provide a detailed list of policy instruments that challenge utilization of conservation areas. Up to this point however, each policy instrument continues to be hollow with little or no implementation/enforcement. Although efforts for liberal zoning to allow utilization in conservation areas have been made, in reality, they have been undermined by actors' interests to maintain a non-decision state through hollow policies.

Notations for A (formulation) and B (implementation/enforcement) in the gradation column connects to our operational concept listed in [Table 1](#). For example, in Constitutional Court decision 95, we provide a

⁵ Except for a small authority for forest park (*Tahura*) managed by district government.

Table 2
Hollow policies for community management in conservation areas.

Policy instrument	Hollow situation	Rules and mandate	Timber utilization issue	Implementing actors' treatment	Gradation degree of hollow policy
1. Collaborative management: Conservation-based activities planned/managed with community participation, and multiple actors dialogue in MOEF regulation 19 (2007)	Clear formal rule, but impossible to accommodate multiple stakeholders' interests in the management.	Clear rule, especially after MOEF regulation 83 (2016)	No clear mandate to allow community to extract timber in conservation forest	Only work if there is strong non-state actor(s) with funding to showcase collaboration interests, and the willing head of the conservation unit (e.g. national park)	A2 + B1 (Pure hollow policy)
2. Special zone: To those local communities with public infrastructure, e.g. market, electricity, road, school	Clear rule, especially after MOEF regulation 83 (2016)	Clear rule, especially after MOEF regulation 83 (2016)	Not allowed to harvest timber	Need strong commitments of implementing actors	A2 + B2 (Medium hollow policy)
3. Traditional zone: To ensure traditional utilization of natural resources in the national park	Clear guideline rule, but lack support of basic law, and still need time to prove its effectiveness	Clear rule, especially after MOEF regulation 83 (2016)	Not allowed to cut the tree	Need strong commitments from implementing actors	A2 + B2 (Medium hollow policy)
4. Partnership in conservation forests in MOEF regulation 83 (2016)	No detailed rule, especially on regulation effectiveness	Clear guideline rule, but lack support of basic law, and still need time to prove its effectiveness	Timber utilization allowed only for villages outside conservation areas	Only work if it is a showcase of conservation working with community	A2 + B2 (Medium hollow policy)
5. Ecosystem essentials – based on Government Regulation 28 (2011)	No implementing rule from the sectoral bureaucracy	No detailed rule, especially on regulation effectiveness	Allowed, depending the conservation area authority	Can work if there is strong collaboration with local governments	A2 + B1 (Pure hollow policy)
6. Constitutional court decision 95 (2014)	No implementing rule from the sectoral bureaucracy	No implementing rule from the sectoral bureaucracy	Allowed to utilize timber in the state forest; MOEF still needs to follow up with detailed regulation	Need strong bureaucracy coordination	A3 + B1 (Pure hollow policy)

* The code is developed based on Table 1.

notation of A1 (high rules) because this is one of the strongest legal decision bodies in Indonesia. However, this can be coupled with the notation B3 (no implementation) to produce a hollow policy, if no ministerial body has developed to interpret and implement the decision. Therefore, at this juncture, we call this a pure hollow policy. If the enacting body was designated for implementation, but the policy is not enforcement, we define this as a medium hollow policy. For example, traditional zones were created to allow customary and traditional practices in conservation areas. In reality, although they have medium level of legal standing as a ministerial decree (A2, rules without strong support from basic laws), the regulation can only be implemented on paper through mapping exercises. Enforcement is not possible because enforcement would collide with stronger policies that prohibit common traditional practices such as introducing new species, traditional burning, and any timber harvesting actions. Therefore we assign (B2, implementation without enforcement) and identify the policy of traditional zones as a medium hollow policy. We have identified one instance of non-hollow policy. However, MDK policies (see Table 2, policy instrument 4) are only implemented and enforced in buffer zones outside of conservation areas. Overall, the conservation bureaucracy has continued to maintain hollow policies for utilization in conservation areas

4.2. Justifying geothermal development in conservation zones: breaking the deadlock

As of 2016, there were 265 potential geothermal sites identified in Indonesia, with the expected capacity to produce more than 28,000 megawatts (MW), which is equivalent to about 40% of total estimated geothermal potential in Indonesia. So far, however, Indonesia has only developed 5.12% of its geothermal potential (approximately 1514 MW) (MOEF, 2017). Potential locations for geothermal development highlight large potential of electric power production from 17 HK (Ekowisata.org, 2014), which is 70% of all areas in HK in Indonesia (Hakim et al., 2014). In 2017, MOEF approved the first geothermal development in HK by issuing environmental service licenses to PT. PGE-CGS, Ltd in Gunung Halimun national park to produce 377 MW (MOEF, 2017). The project was approved on justifications of providing an environmental service (e.g. renewable energy) and stipulated for the company to produce detailed environmental impact statements and ecosystem management plans to protect surrounding areas.

After this initial success, MOEF established a specific bureaucracy, the 'Directorate of Environmental Services of Conservation Forests', which oversee the 'Sub-directorate of Geothermal Utilization and Carbon'. In other words, the bureaucratic politics and prioritization by MOEF has conflated the importance of expanding geothermal projects with the impetus for carbon mitigation, placing geothermal development firmly within the approaches to mitigate climate change. MOEF staff overseeing geothermal development have now developed a detailed map of potential locations for geothermal development in Indonesia. According to preliminary surveys by the Ministry of Energy and Mineral Resources (MOEMR), there are several conservation areas that have geothermal potential (in 6 national parks and 33 nature reserves), such as Gunung Leuser National Park (NP), Kerinci Seblat NP, Bukit Barisan Selatan NP, Gunung Halimun Salak NP, Gunung Ciremai NP, and Gunung Rinjani NP. The potential areas are either located in the core or utilization zones. In one national park (Gunung Leuser NP), for example, the potential site is located in the core zone, while in other NPs, uncharted potential geothermal locations are expected to be in utilization zones.⁶ Justifying utilization permits for geothermal development on the premise of providing an environmental service was articulated in PP No. 108 of 2015. Permits can only be issued for

⁶ Except for a small authority for forest park (*Tahura*) managing by district government.



Fig. 4. Map of Geothermal Potential in Conservation Areas.

development in utilization zones. Many of the geothermal sites in Nature Reserves, however, are located within the core zones, initiating further efforts to push the envelope of possible utilization or to redraw the zoning boundaries (Mongabay, 2016).

In 2017, MOEMR released new data on 145 potential sites in conservation areas for geothermal development (total 12,176 MW possible) (see Fig. 4, below), which created an excitement about potential development/funding possibilities.⁷ A MOEMR's report (2017) explicitly stated that energy from the renewable sources, such as geothermal development, provides broader environmental benefits for climate mitigation, which is a foundation for attracting external supports from environmentally/conservation-oriented institutions. These arguments frame the rationale for development as benefits far outweighing the site-specific impacts.

4.3. Re-establishing hollow policy in social forestry

As explained in previous sections, efforts to utilize conservation areas in Indonesia have mostly ended up in a deadlock, as lower-level regulations for utilization clash with the umbrella laws (Law 5, 1990, in particular), which maintained strict preservation of HK. Until geothermal politics intervened with Law 21 (2014) further supported by MOEF regulations, no clear pathways existed for articulating and implementing liberal zoning in conservation forests. Breaking a deadlock policy state has been possible through a combination of green narratives and powerful alliances creating an opportunity. This also opened up a possibility for proponents of community based forest management to make similar utilization claims in conservation areas. The government now has a legal precedence that can force MOEF to liberal zoning, which created concerns for the conservation bureaucracy. The most prominent claimants in the post-New Order era are the advocacy groups for social forestry who have been seeking recognitions for indigenous communities, traditional uses, as well as those communities already residing within conservation areas.

⁷ Interview with a former senior staff at MOEF in November 2016.

The most obvious concern is related to the further destruction of forest areas. Many in the bureaucracy feel that if lands were handed over to local communities, rapid land conversion would take place. However, major concerns among bureaucratic actors are related to more practice aspects. It is much simpler for them to work with a few investors of geothermal energy development for the necessary assessments and paperwork where the process is more clearly defined. The locations are already mapped out, environmental impact assessments are more likely to be conducted in a professional manner, and they can reasonably expect reporting responsibilities to be fulfilled. Past experiences have proved that working on social forestry with local communities is difficult from the bureaucratic perspective. Local plans are usually drawn up by third-party intermediaries like NGOs or local universities. Once such plans are submitted and approved, the local communities often do not have the capacity to fulfill existing paperwork requirements. When multiplied by thousands of communities across Indonesia, such a challenge seems bureaucratically insurmountable. The conservation bureaucracy does not have enough staff and furthermore, is not familiar with the legal process for addressing land use conflicts in conservation areas.

Large corporations have built-in resources and technical capacity for working with local communities. For example, the geothermal power plant run by Chevron in the Gunung Halimun Salak NP were able to mobilize Corporate Social Responsibility (CSR) funds to work with local communities (Hadiprasojo, 2015). They provided employment opportunities and community development programs, and initiated small environmental rehabilitation and monitoring projects. They were also able to mobilize ad hoc funding sources to address conflicts with local communities. Overall, working with a utilization concession is much clearer and straightforward for the conservation bureaucracy, while working with communities would require substantial face-to-face interactions and directly dealing with individual conflicts. In the event of conflicts in a geothermal concession area, the conservation bureaucracy can just address the corporation and their regulatory commitments.

Advocacy groups for social forestry have grown increasingly powerful in the past decade. Policies supporting indigenous rights, social

forestry, and agrarian reform have expanded legal bases for the claims to millions of hectares in the forest estate,⁸ including conservation areas. The President has personally intervened in supporting local community land claims and appointed the previous head of DG of social forestry to oversee DG for conservation. Nevertheless, certain barriers to acknowledging community claims to conservation areas still persist. The politics of delay and non-decision are inherent in the rationale that emerge from Law 5, 1990 stipulating conservation utilization, which must first be resolved before any claims can be realized.

Maintaining the deadlock of strict preservation blocking community access while letting private actors utilize conservation forests became increasingly impossible. New regulations began to open up the opportunity for both, but power politics of implementation/enforcement make them effectively hollow for some interests while serving others.

5. Who benefits? : Actors and institutions

5.1. President, economy, and social welfare commitments

President Widodo is often described as a populist president. Not coming from a typical aristocratic background, he came into the elected office as one of the most popular presidents in Indonesian history. The key strategy to Widodo's success is appealing to the popular sentiments among activist communities, while also supporting the broader business elites in Indonesia. He played a central role in creating the window of opportunity that led to breaking the deadlock in conservation areas. The state forest is now totally under the control of the President, where he can impose his popular political agenda on social forestry, while encouraging liberal investments on geothermal projects with new government regulations issued at the end of 2016.⁹

As Widodo came into office, he selected a prominent activist from Indonesia Corruption Watch to act as the chief of staff, especially to ensure his commitment on following up on the key national reform commitments. This appointment provided a platform for building trust with broader activist communities and addressing their concerns. He created a broad umbrella of policies to support agrarian reforms, indigenous rights, village empowerment, and others. His campaign promises for securing land rights and livelihood for the poor were articulated through the programs on reforming land rights and developing social forestry. As numerous Indonesian villages are located within or around the state forest estate, social forestry became the vehicle for securing usufruct land rights of the rural poor. At the beginning of his tenure, the MOEF sought to delay the contested claims to the state forest, especially around conservation areas. However, the president Widodo's commitments and staff interventions at the ministry made utilization more likely than ever.

Ministries coordinating economic activities (e.g. the Ministry of Energy and Mineral Resources) was able to create the opportunities that broke the deadlock of utilization in conservation areas. One of the key strategy was creating a pathway for fulfilling the renewable energy commitment of 35,000 MW. Geothermal energy was framed as providing an environmental service, while also supporting sustainable development. The President has successfully persuaded the Parliament on re-drafting energy policy to make it easier for geothermal expansion and ensure strategic development of some conservation areas.

5.2. The key line ministries (MOEF and MOEMR)

As explained earlier, MOEF's current form has evolved from its historical development (Fig. 2) and consists of two distinctive elements: DG of Production and DG of Conservation. DG of Conservation has a

considerable power over maintaining the political identity of MOEF and zoning is a way to create a non-decision state to server its bureaucratic interests. Although traditional and special zones are allowed on paper, they are in fact a hollow policy, without the mechanism for implementation (Table 2). The main job for DG of Conservation is 'selling' conservation to international forest regimes and to receive international funding. Thus, DG of conservation is programed to only work with external actors – such as NGOs and international actors – and maintain preservation of the state forest.

However, MOEF has allowed the Parliament to take the initiative on revising conservation forest law, which signals that conservation in the future will be more business friendly accounting additional benefits of engaging private sector. Geothermal energy as an environmental service provides an ideal justification for this. A large business venture for geothermal development can meet national development goals and also attract the notable attention to clean energy development and carbon emission reduction in Indonesia. This can help negate some of the negative attention Indonesia received in the recent year for deforestation (e.g. Hansen et al. 2013). The popularity of landscape approaches also provides a rationale for multiple uses and a basis for zoning that can maintain conservation function while also generating financial benefits.

Therefore, DG of Conservation has responded to the demand for geothermal development by transforming the bureaucracy to incorporate hybrid functions. Several strands of bureaucracies have emerged under DG of Conservation, such as the 'Directorate of Environmental Services in Conservation Forest', as well as the 'Sub-directorate of Geothermal Environmental Service Utilization and Carbon'¹⁰. Creating these bureaucratic structures has expanded their role and authority, as well as additional staff, mandates, and budget. To distance themselves from the critique that geothermal development is an extractive deep mining venture, MOEF representative argue that: "geothermal development is not like the coal mine, the open pit. Those [coal mines] destroy the forest, they extract and leave behind a large hole. Meanwhile, accessing heat for energy from the Earth only create tiny holes, and does not require cutting down all [forests]" (Berita Satu, 2016). MOEF has their own definitions on conservation and sustainability to challenge transnational conservation standards such as HCV and to maintain their control over conservation areas (the process was described in Giessen et al., 2016).

Opening the policy window for potential geothermal projects has proceeded cautiously with ongoing revisions of the Conservation Law 5/1990, as allowing geothermal projects can intensify other actors to demand similar utilization, particularly advocates of social forestry¹¹. Backed by strong non-government interests and activists with direct channels to President Widodo, these demands might lead to additional allowable uses in conservation zones. DG of Conservation is awaiting for a clear instruction from the law, which will decide either maintaining the deadlock or addressing the complexities of allowing social forestry in conservation areas.

In the meantime, MOEMR will need to meet the ambitious target of additional 7200 MW from renewable sources by 2025 (Prodaya, 2016). MOEMR has actively engaged in facilitating good relations between geothermal businesses and local communities, as well as with local and civil society organizations (Hadiprasojo, 2015), which reduces the complexity of negotiating with local communities directly for the bureaucracy. MOEMR are also supported by ambitious geothermal developers who argue that if active development does not immediately get underway in Indonesia, they risk losing potential investors to other countries and Indonesia will not achieve targeted climate mitigation

⁸ Interview with NGOs in Jakarta on 15 December 2016 during a workshop for revising the Indonesia conservation law.

⁹ This new government regulation replaced old GG 59/2007 on geothermal activities and business interests.

¹⁰ See new structure (2016) of MOEF on DG conservation structure at <http://ekowisata.org/tentang-kami/> as well as <http://ksdae.menlhk.go.id/struktur-organisasi.html>.

¹¹ Based on our observations on the effort of revising Forestry Law (Law 41 of 1999) at MOEF, as well as the process on the revisions of the Conservation Law 5 / 1990 (during workshop series and media analysis).

commitments.

5.3. Local leaders (national parks, sub-national governments, and civil society)

Local leaders are defined as the actors who influence local land management, which include those working in national parks, Tahura¹², provincial and district agencies, as well as influential civil society. Although the national park system is a part of DG of Conservation, leaders in these posts play an important role in negotiating policies at local sites. However, leadership of national parks are notorious for having some of the shortest tenures, generally not lasting more than two - three years in their posts¹³. Through the national park offices, MOEF can coordinate infrastructure projects, like access roads, and other small support programs for local communities under the title of local community empowerment¹⁴. National parks and other conservation unit administration are also requested for not only taking initiatives on conserving natural resources but also promoting community empowerment and increasing income from ecosystem services¹⁵.

Conflicts surrounding uses of conservation areas among local communities are often mediated by local government representatives. The main intermediary in such conflicts between communities and DG of Conservation (e.g. national park leadership) are the district heads whose constituencies are local communities. Local district heads generally tend to propose the release of enclave areas from conservation zone designation to mediate the conflicts. One exception is Tahura¹⁶ conservation areas. In these cases, the district governments seek to maintain the conservation function of the Tahura and tend to have adverse relationships with local communities by keeping them out.

5.4. Large-scale corporations

Investors require land for building geothermal power plants. Large infrastructure projects had been off limits in conservation areas due to regulatory deadlock, while they are plagued by resettlement challenges outside of conservation areas. Thus, some conservation areas may need to be sacrificed. Chevron has managed 200 ha of conservation areas out of their 10,000 ha concession (since 1980) where they achieved ‘golden category’ certificate from the Ministry of Environment in 2011. They did not have a problem securing geothermal investment (Berita Satu, 2016). National state-owned companies like PERTAMINA also prioritize geothermal projects in Indonesia and have close relations with parliament members, which create concerns. In one news statement (TEMPO, 2017), the Indonesian Forestry Higher Institution network requested investment agencies not to lobby or otherwise intervene the revision of the Indonesian Conservation Law.

¹² Tahura (Taman Hutan Raya) (forest park) is the only conservation unit managed under district authority.

¹³ For example, during the conflict of Tallasa sub-village in Bantimurung Bulusaraung National Park the head of the national park has been replaced three times since 2005. Villagers of Cinagara located within Gunung Gede Pangrango NP complained that these replacements affected their ability to coordinate a sustained community empowerment program with NP staff (Soemarno, 2012).

¹⁴ One commonly observed example are roads built in the Babul National Park, which was generally promoted under the rhetoric of community empowerment. Our observation was made in the event of socialisation on 28 November 2016. *Pemberdayaan Masyarakat Dalam Rangka Pemanfaatan dan Pengembangan Transportasi Terbatas di Kawasan Taman Nasional Bantimurung Bulusaraung, Kabupaten Maros, kerjasama antara Balai Taman Nasional Babul dan Balai Besar Pelakasana Jalan Nasional XIII, Makassar.*

¹⁵ An interview with the head of NP Takabonerate 19 March 2018.

¹⁶ The seemingly unmanaged Tahura are common particularly in South Sulawesi province. These conservation areas were not centralized as part of Law 23/2014, but established for recreation, tourism and watershed protection by district governments, especially in outer islands outside of Java. MOEF tends to not approve new Tahura proposals in the state forest area. The Minister stated that proposal to convert non-state forest area to become Tahura is more preferable.

Table 3
Scenarios for deadlock opportunism in Indonesia's conservation forests.

No	Policy Instrument options	Entry point	Consequences	Actors who benefit from the option
1	<ul style="list-style-type: none"> Liberal zoning for both community forests and geothermal utilization Revising the conservation law to provide a win-win for both community and geothermal investment Fulfilling the commitments for social forestry in conservation areas 	<ul style="list-style-type: none"> Geothermal development and social forestry coalitions enter political argumentation to challenge conservation zones 	<ul style="list-style-type: none"> Weakening pure conservation politics (in terms of forest defense) Strengthening conservation as business. Greater local claims to access land 	<ul style="list-style-type: none"> President: for securing electoral votes from popular land reforms NGOs that support brokering management plan for community forests Large scale corporations MOEFM with expanded avenues to implement large infrastructure projects
2	<ul style="list-style-type: none"> Status quo zoning, keeping the deadlock Keeping existing popular legal framework (without mechanisms), such as (1) Collaborative management, (2) Conservation Partnership, (3) Conservation village model Keeping special zone, traditional zone as status quo (popular social forest zonation but not implemented) Permits for geothermal business in existing sites with strong political backup, meanwhile not allowing c additional sites. CSR programs for existing sites 	<ul style="list-style-type: none"> International donors prefer multi-stakeholder approaches including social forestry Strong commitment from site level bureaucracies (e.g. national park management) 	<ul style="list-style-type: none"> Sustaining ambiguities and inconsistent rules regarding social forestry programs in conservation areas Many interpretations possible and subjective interpretation steered by strong coercive power in site level Strong conservation bureaucracy blocking new geothermal proposal. 	<ul style="list-style-type: none"> MOEF collecting more dominant information especially national parks selecting partners to collaborate with, proceed or delay collaboration implementation and agenda, and select location inside or outside (buffer area) for partnership and collaboration

6. Discussion and conclusion

This paper discussed how bureaucratic politics, namely the mechanism of creating deadlocks - through non-decisions and hollow policies - take shape in the context of the forestry policy cycle in Indonesia. We have described how the forest bureaucracy has evolved over time to maintain conservation zones. Deadlock opportunism showcases the friction that takes place to allow for longstanding policies in a deadlock situation, to be reinterpreted to serve particular powerful interests while being closed off to others with similar claims over the same deadlock. Table 3 highlights the conditions of deadlock opportunism in conservation zones, and discusses the implications of breaking the deadlock in different ways.

The first example in Table 3 is the liberal zoning case for both community forests and geothermal utilization. In this scenario, the policy instruments would include both revising the existing conservation law and creating new ones for supporting social forestry commitment. If this deadlock opportunism succeeds, it will weaken politics for strict preservation, but would benefit a number of powerful and not so powerful actors. In the second scenario, we provide the conditions in which deadlocks can be maintained. Although the initial opening for geothermal utilization permits are underway in conservation areas, this does not guarantee future permits will be issued in other locations. There are even some indications of geothermal permits in conservation areas already being denied. We also discuss consequences of the continued status quo of social forestry deadlocks in their preexisting conditions.

All over the world, the ambiguity surrounding conservation and preservation persists often resulting in sometimes unlikely alliances, such as social forestry and geothermal development presented in this paper, which challenge the longstanding deadlock preventing utilization of conservation areas in Indonesia. The historical factors that created widespread conservation zones across Indonesia illustrates how the bureaucracy evolved to maintain a deadlock on these zones through Indonesia's development. We argue that Indonesian forestry policy has evolved with key alliances within the international forestry regime. The operational framework of deadlock opportunism developed here help us understand how deadlocks are created and how they can be broken or maintained. This paper presents thorough explanations of the actors, interests, and bureaucratic tools at work in interplays between geothermal development and social forestry for utilizing conservation areas. However, they are by no means to suggest prescriptive solutions or predetermined outcomes. We believe the concept of deadlock opportunism and the operational framework can provide new insights for understanding progress (or lack thereof) of certain policies in their lifecycles in other parts of the world.

Acknowledgements

All reviewers suggestion was helpful for us to improve our conceptual and operational framework. We thank their time and efforts. We appreciate all those who participated in our interviews and allowed us to observe their meetings. We also thank to Andita Aulia Pratama who has reshaped our figures and graphical abstract.

References

- Adams, W.M., Hutton, J., 2017. People, parks and poverty : political ecology and biodiversity conservation. *Conserv. Soc.* 5 (2), 147–183.
- Anderson, B., 1991. *Imagined Communities. Reflections on the Origin and Spread of Nationalism.* Verso, New York.
- Anderson, B., 2017. People, land and poppy: the political ecology of opium and the historical impact of alternative development in Northwest Thailand. *For. Soc.* 1 (1), 48–59. <http://dx.doi.org/10.24259/fs.v1i1.1495>.
- Anderson, B., Jongruck, P., 2017. Forestry, illegibility and illegality in Omkoi, Northwest Thailand. *For. Soc.* 1 (2), 98–109. <http://dx.doi.org/10.24259/fs.v1i2.2809>.
- Bachrach, P., Baratz, M.S., 1962. Two faces of power. *Am. Political Sci. Rev.* 56 (4), 947–952. <http://dx.doi.org/10.2307/1952796>.
- Bachrach, P., Baratz, M.S., 1963. Decisions and nondecisions : an analytical framework. *Am. Political Sci. Rev.* 57 (3), 632–642. <http://dx.doi.org/10.2307/1952568>.
- Berita Satu, 2016. Chevron Minta Pemerintah Longgarkan Peraturan Geothermal. Retrieved from <http://www.beritasatu.com/nasional/72482-chevron-minta-pemerintah-longgarkan-peraturan-geothermal.html>.
- Bettinger, K., Fisher, M., Miles, W., 2014. Occupy the earth: global environmental movements. *The Art of Contestation and Legitimacy: Environment, Customary Communities, and Activism in Indonesia.* Emerald Group Publishing Limited, pp. 195–224.
- Bos, J.J., Brown, R.R., 2012. Governance experimentation and factors of success in socio-technical transitions in the urban water sector. *Technol. Forecasting Soc. Change* 79 (7), 1340–1353. <http://dx.doi.org/10.1016/j.techfore.2012.04.006>.
- Brosius, J.P., Tsing, A.L., Zemer, C., 1998. Representing communities: histories and politics of community-based natural resource management. *Soc. and Nat. Res.* 11 (2), 157–168. <http://dx.doi.org/10.1080/08941929809381069>.
- Dhiaulhaq, A., Wiset, K., Thaworn, R., Kane, S., Gritten, D., 2017. Forest, water and people : the roles and limits of mediation in transforming watershed conflict in. *For. Soc.* 1 (November), 121–136. <http://dx.doi.org/10.24259/fs.v1i11.2049>.
- Dunggio, I., Gunawan, H., 2009. An overview on the history of national Park management policy in Indonesia. *Jurnal Analisis Kebijakan Kehutanan* 6 (1), 43–56.
- Ekowisata.org, 2014. Bagaimanakah Pemanfaatan Panas Bumi di Kawasan Konservasi Setelah Undang-undang Tentang Panas Bumi Terbit. Retrieved November 2, 2014. <http://ekowisata.org/bagaimanakah-pemanfaatan-panas-bumi-di-kawasan-konservasi-setelah-undang-undang-tentang-panas-bumi-terbit/>.
- Fearnside, P.M., 2003. Conservation policy in Brazilian Amazonia: understanding the Dilemma. *World Dev.* 31 (5), 757–779. [http://dx.doi.org/10.1016/S0305-750X\(03\)00011-1](http://dx.doi.org/10.1016/S0305-750X(03)00011-1).
- Fisher, M., Sablan, T., 2018. Evaluating environmental conflict resolution: practitioners, projects, and the movement. *Conflict Resolut. Q.* 1–13. <http://dx.doi.org/10.1002/crq.21222>.
- Fisher, L.A., Kim, Y.-S., Latifah, S., Mukarom, M., 2017. Managing Forest conflicts: perspectives of Indonesia's Forest management unit directors. *For. Soc.* 1 (1), 8–26. <http://dx.doi.org/10.24259/fs.v1i1.772>.
- Forest Stewardship Council, 2015. *HCV Manager's Guide HCV Manager's Guide (FSC-GD-30-009 V1-0 D1 EN)*. Retrieved from <https://fc.fsc.org/preview/hcv-managers-guide-fsc-gd-30-009-v1-0-d1-en-a-6173.pdf>.
- Giessen, L., Burns, S., Sahide, M.A.K., Wibowo, A., 2016. From governance to government: the strengthened role of state bureaucracies in forest and agricultural certification. *Policy Soc.* 35 (1). <http://dx.doi.org/10.1016/j.polsoc.2016.02.001>.
- Giessen, L., Krott, M., Möllmann, T., 2014. Increasing representation of states by utilitarian as compared to environmental bureaucracies in international forest and forest-environmental policy negotiations. *For. Policy Econ.* 38 (March 2015), 97–104. <http://dx.doi.org/10.1016/j.forpol.2013.08.008>.
- Giessen, L., Sahide, M.A.K., 2017. Blocking, attracting, imposing, and aligning : the utility of ASEAN forest and environmental regime policies for strong member states. *Land Use Policy* 67 (May 2016), 13–26. <http://dx.doi.org/10.1016/j.landusepol.2017.05.012>.
- Gilmour, D., 2016. Forty years of community-based forestry a review of its extent and effectiveness. *FAO Forestry Paper. Food and Agriculture Organization of the United Nations, Rome* Retrieved from <http://www.fao.org/3/a-i5415e.pdf>.
- Goss, A., 2011. *The Floracrats: State-sponsored Science and the Failure of the Enlightenment in Indonesia.* Retrieved from The University of Wisconsin Press, Madison, Wisconsin. <https://goo.gl/oHJzon>.
- Hadiprasojo, 2015. Masyarakat Sekitar PLTP Chevron Geothermal Salak. Retrieved November 2, 2016, from <https://hadiprasojo.wordpress.com/2015/06/16/masyarakat-sekitar-pltp-chevron-geothermal-salak-januari-2015/>.
- Hakim, C. Al, Fauzi, A., Ekayani, M., 2014. PEMILIHAN ALTERNATIF KEBIJAKAN PENGELOLAAN SUMBERDAYA ENERGI PANAS BUMI DI KAMOJANG, JAWA BARAT DENGAN ANALISIS MULTI CRITERIA DECISION MAKING (MCDM). *JURNAL EKONOMI PERTANIAN, SUMBERDAYA DAN LINGKUNGAN* 2, 26–43.
- Hansen, M.C., Potapov, P.V., Moore, R., Hancher, M., Turubanova, S.A., Tyukavina, A., Thau, D., Stehman, S.V., Goetz, S.J., Loveland, T.R., Kommareddy, A., Egorov, A., Chini, L., Justice, C.O., Townshend, J.R., 2013. High-resolution global maps of 21st-century forest cover change. *Science* 342 (6160), 850–853. <http://dx.doi.org/10.1126/science.1244693>.
- Hidayat, H., 2008. *Politik Lingkungan: Pengelolaan Hutan Masa Orde Baru Dan Reformasi (Pertama)*. Retrieved from Yayasan Obor Indonesia, Jakarta. <https://goo.gl/4tnrjE>.
- Hirsch, P., Warren, C., 1998. In: Hirsch, P., Warren, C. (Eds.), *Introduction: Through the Environmental Looking Glass: The Politics of Environment in Southeast Asia : Resources and Resistance.* Routledge, London and New York.
- Kaimowitz, D., 2003. Forest law enforcement and rural livelihoods. *Int. For. Rev.* 5 (3), 199–210.
- Kane, S., Dhiaulhaq, A., Sapkota, L.M., Gritten, D., 2018. Transforming forest landscape conflicts : the promises and perils of global forest management initiatives such as REDD +. *For. Soc.* 2 (April), 1–17. <http://dx.doi.org/10.24259/fs.v2i1.3203>.
- Krott, M., 2005. *Forest Policy Analysis.* Springer <http://dx.doi.org/10.1007/1-4020-3485-7>.
- Krott, M., Bader, A., Schusser, C., Devkota, R., Maryudi, A., Giessen, L., Aurenhammer, H., 2014. Actor-centred power : the driving force in decentralised community based forest governance. *For. Policy Econ.* 49, 34–42. <http://dx.doi.org/10.1016/j.forpol.2013.04.012>.
- Li, T.M., 2001. Masyarakat Adat, difference, and the limits of recognition in Indonesia's forest zone. *Mod. Asian Stud.* 35 (3), 645–676. <http://dx.doi.org/10.1017/S0026749X01003067>.
- Ma, Z., Li, B., Li, W., Han, N., Chen, J., Watkinson, A.R., 2009. Conflicts between

- biodiversity conservation and development in a biosphere reserve. *J. Appl. Ecol.* 46 (3), 527–535. <http://dx.doi.org/10.1111/j.1365-2664.2008.01528.x>.
- Maryudi, A., 2014. Arah tata Hubungan Kelembagaan Kesatuan Pengelolaan Hutan (KPH) di Indonesia. *Jurnal Ilmu Kehutanan* 10 (1), 57–64. <http://dx.doi.org/10.22146/jik.12632>.
- Maryudi, A., 2015. The political economy of forest land-use, the timber sector, and forest certification. In: Romero, C., Putz, F.E., Guariguata, M.R., Sills, E.O., Maryudi, A., Ruslandi (Eds.), *The Context of Natural Forest Management and FSC Certification in Indonesia*. Center for International Forestry Research (CIFOR), Bogor, pp. 9–34. <http://dx.doi.org/10.17528/cifor/005659>.
- Maryudi, A., Sahide, M.A.K., 2017. Research trend: power analyses in polycentric and multi-level forest governance. *For. Policy Econ.* 81 (May), 65–68. <http://dx.doi.org/10.1016/j.forpol.2017.05.003>.
- Matland, R.E., 1995. Synthesizing the implementation literature: the ambiguity-conflict model of policy implementation. *J. Public Administration Res. Theor.* 5 (2), 145–174. <http://dx.doi.org/10.1093/oxfordjournals.jpart.a037242>.
- MoEF (2017). PEMANFAATAN PANAS BUMI UNTUK KESEJAHTERAAN RAKYAT. Retrieved April 22, 2017 from http://ppid.menhk.go.id/siaran_pers/browse/556.
- MoEF, 2014. The Statistics of Environmental Quality and Forestry in Indonesia 2014. MoEF, Jakarta. <http://dx.doi.org/10.1017/CBO9781107415324.004>.
- Moeliono, M., Thuy, P.T., Bong, I.W., Wong, G.Y., Brockhaus, M., 2017. Social forestry—why and for whom? A comparison of policies in Vietnam and Indonesia. *For. Soc.* 1 (1), 78–97. <http://dx.doi.org/10.24259/fs.v1i1.2484>.
- MoFor (2005). SEJARAH ORGANISASI DIREKTORAT JENDERAL KONSERVASI SUMBER DAYA ALAM DAN EKOSISTEM. Retrieved November 2, 2016, from <http://ksdae.menhk.go.id/sejarah-ksdae.html>.
- Mongabay. (2016). Genjot Energi Panas Bumi, Pemerintah Perbaiki Regulasi. Retrieved December 29, 2016, from <http://www.mongabay.co.id/2016/11/14/genjot-energi-panas-bumi-pemerintah-perbaiki-regulasi/>.
- Morelli, F., Tryjanowski, P., Benedetti, Y., 2016. Differences between niches of anthropocentric and biocentric conservationists : wearing old clothes to look modern? *J. For. Nat. Conser.* 34, 101–106. <http://dx.doi.org/10.1016/j.jnc.2016.09.005>.
- Myers, R., Intarini, D., Sirait, M.T., Maryudi, A., 2017. Claiming the forest: inclusions and exclusions under Indonesia's "new" forest policies on customary forests. *For. Policy Econ.* 66, 205–213. <http://dx.doi.org/10.1016/j.landusepol.2017.04.039>.
- Negi, S., Giessen, L., 2018. India in international climate governance : through soft power from REDD to REDD + policy in favor of relative gains. *For. Soc.* 2 (April), 47–64. <http://dx.doi.org/10.24259/fs.v2i1.3584>.
- Nurjaya, I.N., 2005. Sejarah hukum pengelolaan hutan di Indonesia. *Jurisprudence* 2 (1), 35–55. Retrieved from <https://publikasiilmiah.ums.ac.id/bitstream/handle/11617/1036/3.NYOMANNURJAYA.pdf?sequence=1>.
- Nurrohmah, D.R., Nugroho, I.A., Hardjanto, Purwadianto, Maryudi, A., Erbaugh, J.T., 2017. Shifting contestation into cooperation: strategy to incorporate different interest of actors in medicinal plants in Meru Betiri National Park, Indonesia. *For. Policy Econ.* 83, 162–168. <http://dx.doi.org/10.1016/j.forpol.2017.08.005>.
- Peluso, N.L., 1993. Coercing conservation? *Control. Global Environ. Change* 3 (2), 199–217. [http://dx.doi.org/10.1016/0959-3780\(93\)90006-7](http://dx.doi.org/10.1016/0959-3780(93)90006-7).
- Peluso, N.L., Vandergest, P., 2001. Genealogies of the political forest and customary rights in Indonesia, Malaysia, and Thailand. *J. Asian Stud.* 60 (3), 761–812.
- Prabowo, D., Maryudi, A., Imron, M.A., Senawi, 2016. Enhancing the application of Krott et al.'s (2014) Actor-Centred Power (ACP): the importance of understanding the effect of changes in polity for the measurement of power dynamics over time. *For. Policy Econ.* 62, 184–186. <http://dx.doi.org/10.1016/j.forpol.2015.10.006>.
- Prodaya. (2016, September 23). Panas Bumi Jadi Andalan Sumber Energi Baru Terbarukan Indonesia Masa Depan. Retrieved November 2, 2016, from <http://prodaya.com/panas-bumi-jadi-andalan-sumber-energi-baru-terbarukan-indonesia-masa-depan/>.
- Purnomo, M., Bintemagel, N., Faus, H., 2010. Transformation of resource management in upland East-Java, Indonesia – from directive power to social and institutional interactions. In: *The International Symposium 'Sustainable Land Use and Rural Development in Mountainous Regions of Southeast Asia*. Hanoi, pp. 1–18.
- Resosudarmo, 2003. Computable General equilibrium model on air pollution abatement policies with Indonesia as a case study. *Economic Record* 79 (June), S63–S73. <http://dx.doi.org/10.1111/1475-4932.00092>.
- Resosudarmo, I.A.P., 2004. Closer to people and trees: will decentralisation work for the people and the forests of Indonesia? *Eur. J. Dev. Res.* 16 (1), 110–132. Retrieved from https://www.researchgate.net/profile/Ida_Resosudarmo/publication/233378391_Closer_to_People_and_Trees_Will_Decentralisation_Work_for_the_People_and_the_Forests_of_Indonesia/links/549345150c225de74db4f48/Closer-to-People-and-Trees-Will-Decentralisation-Work-for-the-People-and-the-Forests-of-Indonesia.pdf.
- Retno, S. (1998). Lokakarya Kepala Balai Dan Kepala Unit Taman Nasional se-Indonesia. Jakarta. Retrieved from http://pdf.usaid.gov/pdf_docs/Pnacp127.pdf.
- Sahide, M.A., Giessen, L., 2015. The fragmented land use administration in Indonesia - analysing bureaucratic responsibilities influencing tropical rainforest transformation systems. *Land Use Policy* 43, 96–110. <http://dx.doi.org/10.1016/j.landusepol.2014.11.005>.
- Sahide, M.A., Supratman, S., Maryudi, A., Kim, Y., Giessen, L., 2016. Decentralisation policy as recentralisation strategy: forest management units and community forestry in Indonesia. *Int. For. Rev.* 18 (1), 78–95. <http://dx.doi.org/10.1505/146554816818206168>.
- Sahide, M.A.K., Nurrochmat, D.R., Giessen, L., 2015. The regime complex for tropical rainforest transformation: analysing the relevance of multiple global and regional land use regimes in Indonesia. *Land Use Policy* 47. <http://dx.doi.org/10.1016/j.landusepol.2015.04.030>.
- Sammon, D. (2008). Understanding Non-Decision Making. *Encyclopedia of Decision Making and Decision Support Technologies*, (1962), 1962–1964.
- Setiawan, E.N., Maryudi, A., Lele, G., 2017. Tipologi dan Kerawanan Korupsi Sektor Kehutanan di Indonesia. *Jurnal Ilmu Kehutanan* 11 (2), 142–155. <http://dx.doi.org/10.22146/jik.28278>.
- Setiawan, E.N., Maryudi, A., Purwanto, R.H., Lele, G., 2016. Opposing interests in the legalization of non-procedural forest conversion to oil palm in Central Kalimantan, Indonesia. *Land Use Policy* 58 (August), 472–481. <http://dx.doi.org/10.1016/j.landusepol.2016.08.003>.
- Setyowati, A.B., Sriyanto, A., Amsa, A.W., Santosa, A., Aliadi, A., Steni, B., ... Sukmantoro, W., 2008. In: Santosa, A. (Ed.), *Konservasi Indonesia, Sebuah Potret Pengelolaan & Kebijakan*. Ministry of Forestry Republic of Indonesia, Pokja Kebijakan Konservasi, USAID, Jakarta Retrieved from http://pdf.usaid.gov/pdf_docs/Pnadu286.pdf.
- Singer, B., Giessen, L., 2017. Towards a donut regime? Domestic actors, climatization, and the hollowing-out of the international forests regime in the anthropocene. *For. Policy Econ.* 79, 69–79. <http://dx.doi.org/10.1016/j.forpol.2016.11.006>.
- Soemarno (2012). Model Desa Konservasi. Malang.
- Stutzin, G., 1975. A note on conservation and politics. *Environ. Policy Law* 1, 38–40.
- Susanti, A., Karyanto, O., Affianto, A., Ismail, Pudyatmoko, S., Aditya, T., et al., 2018. Understanding the impacts of recurrent Peat fires in Padang Island – Riau Province, Indonesia. *Jurnal Ilmu Kehutanan* 12 (1), 117–126. <http://dx.doi.org/10.22146/jik.34126>.
- Susanti, A., Maryudi, A., 2016. Development narratives, notions of forest crisis, and boom of oil palm plantations in Indonesia. *For. Policy Econ.* 73, 130–139. <http://dx.doi.org/10.1016/j.forpol.2016.09.009>.
- Tacconi, L., Obidzinski, K., Agung, F., 2004. Learning Lessons to Promote Forest Certification and Control Illegal Logging in Indonesia Learning Lessons to Promote Forest. Bogor.
- TEMPO. (2017). Revisi UU Konservasi Diminta Bebas dari Intervensi Korporasi. Retrieved May 5, 2017, from <https://m.tempo.co/read/news/2017/05/05/173872427/revisi-uu-konservasi-diminta-bebas-dari-intervensi-korporasi>.
- Tsing, A.L., 2005. *Friction: An Ethnography of Global Connection*. Princeton University Press.
- Wertz-kanounnikoff, S.A., 2005. *Forest Policy Enforcement at the Amazon Frontier : the Case of Mato Grosso, Brazil*. Ruprecht-Karls-Universität Heidelberg.
- Wibowo, A., Giessen, L., 2015. Land use policy absolute and relative power gains among state agencies in forest-related land use politics : the ministry of forestry and its competitors in the REDD + programme and the one map policy in Indonesia. *Land Use Policy* 49, 131–141. <http://dx.doi.org/10.1016/j.landusepol.2015.07.018>.
- Wibowo, A., Giessen, L., 2018. From voluntary private to mandatory state governance in Indonesian forest certification : reclaiming authority by bureaucracies. *For. Soc.* 2 (April), 28–46. <http://dx.doi.org/10.24259/fs.v2i1.3164>.
- Wiratno, Indriyo, D., Syarifuddin, A., Kartikasari, A., 2001. Berkaca di cermin retak: refleksi konservasi dan implikasi bagi pengelolaan taman nasional. FPReSt, the Gibbon Foundation, PILINGO Movement.
- Wolfiger, R.E., Brand, J.H., Brody, R.A., Derthick, M., George, A.L., Mundt, R.J., et al., 1968. Nondecisions and the study of local politics. *Am. Political Sci. Rev.* 58, 1063–1080.
- Wulan, Y.C., Yamsi, Y., Purba, C., Wollenberg, E., 2004. *Analisa Konflik Sektor Kehutanan di Indonesia 1997 - 2003*. Retrieved from Bogor, Center for International Forestry Research. http://www.cifor.org/publications/pdf_files/Books/BWulan040110.pdf.
- Yusran, Y., Sahide, M.A.K., Supratman, S., Sabar, A., Krott, M., Giessen, L., 2017. The empirical visibility of land use conflicts : from latent to manifest conflict through law enforcement in a national park in Indonesia. *Land Use Policy* 62, 302–315. <http://dx.doi.org/10.1016/j.landusepol.2016.12.033>.
- Zemer, C., 2000. *People, Plants, and Justice: the Politics of Nature Conservation*. Columbia University Press.

Deadlock opportunism in contesting conservation areas in Indonesia

ORIGINALITY REPORT

5%

SIMILARITY INDEX

4%

INTERNET SOURCES

2%

PUBLICATIONS

2%

STUDENT PAPERS

MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

1%

★ kclpure.kcl.ac.uk

Internet Source

Exclude quotes On

Exclude matches Off

Exclude bibliography On

Deadlock opportunism in contesting conservation areas in Indonesia

GRADEMARK REPORT

FINAL GRADE

/0

GENERAL COMMENTS

Instructor

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12

PAGE 13
