

The "Common Pool" Problems in the Protected Area Regarding Natural Tourism in Indonesia

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Abstract

Phenomena that indicate the performance of the use of natural tourism in protected areas indicate that there are institutional problems in it. This study aims to determine the influence of exogenous variables on the action arena for the use of natural tourism in protected areas in Indonesia. Data were collected through in-depth interviews, participatory observation, document, and regulatory review. Then the data were analyzed using descriptive analysis. This study was analyzed using the institutional analysis and development (IAD) framework. This framework provides a useful approach to understanding institutional issues. Based on the research, the influence of exogenous variables on the action arena, among others 1) there is an incorrect implementation between the cooperation agreement and the permit carried out by the Mount Gede Pangrango National Park Office as the principal, which has resulted in the agent bearing additional costs to obtain exclusion rights, and the principal's loss does not receive a contribution in the form of Levies on The Results of Business Activities for Nature Tourism Facilities from the transfer of rights to agents; 2) when public access is closed in the public space, there will be a conflict between the agent and the community which creates a high cost of exclusion and is charged to the agent; 3) the agent is aware of the lack of principal resources to carry out supervision so that the agent does not immediately carry out his obligations.

Keywords: institutional analysis, protected areas, use of natural tourism

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Introduction

The integration of protected areas in the sustainable development planning agenda is needed to help conserve biodiversity (Pegas & Castley, 2014). One identified strategy as an ideal mechanism for achieving natural resource conservation and economic development is ecotourism. In other words, ecotourism is considered as an economic and a conservation strategy. This strategy grows the population's positive attitude towards the protected area's preservation (Hearne & Santos, 2005). The International Ecotourism Society defines ecotourism as responsible nature-based tourism that includes aspects of environmental preservation and improving the welfare of local communities (Orams, 1995).

Although tourism development generates economic benefits, empowers local communities, and improves infrastructure, overdevelopment often causes negative impacts (Lin et al., 2018). Proper planning and management of ecotourism are necessary to reduce the negative impact caused by tourism activities and maximize the positive

impact (Jeong et al., 2014). The basic principle of sustainable tourism is to optimize the environmental resources use while maintaining ecology and conservation, respecting cultural and community authenticity, and ensuring long-term sustainability (Aryasa et al., 2017).

Protected areas as natural tourism destinations by ownership are state property with the characteristics of being difficult to eliminate their availability for other parties or also referred to as joint impact goods. Therefore, protected areas are included in common pool resources or CPRs category (German & Keeler, 2010). The inherent nature of goods or services in the CPRs category is that if used by one party, it would reduce its availability to other parties (substractability). Moreover, it is difficult to separate the access of its users (excludability) (Kartodihardjo, 2017). There are several phenomena in the use of natural tourism in protected areas that are considered to be related to the characteristics of CPRs. Phenomena that indicate the use performance of nature tourism in protected areas in Indonesia are included 1) conflicts over the use of natural

tourism exploitation areas, 2) the use of a cooperation agreement scheme as a substitute for permits for the provision of tourism infrastructure, 3) conflicts over the use of environmental permits, 4) unprofitable thought that comes from the local government from tourism in protected areas in its territory, 5) dormant company after obtaining a permit, 6) not transparent company in submitting financial reports as the basis for *Pungutan Hasil Usaha Penyediaan Sarana Wisata Alam* (PHUPSWA) (Levies on the Results of Business Activities for Nature Tourism). These are institutional problems in the use of natural tourism in protected areas. Institutional problems are often characterized by the emergence of negative performance from action situations due to regulations that are not in accordance with biophysical conditions and community characteristics (Ostrom & Crawford, 2005).

Based on the things mentioned above, it is necessary to conduct an institutional analysis to improve the institutional performance of the use of nature tourism in protected areas. According to Ostrom (1990), the purpose of institutions is to direct individual behavior in the direction desired by community members, increase certainty and order in society, and reduce opportunistic behavior. In addition, institutions can also limit human behavior that tends to think strategically, rationally, and prioritize self-interest, and also must be able to distribute economic resources fairly and equitably (Libecap, 1989).

This study aims to determine the influence of exogenous variables on the action arena for the use of natural tourism in protected areas in Indonesia. One instrument of institutional analysis that has received wide international recognition is the institutional analysis development (IAD) framework developed by Ostrom (2005). Institutional problems in the use of natural tourism services in conservation areas can be dissected within the framework of IAD by analyzing the influence of exogenous factors, namely the characteristics of natural resources, community attributes and rule-in-use on action situations and participants, as well as interaction patterns in the action arena. which results in performance (outcomes), and then find out the evaluation criteria used to improve the institutional performance of the use of nature tourism in conservation areas.

Data collection Data were collected through in-depth interviews, participatory observation, and document review. Participatory observation is carried out by observing closely with the community providing tourism services in Situ Gunung, the *Taman Nasional Gunung Gede Pangrango* (TNGGP). Document review is carried out on documents related to the use of environmental services in protected areas, especially in Situ Gunung and related regulations.

In this study, interviews were conducted in two ways. First, the interviews were conducted using the purposive sampling with semi-structured questionnaire to the community providing tourism services in Situ Gunung, Head of TNGGP, Director of Utilization of Environmental Services KLHK, Head of PTN Region II Sukabumi, Head of Section Situ Gunung and companies holding business permits for the provision of nature tourism facilities (*izin usaha penyediaan sarana wisata alam*, IUPSWA) in Situ

Gunung, Department of Law and Cooperation of the Ministry of Environment and Forestry, Environmental Service of Sukabumi Regency, Tourism Office of Sukabumi Regency. Second, the interviews were conducted using the snowball sampling method. The criteria for informants are those who master information about substantive matters that were found when the predecessor interview was conducted. In this study, the informants were from companies holding IUPSWA in other places (not in Situ Gunung), consultants, representatives from related agencies and also the community.

Variables in the elements of the IAD framework become a reference in data collection. These variables can be seen in Table 1. In-depth interviews were preceded by the main actors in the licensing process for the use of natural tourism that its implementation at the *Balai Besar Taman Nasional Gunung Gede Pangrango* (BBTNGGP) Office, namely structural and staff officials, private companies holding permits, the local government (Tourism and Environment and Forestry Offices) Sukabumi Regency, local communities as provider for nature tourism services, and expert consultants.

Data analysis This study adopted the IAD framework (Ostrom, 2005). This framework provides a useful approach to understanding or dissecting institutional issues. The IAD framework has been proven for understanding a wide variety of institutional arrangements in both developed and developing countries (Imperial & Yandle, 2005). In addition, this study also adapted the “Five W” (Afriyane et al. 2018) by modifying it to “Five W One H” in identifying the limitations and scope of the research substance (Table 2).

This framework considers the exogenous factors that affect the action arena of the actor's action. These factors determine the way institutional function working and how to put local people as subjects. This approach allows inserting contextual factors according to field conditions. As a dynamic framework, the performance, in turn, would give feedback into and affect the context and next arena action (Ostrom, 2008). Regulatory analysis is carried out by identifying the characteristics of the content of the regulations and comparing them with the implementation of regulations for the use of nature tourism in TNGGP to determine the implications of regulations on the behavior and performance of participants. Figure 1 shows the IAD framework.

Results and Discussion

Research result indicates that the regulations governing IUPSWA's business processes have triggered sub-optimal behavior in the natural tourism utilization at the Resort of the Situ Gunung area, TNGGP, both by second level principal and agent. The weakness of the regulations are as follows: 1) the emergence of opportunities in the form of confusion in the use of regulations between permits and cooperation agreements, 2) the possibility of differences in the interpretation of environmental permit regulation between the mandatory AMDAL and its exception (UKL-UPL), 3) the availability of insufficient information, both for the principal to carry out control, and for the agent to take action,

4) the imposition of sanction that cannot be used as a means of control for the principal, as well as 5) the absence of an equal incentive system for the participants.

The influence of exogenous factors, namely the characteristic of natural resources that are CPRs, community attributes and rule-in-use, political economy (interests) and discourse in the arena of the natural tourism utilization actions tend to work together and have the potential for conflict between participants. The action arena in utilizing nature tourism in TNGGP has led to sub-optimal behavior of the participants. Performance or outcomes arising from the arena of action and behavior of the participants include: 1) the occurrence of confusion over the transfer of right from the principal to the agents causing high transaction/exclusion cost, 2) conflicts between principal and agent, as well as agent with local community that cause transaction costs, 3) ambiguous compensation payments to the principal by

agents due to ambiguous transfer of rights, 4) weak supervisory capacity of the principal to the agents which results in moral hazard by the agents in fulfilling obligations, and 5) the absence of equal benefits, especially for national park which the causes opportunistic behavior of public officials.

Based on the performance or outcomes of the natural tourism utilization in TNGGP, institutional improvements need to be done. According to Ostrom (2005), among the three exogenous factors, namely resource characteristics, community attributes and rule-in-use, changing rules is the easiest to do. Therefore, institutional improvement is carried out through two aspect which include: 1) improvement of rule-in-use: (a) changes in methods and criteria for space in the preparation of site design, (b) development of tourist facilities utilized by national park through grant agreements, (c) financial statements audited by the government, with an

Table 1 The variables of institutional analysis development (IAD) frameworks elements

The elements of IAD frameworks	The variables
Exogenous variables	
Resource characteristics (biophysical conditions)	- The institutional nature of the resource; - Nature of resources in water use management in TNGGP
Community attributes	- Conformity between policy values with forest utilization culture and government bureaucratic culture - A common understanding of the policy on natural tourism in conservation areas - Homogeneity of preferences towards policy strategies.
Rule	Position rules, boundary rules, choice rules, aggregation rules, information rules, scope rules, costs and benefits rules
Action arena	
Action situation	Participants, position, action type, level of control, availability of information, cost-benefit, potential impacts that occur
Participants	Preferences, how to process information, participant strategy

Source: Adapted from Ostrom (2005)

Table 2 Scope of research substance

Question word	Limitation of research substance from the tourism problem component
Who	- Manager of the Mount Gede Pangrango National Park (TNGGP) - Local government (Department of Tourism and Department of Environment and Forestry) - Private company holding business permit for provision of nature tourism facilities (IUPSWA) - Communities around the TNGGP area or holders of IUPSWA - Expert consultant
What	- In particular, focus on the exploitation of nature tourism in TNGGP - Limitations: the practice of managing the use of natural tourism in TNGGP through licensing for IUPSWA and the sale of tourism products in Situ Gunung
When	Since the enactment of Government Regulation Number 36 of 2010 concerning Natural Tourism Exploitation in Wildlife Sanctuaries, National Parks, Grand Forest Parks, and Nature Tourism Parks until February 2020, when the research was carried out
Where	Management of the Sukabumi Region II National Park, TNGGP, as an example of a case study on the performance of the use of nature tourism in a protected area
Why	Aimed at improving protected area management, improving community welfare, and reducing the impact of damage to natural resources in protected areas due to natural tourism exploitation
How	With the use of institutional analysis development (IAD)

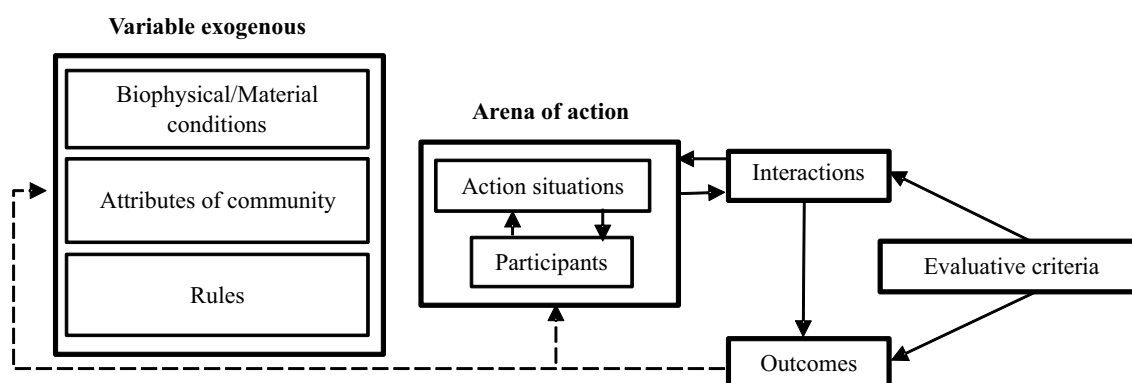


Figure 1 IAD Framework. Source: Ostrom (2005).

opinion standard of reasonable without exception (WTP) for a minimum of 5 years (d) PHUPSWA is calculated from the percentage of gross revenue, (e) impose of sanctions for those who do not pay PHUPSWA, after IUPSWA for more than 5 years, (f) obligation to report on the implementation of UKL-UPL to the principal, (g) changes to the IUPSWA performance appraisal criteria; 2) improvement of relationship between principal and agents (a) increasing the capacity of the Head of *unit pelaksana teknis* (UPT) in understanding the difference between a cooperation agreement and a permit (b) providing incentives to UPT, (c) increasing principal capacity in terms of financial reports, (d) providing information on site design and business standards on the official website of the Ministry of Environment and Forestry, (e) application of technology such as online booking and e-payment. The following is a more detailed discussion of the results of this study.

Resource characteristics The characteristics of the resources referred to in the study are natural resources in the national park utilization zone, the zone where a business permits for the provision of nature tourism facilities (IUPSWA) and also a permit for the provision of natural tourism services (*izin usaha penyediaan jasa wisata alam*, IUPJWA) is granted. Resource characteristics include physical characteristics and supply and consumption characteristics. CPRs are natural and man-made resources. CPRs' availability to other parties will reduce when used by one party. It is known as subtractability, and it is difficult to separate the access of users or is called excludability (Kartodihardjo, 2006). German and Keeler (2010) categorize forest resources as CPRs or resources that are difficult to exclude other parties from using. This resource does not have a clear definition of property rights and has a set of institutionalized rules to govern the behavior of its users. Open access and unrestricted demand for limited CPRs lead to overexploitation of CPRs.

The conservation area in this study is a national park according to Law Number 5 of 1990 regarding the Conservation of Natural Resources and Ecosystems, which is determined and managed by the central government (state property). Referring to the definition of Kartodihardjo (2006) and German and Keeler (2010), conservation areas

have characteristics as CPRs where there are problems of collective impact goods and excludability that are difficult to avoid. With the nature of CPRs, the government, through the Regulation of the Director-General of Forest Protection and Nature Conservation Number 5 of 2015, divides utilization zones into business spaces and public spaces. The utilization of nature tourism in conservation areas consists of two types of permits, which are IUPSWA in the business space of the utilization zone and IUPJWA in all zones except the primary zone. The government has issued 87 units of IUPSWA and 676 units of IUPJWA in wildlife sanctuaries, national parks, and nature tourism parks in Indonesia, as shown in Table 3.

Regarding the characteristics of CPRs, the two types of permits for the use of natural tourism have four types of rights in the bundle of rights. In the contractual relationship between the principal and agent, which refers to the property rights theory developed by Schlager and Ostrom (1992), the rights are: 1) the right of access and utilization, which is the right to get access to use the space within the conservation area and utilize it for nature tourism activities, 2) the right of management, which is the right to manage the space for nature tourism activities, 3) the right of exclusion, which is the right to remove other parties from the space, and 4) the right of transfer, which is the right to transfer or transfer to another party. Referring to the regulation and ownership of the bundle of rights (Schlager & Ostrom, 1992), the category of ownership in the IUPSWA includes two parties. The first party is the Ministry of Environment and Forestry as the principal, the owner with a bundle of rights covering the four rights, which are accessible and use right, management rights, exclusion right, and transfer right. The second part is the proprietors of IUPSWA, who wish to obtain access and utilization rights, management rights, and exclusive rights. Meanwhile, the IUPJWA proprietor only gets one right, which is the right to access and use. Based on the preceding, the characteristics of the transfer of rights in the business space are different from those in the public space in the utilization zone. In the business space, three rights can be used: the right to access and use, management rights, and exclusive rights. Meanwhile, only one right can be exercised in the public space, which is the right to access and use. The types of bundles of rights in the IUPSWA and IUPJWA contractual implementations are summarized in Table 4.

Community attributes Regarding the action area, the participants characteristics are usually strongly influenced by the attributes of the community in which they are located (Sabatier et al., 2005). These attributes can affect preferences for policies and whether these policies operate or not as expected (Imperial, 1999). Members of this community are all participants involved in nature tourism at the Situ Gunung

National Park Management Resort. Referring to Ostrom (2005), three community attributes selected are: 1) the suitability of policy values with the culture of forest use in Situ Gunung; 2) the level of understanding of the policy on the use of nature tourism in the TNGGP; and 3) the homogeneity of preferences towards the policy strategy for the use of nature tourism in the TNGGP.

Table 3 IUPSWA and IUPJWA in wildlife sanctuaries, national parks, and nature tourism parks in Indonesia

No	Name of protected area	Amount of IUPSWA	Business space area (ha)	Amount of IUPJWA	Business space area (ha)
1.	BBTN Bromo Tengger Semeru	4	127.36	1	1,000.27
2.	BTN Alas Purwo	4	49.08	25	746.99
3.	BTN Bali Barat	5	966.58	0	2,654.75
4.	BKSDA NTB	13	1,240.58	3	1,034.75
5.	BBTN Kerinci Seblat	1	670.90	7	3,066.71
6.	BBTN Bukit Barisan Selatan	1	1,206.70	11	8,959.10
7.	BBKSDA Jawa Barat	11	945.08	40	804.31
8.	BKSDA DKI Jakarta	1	98.32	0	1.5
9.	BKSDA Jawa Tengah	4	99.07	2	13.68
10.	BTN Gunung Merbabu	1	143.29	0	46.01
11.	BBKSDA Jawa Timur	4	31.39	65	41.02
12.	BKSDA Bali	1	443.45	99	1,299.01
13.	BKSDA Kalimantan Timur	1	81.71	0	84.38
14.	BKSDA Sulawesi Tenggara	3	1,457.74	0	6,238.94
15.	BTN Bunaken	2	85.85	0	7,724.40
16.	BTN Gunung Rinjani	1	1,462.62	129	5,980.30
17.	BBKSDA Riau	2	485.01	4	120.63
18.	BTN Ujung Kulon	3	209.77	0	752.61
19.	BTN Komodo	3	562.75	5	1,845.46
20.	BKSDA Sulawesi Utara	3	48.91	0	93.64
21.	BKSDA Bengkulu	1	20.00	1	257.83
22.	BBTN Gunung Gede Pangrango	6	925.05	14	732.94
23.	BBKSDA NTT	2	867.22	6	12,855.78
24.	BTN Gunung Halimun Salak	6	1,965.24	34	220.78
25.	BBTN Gunung Leuser	0	221.57	2	9,438.16
26.	TN Kamirunjawa	0	103.51	3	659.50
27.	TN Baluran	1	97.38	20	2,994.14
28.	BTN Meru Betiri	0	147.90	10	460.40
29.	BTN Kepulauan Seribu	0	718.81	18	22,572.07
30.	BTN Gunung Merapi	0	88.00	6	336.50
31.	BTN Gunung Ciremai	0	153.67	142	764.75
32.	BTN Karimunjawa	0	103.51	1	659.50
33.	BKSDA Kalimantan Barat	0	0	17	0
34.	TN Kutai	0	15.59	1	1,158.43
35.	BBKSDA Sulawesi Selatan	1	428.00	1	14,786.28
36.	TN Wakatobi	0	49.80	4	1,302,139.21
37.	BTN Bantimurung Bulusaraung	0	30.37	1	320.45
38.	BTN Rawa Aopa Watumohai	0	87.57	1	8,518.87
39.	BTN Lorentz	0	0	1	0
40.	BKSDA Sumatera Selatan	1	39.90	0	0
41.	TN Way Kambas	1	112.39	0	2,533.43
		87	16,591.64	676	1,423,917.48

Source: Directorate of Utilization of Conservation Forest Environmental Services (2021)

Conformity between policy values with forest utilization culture and government bureaucratic culture Since 1928, during the Dutch East Indies era, the Situ Gunung lake and the natural beauty of its forests have attracted visitors for recreation or tourism. In 2003, this area was handed over to be part of the TNGGP. Along with changes in tourism demand in this area, some visitors prefer to enjoy the Situ Gunung lake, trek into the forest, and camp. The local community, especially the younger generation, seized this opportunity by becoming guides and renting tents and camping equipment. The provision of tourism services continues to grow until this area has been effectively managed by the TNGGP since 2007 until now¹.

Bureaucracy is the most important part of the administration of government. When connected between bureaucratic ethics and community culture in Indonesia, there are still many inappropriate rules or regulations due to corruption, collusion, and nepotism, especially in public services. It is often known that the society's culture in Indonesia is heavily influenced by eastern customs, which still adhere to the term kinship. According to Mustafa (2012), several things that can make the bureaucracy bad when associated with the culture people in Indonesia, especially in terms of public services, include: 1) close kinship relations in both co-workers and family lead to discrimination occurs in service delivery, 2) people are more likely to choose the fast path because of considerations that do not waste time and the process is fast, and 3) the time for completion is unclear. The ability of the service bureaucracy to satisfy service users also still looks very weak. The service bureaucracy is still very rules-driven in making decisions. In principle, the institutional capacity of the bureaucracy to transform new values such as transparency, accountability, justice, law enforcement, and public service management reform will be positively correlated with improving bureaucratic performance.

A common understanding of the policy on natural tourism in conservation areas Referring to the understanding characteristics, all participants, both local communities, IUPSWA holders (private business entities), and local governments, know that the Situ Gunung forest area is a protected area. The local community and the local government understand tourism use in conservation areas, prioritizing local communities, and protecting catchment areas or water sources. Meanwhile, there is an understanding and disagreement between entrepreneurs and the community. The agreement between the community and entrepreneurs and the regional government is making Situ

Gunung a tourist destination that attracts many visitors. The local community feels insecure about tourism exploitation done by the private sector. Their livelihoods as tourism service providers are feared to be lost and replaced. There is also disagreement between the national park authority and the regional government regarding the small role of the local government in policies for using natural tourism in conservation areas. There is no distribution of retribution for the local government². According to Ostrom (2005), an understanding of the structure of the arena of action among the participants is one of the prerequisites for collective action to take place

Homogeneity of preferences towards policy strategies In the same situation, participants may have different preferences for strategies and outcomes (outcomes) that are expected to hinder collaboration (Schlager & Blomquist, 1996; Ostrom, 2005). Participants' preferences for the policy strategy for the use of natural tourism in conservation areas can be seen from the policy's objectives. The policy objectives are 1) using nature tourism that supports the preservation of the function of national parks, which are the protection of life support systems, preservation of plant and animal species and their ecosystems, sustainable use, and 2) empowering community. For supporting the preservation of the national park, the participants tend to have similar preferences. For the community and entrepreneurs, economic interests are more priority, as is the Tourism Office, which has performance indicators to increase the number of visitors and income in the tourism sector. In the first objective, the National Parks of the Ministry of Environment and Forestry with the Regional Government Environmental Office have similar preferences for policies on natural tourism in conservation areas, paying attention to area protection. For the second purpose, the participants also tend to have similar preferences. For National Parks, no illegal activities must disturb the area. At the same time, for entrepreneurs themselves, community involvement can be accommodated if it follows the business vision. The important thing is that the Tourism Office has a destination icon in Sukabumi Regency, visitors increase, and there is no community turmoil. The term in Sukabumi has environmental permits from locals around it. Situ Gunung is surrounded by two villages, namely Gunung Gede Pangrango Village and Sukamanis Village, located in the Kadudampit Sub-District, Sukabumi Regency.

Rules Based on Law Number 5 of 1990 regarding the Conservation of Natural Resources and their Ecosystems, conservation areas have functioned as (1) protection of life

Table 4 Type of bundle of right in contractual implementation of IUPSWA and IUPJWA

Type of bundle of right	Owner (KLHK)	Proprietor (IUPSWA holder)	Proprietor (IUPJWA holder)
Access and utilization	x	x	x
Management	x	x	-
Exclusion	x	x	-
Diversions	x	-	-

Source: Adapted from Schlager and Ostrom (1992)

¹The results of interviews with the head of the Situ Gunung resort and local community guides who are processed, 2021

support systems, (2) preservation of plant and animal species, and (3) sustainable use of plants, animals, and their environmental services. The policy direction for using natural tourism in conservation areas must pay attention to preserving the three functions mentioned above and community empowerment. Empowering local communities is expected to solve conflicts over natural resources in conservation areas, areas with CPRs characteristics. Improving the community's welfare around the national park area using nature tourism is expected to increase community participation in protecting the national park from damage (Muradian & Rival, 2012; Ban et al., 2013; Badola et al., 2018). The policy on the use of nature tourism in the conservation area studied in this study can be seen in Table 5.

The issuance of Law Number 11 of 2020 concerning Job Creation did not affect Law Number 5 of 1990. Meanwhile, the business permit for providing natural tourism facilities and services in conservation areas was included in Government Regulation Number 5 of 2021 concerning Risk-Based Licensing.

Based on the content analysis of the regulations, the business process in the contractual principal of the IUPSWA agent is obtained, with four stages, which are planning, fulfilling licensing requirements before signing the contract (ex-ante), licensing implementation (ex-post), and monitoring and evaluation (controlling). The gap analysis of rule in form and rule in use and their impact on the business process follows.

Planning Since the issuance of Government Regulation Number 36 of 2010 and followed by Ministry of Forestry

Regulation Number 48 of 2010 regarding Natural Tourism Exploitation in Wildlife Reserve Areas, National Parks, Forest Parks, and Nature Tourism Parks, the use of natural tourism through exploitation in protected areas is carried out through two types of permits, which are IUPSWA and IUPJWA. The IUPSWA is only allowed in the utilization zone, and by site design, it is in the business space. Furthermore, IUPJWA is permitted in all zones, except for the core zone, and by design, the site is in a public area. Potential conflicts in using the two spaces often occur because the information is not evenly distributed among the participants since its planning. The rule in form only mentions the process of preparing the site design through three stages, which are 1) preparation of the site design, 2) discussion, 3) assessment and validation. Public consultation or involvement of participants in the preparation of this site design has not been regulated.

- a. Fulfillment of pre-contract licensing requirements (ex-ante)
 The gap between the rule in form and the rule in use at the stage of fulfilling licensing requirements is described in Table 6.
- b. Execution of permits (ex-post)
 The gap between rule in form and rule in use at the licensing implementation stage is shown in Table 7.
- c. Controlling (monitoring and evaluation)
 The gaps between rule in form and rule in use and their outcomes at the monitoring, coaching, and evaluation stages are described in Table 8.

Table 5 Regulations for utilizing nature tourism in conservation areas

Rules	Main things arranged
Law Number 5/1990	Utilization of natural tourism environmental services in national parks is carried out while maintaining the preservation of the function of protected areas
Government Regulation Number 28/2011 jo Government Regulation 108/2015	Zoning or arrangement of blocks in protected areas
Directorate General of Natural Resources and Ecosystem Conservation Number 5/2015	Guidelines for preparation of site design for natural tourism management in wildlife sanctuaries, national parks, grand forest parks, and natural tourism parks
Government Regulation Number 36/2010	<ul style="list-style-type: none"> - Provide space for community involvement in the use of nature tourism in protected areas, both individually and as business entities - Prioritizing local communities in the context of community empowerment - There are jurisdictional limits for the use of natural tourism according to zoning/blocks - Nature tourism activities must pay attention to area protection and conservation rules for natural resources and ecosystems - Penalty
Government Regulation Number 12/2014	<ul style="list-style-type: none"> - Types of PNBP contributions from nature tourism concessions - Types of PNBP levies from nature tourism concessions - Types of PNBP levies enter protected areas and carry out tourism activities
Ministry of Environment and Forestry Regulation Number 8/2019	<ul style="list-style-type: none"> - Nature tourism business standards in protected areas - Supervision, coaching and evaluation - Procedures for imposing and implementing sanctions

²The results of interviews with representatives from the TNGGP, the Sukabumi District Tourism Office, IUPSWA holders, local communities and the Sukabumi District Environmental Service, which were processed, 2021

Table 6 The gap in rule in form and rule in use in the implementation of compliance with licensing requirements

Regulations	Participants	Rule in form	Rule in use	Outcomes
Ministry of Environment and Forestry Regulation Number 8 of 2019	Gunung Pangrango National Park Center	Issuing IUPSWA technical considerations	Signing a cooperation agreement regarding the development of natural tourism facilities Issuing technical considerations and IUPJWA	Improper transfer of rights from different types of licenses has implications for high transaction costs for agents to obtain management rights and rights to exclude other parties.
Ministry of Environment and Forestry Regulation Number 8 of 2019	Tourism Office	Issuing technical considerations within 30 days	Issuing technical considerations by requiring neighboring environmental permits	High coordination costs for socialization to sub-district heads, village heads, community leaders, and local communities.
Government Regulation Number 36 of 2010, Ministry of Environment and Forestry Regulation Number 8 of 2019, Ministry of Environment and Forestry Regulation Number 25 of 2019	Environmental Office	Issuing environmental permits according to Government Regulation Number 36 of 2010 and Ministry of Environment and Forestry Regulation Number 8 of 2019 is sufficient for using only UKL/UPL, while according to Ministry of Environment and Forestry Regulation Number 25 of 2019, AMDAL is mandatory	Require the application for the mandatory AMDAL exemption to be able to UKL/UPL	Differences in the implementation of regulations result in business entities not promptly fulfilling the permit fulfillment time. Thus, there is the potential for high transaction costs because negotiations usually occur.
Ministry of Environment and Forestry Regulation Number 8 of 2019	Holders of IUPSWA	Developing a nature tourism business plan	Hiring a consultant to develop a nature tourism business plan	It is often not used as a reference because it is considered a fulfillment of administrative requirements.

The influence of external variables on the action arena for utilizing nature tourism in conservation areas The action arena for the use of nature tourism in the Situ Gunung resort area, TNGGP, can be described through the relationship between participants. The relationship between participants can be described through the IUPSWA business process in an agency relationship. According to Jensen and Meckling (1986), an agency relationship is a contract in which one or more persons (principal) assign another person (agent) to perform some of the principal's authority. Therefore, the action arena for using natural tourism at the Situ Gunung resort area following the IUPSWA business process is divided into two stages, which are the licensing process or before the contract (ex-ante) and after the contract is carried out (ex-post).

IUPSWA licensing process (ex-ante) This is used in making decisions, and the resources brought by participants. The IUPSWA (ex-ante) licensing business process in agency relations based on Government Regulation Number 36 of 2010 and Minister of Environment and Forestry Regulation Number 8 of 2019 can be described. Figure 2 describe IUPSWA process flow.

The application for a permit to provide natural tourism facilities by a private business entity at the Situ Gunung resort area begins with a request for technical considerations to the national park. However, the National Park suggested

that the provision of tourist facilities be carried out through a cooperation agreement. According to the National Park, this cooperation agreement can be made based on Minister of Forestry Regulation Number 85 of 2014 regarding cooperation in Nature Reserve Areas and Nature Conservation Areas and Minister of Environment and Forestry Regulation Number 44 of 2017. The cooperation agreement is the authority of the Director-General, which is delegated to the National Park. The National Park preference is followed by permit applicants to understand that the provision of tourist facilities in the national park is the same as in the area belonging to Perhutani West Java, which can be done through cooperation. On May 5, 2017, the cooperation agreement to strengthen functions through area protection, natural tourism development, and community empowerment under PKS 138/BBTNGGP/KBTU/KS/05/2017 and number 18/FAV-3/2017 was signed. The term of the cooperation agreement is five years (2017-2021) in the Situ Gunung Area Resort utilization zone covering an area of 58.41 ha. To take advantage of the tourism facilities built through a cooperation agreement, the head of the UPT issued an IUPJWA through SK Number 173/BBTNGGP/KABIDTEK/Tek.P2/6/2017 dated June 16, 2017, for the provision of travel services, food, and beverages as well as the provision of souvenirs. Cooperation agreements and IUPJWA have less time than IUPSWA. Since the development of natural tourism facilities is carried out

Table 7 Gap rules in form and rules in use in the implementation of IUPSWA

Regulations	Participants	Rule in form	Rule in use	Outcomes
Government Regulation Number 36 of 2010 dan Ministry of Environment and Forestry Regulation Number 8 years 2019	First agent (holders of IUPSWA)	Realizing the construction of natural tourism facilities, no later than one year after the permit is issued	The construction of natural tourism facilities has been built before the permit is issued through a cooperation agreement mechanism	Conflict of obligations implementation between IUPSWA and the cooperation agreement
Ministry of Environment and Forestry Regulation Number 8 of 2019	Holders of IUPSWA	Provide the company's monthly report no later than the 10th of the following month	Late submission of the monthly report	The principal did not get information to control the agent
Ministry of Environment and Forestry Regulation Number 8 of 2019 and Ministry of Environment and Forestry Regulation Number 25 of 2018	Holders of IUPSWA	Performing environmental management and monitoring every semester	Performing environmental management and monitoring every term with a focus on water quality only	Having not enough information to monitor the condition of the ecosystem
Ministry of Environment and Forestry Regulation Number 8 of 2019	Holder of IUPSWA	Provide financial reports based on public accountant audit	Financial reports based on public accountant audits are late in submission	The principal did not obtain information to exercise control over agents related to PHUPSWA payment obligations
Government Regulation Number 12 of 2014 and Ministry of Environment and Forestry Regulation Number 8 of 2019	Holders of IUPSWA	Pay PNBPN PHUPSWA levies (10% of IUPSWA Net Profit)	The PNBPN levy of 10% of the IUPSWA net profit has not been paid. However, the agent pays the PNBPN levy from IUPJWA	The principal did not get levies on the results of business activities for nature tourism facilities (Indonesian: PHUPSWA, which stands for <i>Pungutan Hasil Usaha Penyediaan Sarana Wisata Alam</i>) rights

Table 8 The gap between rules in form and rules in use in monitoring, monitoring, and evaluating the implementation of IUPSWA

Regulations	Participants	Rule in form	Rule in use	Outcomes
Ministry of Environment and Forestry Regulation Number 8 of 2019	Gunung Gede Pangrango National Park	Supervising and coaching at least once a year	There was no monitoring and coaching report	Central Ministry of Environment and Forestry did not obtain information to control agents
Ministry of Environment and Forestry Regulation Number 8 of 2019	Directorate General	The Director-General establishes to evaluate at least once every two years	The evaluation has not been carried out because the new permit was issued in 2020. The business entity operates using the Cooperation Agreement and IUPJWA	There has been no action to resolve the conflict between the cooperation agreement, IUPJWA, and IUPSWA
Government Regulation Number 36 of 2010 and Ministry of Environment and Forestry Regulation Number 8 of 2019	Minister of Environment and Forestry	Giving sanctions	Sanctions could not be given because there had been no report on the results of supervision, guidance, and evaluation	Agents must fulfill the obligations of the cooperation agreement, IUPJWA, and IUPSWA

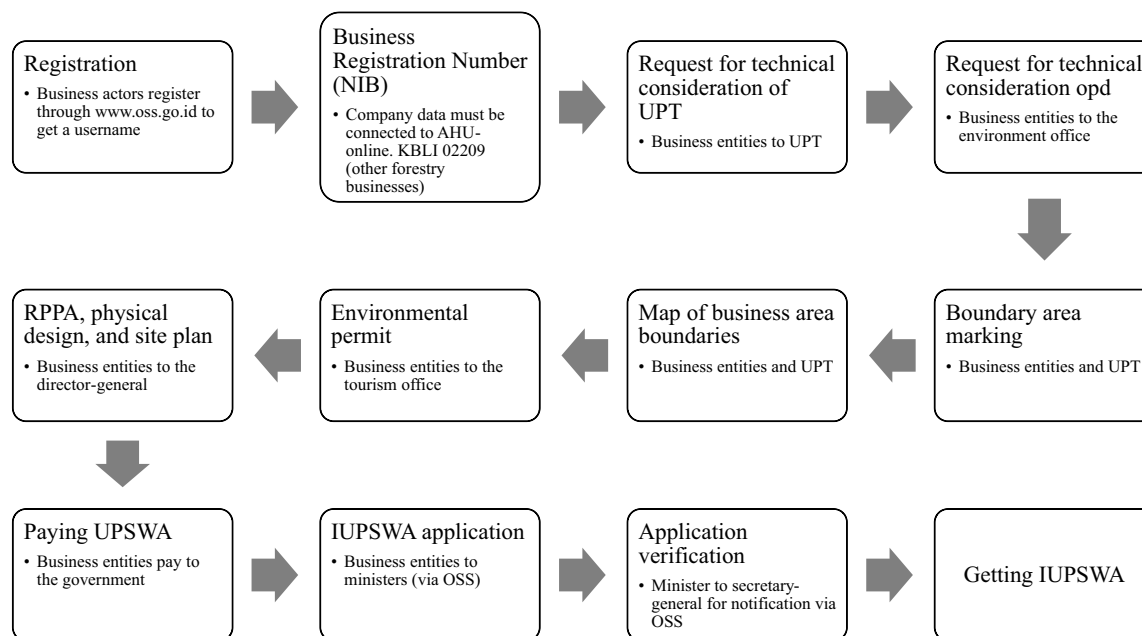


Figure 2 IUPSWA process flow.

through a cooperation agreement, the 2013 site design must be revised to support this decision. According to the regulation, the business space is for IUPSWA, while the public space is for other uses such as management, cooperation agreements to strengthen functions and IUPJWA.

Launching natural tourism products using a suspension bridge as the main attraction was carried out in mid-2018. Business entities charge tariffs for these tourism products through the IUPJWA. The control of public space in the resort utilization zone of the Situ Gunung area has closed the access of people who have been active for a long time to bring visitors to Sawyer waterfalls or camping. Due to the conflict, this business entity re-applies IUPSWA to obtain the right of exclusion. To process the IUPSWA application in 2019, a revision of the site design and an addendum to the cooperation agreement was made to support this decision change. The cooperation agreement was added to avoid overlapping the cooperation area with the IUPSWA area. The addendum to the cooperation agreement was signed on August 21, 2018, with Number 1085/BBTNGGP/BTU/KS/08/2018 and 108/FAV-3/2018. The location and area of cooperation changed from only in the use zone of Situ Gunung to the use zone of Situ Gunung and Selabintana. From an area of 58.41 ha, it was reduced to 35.15 ha. After the cooperation agreement was added, the National Park proposed revising the site design in May 2019.

From the situation of action and participants, asymmetric information and asymmetric power between principals and agents occur in choosing the regulations used to build natural tourism facilities in national parks. The National Parks have a preference to take opportunities by taking actions within their authority. The applicant follows what the National Park suggests with the understanding that he has obtained a permit with a cooperation agreement. In this arena of action, asymmetric power and asymmetric information have led to

high transaction costs, with two revisions to the site design in less than one year and IUPSWA re-applications. In addition, high transaction fees are charged to agents to obtain exclusive rights in the business space. As stated by Klein et al. (2016), without adequate information, moral hazard arises due to high transaction costs because the principal may incorrectly describe and provide information. Diamond and Verrecchia (1991) also stated that the existence of information asymmetry results in the misallocation of resources. As a result, it is important to understand which factors have the potential to reduce the problem of information asymmetry.

IUPSWA implementation (ex-post) The action arena for the use of natural tourism at the resort in the Situ Gunung area after the contract is executed (ex-post) following the IUPSWA business process can be explained through several stages, which are 1) the five-year work plan (*rencana kerja lima tahun*, RKL) and the annual work plan (*rencana kerja tahunan*, RKT) and the realization of the construction of natural tourism facilities following the nature business plan (*rencana perusahaan pariwisata alam*, RPPA); 2) the involvement of experts in the field of nature tourism and conservation; 3) community involvement; and 4) financial reports and PHUPSWA business.

Five-year work plan (RKL) and annual work plan (RKT) and realization of nature tourism facilities development following RPPA The preparation of the RKL, RKT, and the realization of the construction of facilities refers to the RPPA is for five years. For principals, implementing monitoring of the obligations that agents must carry out is confusing. The same natural tourism facilities are constructed but included in two different schemes. For agents, the important thing is that the tourism that has been built has had a significant impact on the increase in the number of visitors and a double impact on the surrounding community. Jensen and Meckling

(1976) suggested that there are often different goal orientations between principals and agents in agency relationships. In addition, since the agent is the party that exercises authority directly, the agent generally has more information related to field operations than the principal. This triggers problems in the contractual relationship, namely the emergence of asymmetric information. As a result of asymmetric information in implementing public policies, costs are needed for efforts to negotiate, monitor, and evaluate as well as enforce rules that arise because of the transfer of rights (Kartodihardjo et al., 2015).

Involvement of experts in the field of nature tourism and conservation The obligation to involve experts in nature tourism and conservation is not accompanied by easy parameters. No department specifically mentions nature tourism, although the Department of Natural Resource Conservation is in the Faculty of Forestry at several universities. Verifier of expertise in nature tourism and conservation of natural resources is a combination of educational background and experience. This obligation was initially imposed to encourage the development of natural tourism facilities and activities to be carried out following the principles of natural resource conservation. However, this opportunity has also led to the practice of corruption, collusion, and nepotism involving former Ministry of Environment and Forestry officials. In the regulations, there is no specific timeframe regarding the involvement of these experts. Still, in practice, the involvement of conservation experts is carried out ex-ante licensing to facilitate obtaining permits.

Community involvement Community involvement is a very strategic issue in exploiting nature tourism in conservation areas. Both in Law Number 5 of 1990, Government Regulation Number 36 of 2010, and Minister of Environment and Forestry Regulation Number 8 of 2019, community involvement is on technical considerations. Before this business entity started operating, there had been people who provided tourism services at the Situ Gunung Area Resort, which were a group of boat activists on the lake 27 people, 43 motorcycle taxis (from the gate to the Sawyer waterfall), 13 people trading blue tent stalls on the lake, 5 people at the terminal 2 Dadog route, and 14 people selling in terminal 1 (main parking). Along with suspension bridge tours, the number of visitors increases. In the past, there were around five visitors each day on weekdays and 300–500 visitors each day on weekends. After that, it has increased to 100 visitors each day on weekdays and could reach 2000 visitors each day on weekends³. This increases the number of people who want to become tourism service providers. There are 63 stalls in front of the mosque and 48 at Curug Sawyer. There is only one that has an individual IUPJWA with travel services. A suspension bridge tourist facility in Situ Gunung has significantly increased the number of visitors and the number of local people who become tourism service providers. However, 77% of the population said their average income decreased due to 1) competition with more people for visitors; and 2) a change in visitor preferences. The provision

of community access by IUPSWA holders in the business space avoids conflicts with the community. To get support from the community, agents always work with the community.

Financial statements and PHUPSWA Effort One of the obligations of agents is to send an annual financial report audited by a public accountant no later than June 30. Agents are often late in sending these financial reports. This financial report is very important to be the basis for implementing PHUPSWA payment obligations. The absence of sanctions in the submission of financial statements makes it difficult for the principal to control the agent. During operation, this business entity has not submitted financial reports assuming that the IUPSWA would only be issued in 2020. The tourism activities carried out since 2018 are based on the IUPJWA, not the IUPSWA. Therefore, there is no financial report audited by a public accountant, causing PHUPSWA payments to have not been made. The agent understands that the IUPSWA was only issued in 2020, so the calculation of profits has not been carried out. The absence of sanctions and the large number of transaction costs borne by the agent causes the agent not to immediately carry out his obligations. According to Gibson et al. (2005), sanctions and regular rules monitoring are necessary for effective management. Furthermore, according to Andersson et al. (2014), an important factor in the performance of forest resource institutions in the making of regulations, monitoring, and imposing sanctions.

Monitoring and evaluation The national parks carry out monitoring of the implementation of the IUPSWA. The evaluation for the IUPSWA in Situ Gunung has not yet been carried out because the new permit was issued in 2020. With the three mechanisms adopted by this business entity, the evaluation should be for the cooperation agreement and the IUPJWA. This cooperation agreement will expire in 2021, and according to regulations, immovable assets such as the construction of natural tourism facilities will be handed over to the National Park. In comparison, the same facilities are used to sell tourism products. The agent's concern is that if the tourist facilities are turned over into national park assets, other parties will use them. The National Park also does not have enough budget to carry out maintenance. In this action arena, the agent will cooperate with the principal to obtain the right to manage this natural tourism facility.

According to Jensen and Meckling (1976), high transaction costs are also caused by the inability of the government to monitor forests and carry out forest governance, additional legal access, and agency relationships in forest management. Transaction costs include operational management costs as well as monitoring and evaluation costs. Furthermore, Pohan (2014) argued that a strict and continuous principal control function periodically over the implementation of agent obligations is one crucial aspect in improving agent performance. The principal's inability to carry out the control function can trigger the agent to carry out moral hazard in fulfilling the agent's obligations in the contract between the principal and the agent.

³Processed results of interviews with local guides, 2021

Conclusion

The weaknesses of the regulations found are 1) the emergence of opportunities for confusion in the use of regulations between permits and cooperation agreements, 2) different interpretations of environmental permit regulations due to differences in understanding of protected areas; 3) the availability of insufficient information to be a means of control; 4) existing sanctions cannot yet become a means of control; 5) no fair incentive system among the participants. The influence of external factors on the arena of action for the use of natural tourism in national parks, among others: 1) there is an incorrect implementation between the cooperation agreement and the permit carried out by BBTNGGP as the principal, which has resulted in the agent bearing additional costs to obtain exclusion rights, and the principal's loss does not receive a contribution in the form of PHUPSWA from the transfer of rights to agents; 2) when public access is closed in the public space, there will be a conflict between the agent and the community which creates a high cost of exclusion and is charged to the agent; and 3) the agent is aware of the lack of principal resources to carry out supervision so that the agent does not immediately carry out his obligations.

Recommendation

Based on the conclusions, the following can be recommended: 1) It is necessary to improve the rule in a form that includes information such as agent capital requirements as a requirement and also increase supervision by involving Audit Board of the Republic of Indonesia, 2) It is recommended to increasing the availability of information about the condition of business spaces and public spaces in protected areas, and 3) It is recommended to build a proportional incentive and sanction system between the central government, technical implementer, local governments, and business permit holders.

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