

Institutional Analysis for Governance Administration Community Forests that Support Sustainable Forest Management

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Abstract: The current condition of social forestry, including Community Forestry (CF), can be said to be stagnant. The target set by the government is 12.7 million hectares by 2019. It has only achieved approximately 3.2 million hectares or about 26% of the initial target with details of Community Forests covering 666,458 hectares, Village Forests covering 1,348,349 hectares, Community Forests Plantation covering an area of 340,837 ha, and Partnership covering an area of 319,414 ha. Many factors obstruct CF management, including the main one, is their interaction with Forest Management Units (FMUs) as forest managers at the site level that has not yet performed their functions optimally. Therefore, this article analyzes how actors (in this case, forest farmer groups and forest management units and the central government) are involved in patterns of interaction in managing community forests, and how regulation as a bureaucratic tie has implications for broader forest planting schemes the local. This study aims to describe the conditions of the action arena that have led to the Toili Baturube Model Production Forest Management Unit's initialization in the management of Community Forests (CF). Ostrom's Institutional Analysis Development (IAD) is used as an analytical framework to investigate the extent of the interaction between local institutions and Forest Management Units (FMU) in community forest management and find new ideal institutional formulas. This study found that Institutional Analysis Development (IAD) can be a useful analytical framework to explore local institutions' role as actors and the capacity of natural resource governance structures for community forest resource management. This paper contributes to identifying forest governance in a centralized system and how IAD Ostrom plays a role in formulating a new formula to develop an ideal community forest governance institution.

Index Terms: Community forestry, forest governance, institutions, Institutional Analysis Development (IAD), Forest Management Units

I. INTRODUCTION

Research on mapping tropical rainforests by Matthew Hanson from the University of Maryland released in 2016 stated that Indonesia has 160.9 million hectares of tropical rainforest, ranking the third-largest in the world after Brazil and the Democratic Republic of Congo. This tropical forest area continues to decrease from year to year (deforestation), mostly for economic and investment reasons. From Indonesia's secondary forest data based on the 2018 Environment and Forestry statistics and 2011 Forestry statistics, it was identified that there was deforestation of 920 thousand hectares of secondary forest per year from 2010-2017. The government has done enough to ensure that the wisdom of the forests and land is preserved and the economic benefits for the community. It means that on paper, there are many regulations which, if followed and practiced in forest governance, can have positive implications for economic growth and environmental sustainability. Still, it should be noted that this measure of success does not always coincide with the goals of sustainable forest governance or central government policy objectives; good governance occurs when city governments minimize interventions into user forestry activities (Andersson, 2006). There are many gaps, especially in the coordination between institutions at various levels, including local governments that have not run synchronously and in harmony. In short, for forests in Indonesia to provide long-term economic benefits and remain sustainable, the forest management system needs to be institutionalized in an adequately coordinated manner to respond quickly, strategically, and efficiently to any development guidance without sacrificing the environment.

Forest governance is forestry policies, regulations, and institutions that affect the use of forest resources. It affects both at the local level (such as community rules and social norms for the benefit of forest resources) and at the national level (such as ownership rights to forest resources and policies that affect profitability). Various groups interact to produce collective goods and services that makeup forest governance. Central government representatives may, for example, decide to hand over responsibility to city governments because they are believed to be able to carry out duties more efficiently (Andersson, 2006). Good forest governance is a prerequisite for sustainable forest management and the successful implementation of initiatives to reduce deforestation and forest degradation (Nansikombi, Fischer, Kabwe, & Günter, 2020).

With Forest Management Units (FMU), it is hoped that they will be able to become managers at the site level to achieve the realization of sustainable forest management. The FMU policy is expected to function as an enabling condition for efforts seven things. They are to improve forest governance, slow down the degradation rate, accelerate forest and land rehabilitation, implement forest protection and safeguards, implement forest utilization optimization, increase forest product supply stability, and provide data and information on forest areas. The principles in Law Number 41 of 1999 concerning Forestry imply community empowerment's

importance, accompanied by fair distribution of forest benefits and forest functions optimization. One of the community-based forest development policies is through the Community Forestry (CF) program.

Community Forestry (CF) is one of the Ministry of Environment and Forestry's policies to reduce Indonesia's deforestation by involving the community and Village Forests and Community Forests Plantation. More than 50 million poor Indonesians live in and around forest areas who depend on forest resources. Therefore, the CF policy aims to empower the community and overcome poverty problems by opening up access and space for forest areas for the community. With CF, it is hoped that forest area communities can utilize forest resources in an optimal, fair, and sustainable manner. Also, preserving aspects of the function of forests and the environment. The CF concept aims to suppress the deforestation process by involving communities in and around the forest.

In general, the current condition of social forestry, including CF, can be stopped. In the National Medium Term Development Plan (RPJMN), the government has targeted the achievement of social forestry of at least 12.7 million hectares by 2019. The government stated that the realization of social forestry by the end of 2019 reached approximately 3.2 million ha or about 26% of the target of 12.7 million ha, through the Five Years Forward Together with the Government Achievements of Joko Widodo-Jusuf Kalla Government. Through CF covering an area of 666,458 ha, Village Forests covering an area of 1,348,349 ha, CFP covering an area of 340,837 ha, and Partnerships are covering an area of 319,414 ha. Many factors lead to stagnation in CF management. The main one is that their interaction with the FMU as a forest manager at the site level has not yet been performed optimally.

The broad definition of Community Forestry is "initiatives, science, policies, institutions and processes intended to enhance the role of local communities in regulating and managing forest resources (Friedman et al., 2020). Community forestry, as a local institution and community-based natural resource management, has been studied in recent decades as a means of rural livelihoods (Adhikari, Williams, & Lovett, 2007). In Community Forest Management (CFM), a substantial institutional aspect is an essential prerequisite for CFM development's success. This institutional readiness is directed at improving the community's managerial and technical capabilities to cultivate CF sustainably. Discuforests' wisdom community forest development can be defined as an organization related to all activities that cannot be separated from farmer families, farmer groups, cooperatives, or associated institutions, such as FMU. It is necessary to regulate, build a shared value system, and measure success mutually recognized by all parties. Therefore, it must have a common perception of institutional models under local social, economic, and cultural characteristics.

Based on the description above, it is deemed necessary to research how the patterns of interaction between Forest Management Units (FMU) and Community Forests (CF) occur in sustainable forest management. The interaction has an impact on the structuring of forest management institutional models and appropriate institutional arrangements.

II. METHODS

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This study used a qualitative descriptive research design with a case study approach. This research was conducted in the Production FMU Model Toili Baturube area, Banggai Regency, Central Sulawesi. The data collection and processing process is carried out in the FMU area and the Koyoan Community Forest (CF) area, as well as the offices of related agencies in Banggai Regency and the Ministry of Environment and Forestry, namely the Production FMU Office Model Toili Baturube, Banggai Regency and the Environment and Forestry Service of Central Sulawesi Province. Data and information collected in this study include primary data and secondary data. Preliminary data were obtained through a structured interview approach using a questionnaire with respondents, in-depth interviews with community leaders, agencies/agencies, and related Community Social Institutions (NGOs), and observations of objects in the field related to the research data topic. Sources of data are informants and stakeholders directly involved in the management of Production FMU Toili Baturube and the Community Forest Management Forest Farmers Group. It spread over four villages, namely Nambo Lempek Village, Nambo Padang Village, Koyoan Village, and Lontio Village. Each village will be taken as many as 30 farmer respondents, so 120 respondents. The selection of respondents was made by purposive sampling. Secondary data is obtained through literature studies on several documents, such as maps, planning documents, activity reports, archives, or other types of documents concerning Forest Management Units (FMU) and Community Forests (CF).

Data analysis in the institutional development framework generally refers to the study of institutional development (IAD) proposed by Ostrom. By describing the rules used, understanding the arena of action and patterns of interaction; analyze the content of the regulations concerning the structure of the action situations formed and the resulting performance. In this arena, actors (e.g., forest managers, owners) come together to determine forest management actions and what will be taken to address specific situations (Brodrechtova, Navrátil, Sedmák, & Tuček, 2018). In this study, the written documents analyzed were the laws and regulations directly or indirectly related to the CF regulation.

III. RESULTS AND DISCUSSION

Forest Utilization Action Arena

This study adopts a line of thought and an analytical approach, as described in the IAD framework (see Figure 1). According to Ostrom (2005), the IAD framework can help institutional analysts identify the key variables that shape the structure of participants' action situations. Ostrom (Suwarno, 2014) provides a framework for analysis and institutional development (IAD-framework) that can be used to examine the effect of biophysical conditions on an arena of action faced by participants. Through the IAD framework, Ostrom states that participants in the situation surrounding them and exogenous factors will influence their behavior patterns, producing a particular impact (outcomes). The exogenous factors referred to consist of the biophysical conditions (physical/material conditions), the rules used (rules in use), and the characteristics of the community (attributes of the community).

Based on Ostrom's statement, the research in this section focuses on the influence of biophysical and regulatory conditions on the arena of forest use action, which in turn will influence patterns of interaction among participants and the resulting impacts. The

impact is limited to strengthening or weakening forest governance principles in the local implementing community, namely members of forest farmer communities who are participants in the arena of collective action of FMUs in forest management.

Based on Figure 1, the relationship between groups of variables is explained by Ostrom (2005) that the interaction of participants in an arena of action faced together tends to lead to specific behavior patterns, which produces certain outcomes. The arena of action consists of “action situations” and “participants.” The action situation refers to the social space where participants with various preferences interact. Participants are individuals or organizations that interact in the action arena. The arena of action is influenced by three major groups of exogenous factors, namely “biophysical conditions,” “rules used,” and “community attributes.”

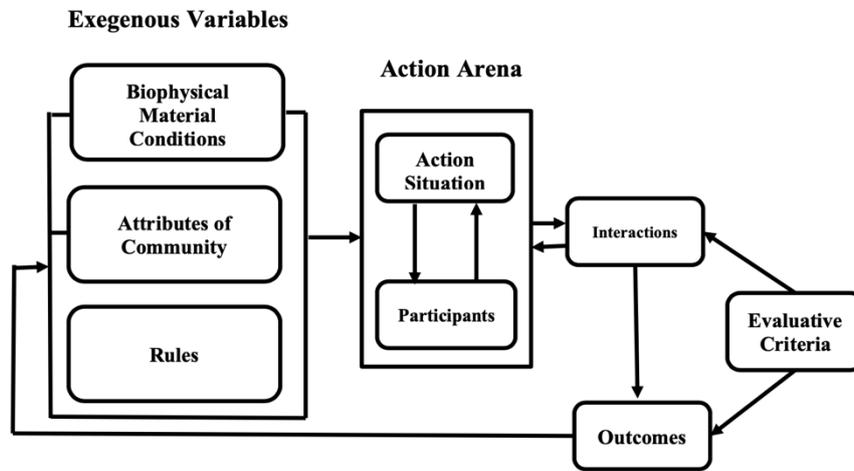


Figure 1 IAD Analytical Framework (Source: Ostrom, 2005)

As shown in Figure 1, the IAD framework represents an institutional process, in which different variables or procedures exist. At the heart of the IAD framework is the situation of action, an abstraction from the decision-making environment in which individuals and actors interact to make choices that determine the outcome of several aspects of the policy question. Individual decisions and collective outcomes are influenced by relevant individuals’ beliefs and incentives shaped by social responsibilities and expectations (Cole, Epstein, & McGinnis, 2019).

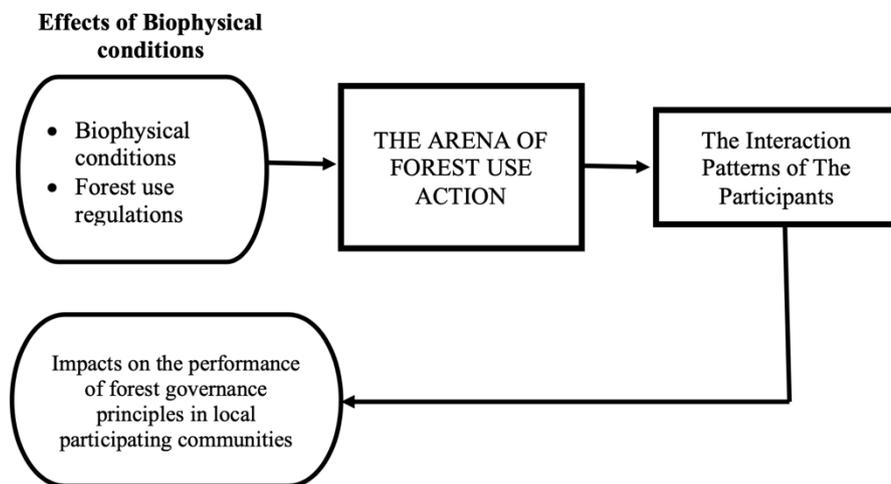


Figure 2 A Research Framework for Biophysical Effects (Ostrom, 2005)

Forest utilization permit regime based on PP 6/2007 jo. PP 3/2008 has designated forest areas into Production Forest (HP) and Protection Forest (HL). According to Ostrom (2005), it will determine the types of permits granted and select the participants involved and the forms of relationships that occur. The conditions of relationship or work relations between the participants, especially CF, are regulated in Permenhut No. P. 37/2007 jo. P. 18/2009 jo. P. 13/2010 jo. P. 52/2011 jo. P.88/2014 concerning Community Forestry.

According to Ostrom (1990), the action arena consists of situations of activities and participants. The action situation comprises seven variables: the participant variable, the participant’s position, the type of action, the level of control, the availability of information, the cost-benefit, and the potential impact. In this case, participants are composed of three variables: the preference variable for the structure of the action situation, how to process and use information, and the selection criteria used in making decisions. Based on the types of variables, the structure of the action situation for forest use is based on Permenhut No. P. 37/2007 jo. P. 18/2009 jo. P.88/2014 concerning Community Forestry, as shown in Table 1.

Table 1 The situation of action on community forest utilization schemes in *Production FMU Toili Baturube*

Participants	Form of Authority	
	PP 52/2011 jo. PP 88/2014	UU 23/2014
Ministry of Forestry	Assisting facilitation and mentoring	The implementation of government affairs in the forestry sector is divided between the Central and the Provinces
Governor	Assisting facilitation and mentoring	Assisting facilitation and mentoring
Forestry Service	Assisting facilitation and operational	Assisting facilitation and mentoring
FMU	Site-level forest management	Site-level forest management
Community Forest Farmer Groups	Permit holder and entitled to get permission and assistance	The status remains the same
Ministry of Forestry	Financing for the implementation of CF	Financing for the implementation of CF
Governor	Financing for the implementation of CF	Financing for the implementation of CF
Provincial Forestry Service	Financing for the implementation of CF	Financing for the implementation of CF
Regent	Funding can be sourced by regional revenue and expenditure budget	Limited authority
District Forestry Office	Funding can be sourced by regional revenue and expenditure budget	Authority is withdrawn to the province
FMU	Obtain budget allocation funds from APBN and APBD	Obtain budget allocation funds from APBN and APBD
Community Forest Farmer Groups	Receive facilitation and assistance funds	Receive facilitation and assistance funds

Government Facilitation

Facilitation is carried out by the Regency/City Government, which can be assisted by the Government and the Provincial Government. One example is the facilitation in submitting a permit application. Regarding CF implementation, PP 88/2014 gives the Governor/Regent authority in granting Community Forest Utilization Business Permits (IUPHKm) in their respective jurisdictions. The process of proposing a CF working area, namely the Regent/Mayor, facilitates the formation and institutional strengthening of local community groups. The Mayor submits a proposal to determine the CF working area to the Minister and a copy to the Directorate General of Forestry Planning. A team established by the Director-General subsequently verifies the Regent/Mayor's bid. The verification team consists of echelon I elements within the Ministry of Forestry and UPT at the Directorate General of Forestry Planning. Verification is carried out by confirming the Regent/Mayor of matters such as certainty of free rights/permits and conformity to area functions. The procedure can be seen in Figure 3. In proposing Community Forestry work areas, field research found the role of the Government and Forestry Service of Banggai Regency in facilitating forest farmer groups to obtain Community Forest Utilization Business Permits (IUPHKm).

Collaboration indicators are indicators of increased trust, improved communication and relationships, and reduced conflict, producing benefits (McIntyre & Schultz, 2020). Government facilitation will further generate trust and increase relationships among stakeholders and resource managers, greater participation, accountability, and transparency among the parties (Wondolleck dan Yaffee, 2000; Gunningham, 2009).

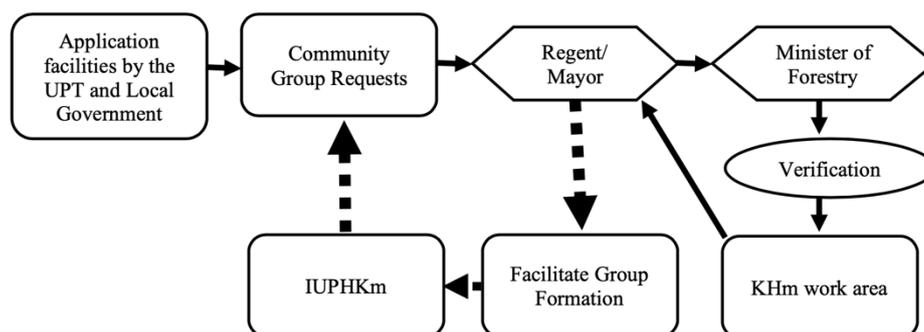


Figure 3. Procedure for Obtaining a Work Area and IUPHKm (Permenhut P.88/2014)

In the Production FMU Toili Baturube working area, there is only one CF, namely CF Nambo, located in Nambo District, Banggai Regency. CF Nambo obtained a Community Forest Utilization Business Permit (IUPHKm) in 2009 covering an area of 500 hectares, with six Community Forest farmer groups holding IUPHHK CF, namely Labakon Lestari Farmer Group I and Labakon Lestari II Farmer Group, Supak Indah Farmer Group, Motoutus Farmer Group, Bayu Lestari Farmer Group, and Galang Forest Sustainable Farmer Group. By Article 26 Permenhut P.88/2014, IUPHKm holders are required to a) delineate the group working area; b) compiling a work plan; c) carry out planting, maintenance and security; d) pay permit fees and forest resource provisions for non-timber forest products and environmental services following the requirements; and e) submit a report on CF utilization activities to

the licensor. The research results found that the CF management condition carried out by 6 CF farmer groups did not go as expected. There are only 2 CF farmer groups that are still active, while the others are not.

Based on Table 2, only 2 CF farmer groups are active in carrying out their obligations as IUPHKm holders, and most of the others are no longer active. Field observations found the active and inactive status of a CF farmer group closely related to a group work program plan. There is a plan for future work programs to carry out in the work plan, including planting, maintenance, security, and harvesting activities. CF farmer groups with a work plan will ensure their existence is still active until now. In contrast, CF farmer groups that do not have a planned future work plan will automatically face obstacles in planting, maintaining, and harvesting business commodities sustainably.

An institution's effectiveness depends on the interaction with other institutions and how responsive the institution is to the problems it has determined to solve (Reischl, 2012). CF farmer groups that are still active, for example, the CF Radakon Lestari II farmer group. This CF farmer group has a straightforward work program, starting from planting preparation activities, seed procurement plans, maintenance, protection, and harvesting plans. Table 2 shows the planting activities carried out, and Table 3 about the harvest plan. Forest security and protection activities are carried out by conducting rotating patrols scheduled by the group and coordinating with related parties such as forest rangers and field extension officers.

Table 2 CF planting activities by the CF Radakon Lestari farmer group II

No.	Types of Plants	Number of stems	Crop Year
1.	Jabon (Burflower Tree)	15.000	2010
2.	Jabon (Burflower Tree)	15.000	2011

Table 3 Harvesting of Plants in the CF Area

Types of Plants	Number of stems	Area (ha)	Year	Information
Logging of Crop				
Felling I Gmelina	8.000	16	2010	
Felling II Gmelina	6.000	15	2011	
Felling III Gmelina	15.000	31	2020	
Felling IV Sulaman	10.000	15	2020	
Brown plant		10	2011	Every year

The dominance of CF farmer groups that are no longer active than groups still functional in managing CF in the Production FMU Tolili Baturube working area is due to several general obstacles. They are still weak coordination between the Ministry of Forestry and Production FMU and the limited budget available to implement them. Two factors found in this field have had a further impact, especially on facilitation issues, which are the government's responsibility to the CF Farmer Group.

The function of Production FMU in the field is not running optimally, adding to the complex problem of social forestry management. Given the presence of FMUs as forest management operators at the site level, one of which is with the local government to facilitate the CF farmer group, all the CF farmer group's obligations can be fulfilled in forest management. It is inseparable from the domestic bureaucracy's role that uses the FMU program to transfer power back to the central bureaucracy by strengthening state forest areas, promoting forest benefits, centralizing budgets, building capacity, and centralizing information (Sahide, Maryudi, Supratman, & Giessen, 2016). Local efforts to develop Community Forestry have often met with considerable resistance. It is partly due to rapid deforestation across the country (Chan dan Sasaki, 2014; Ehara et al., 2016). Also, favorable control over natural resources has created a constant tug-of-war between local and central actors (Phelps et al. 2010).

The Central Sulawesi Provincial Government, as an extension of the Central Government in the regions, until now has not been well equipped with regards to regulations, budgets, and institutions. Institutions and organizations are two important components (North, 1990; Rodgers, 1994). Institutions are built to inhibit the emergence of mutually harmful behavior so that the goal of creating a prosperous society can be achieved (Kasper dan Streit, 1998). Support in the form of a Governor Regulation concerning the implementation of social forestry facilitation is needed to provide social forestry facilitation performance guidelines. It aims to support the acceleration of facilitation for the community in preparing and developing social forestry enterprises, resolving tenure problems through social forestry, and arranging coordination, integration, and synchronization to improve parties' participation in supporting social forestry. It can be seen in figure 4. The issue of not optimal regulation, institutional capacity, and budget has other impacts on a) participatory practices, namely the role of the Provincial Government in community involvement in developing management areas; b) practice of transparency in publications on community management area development (WKM); and c) accountability practices in forest and land management in Central Sulawesi Province.

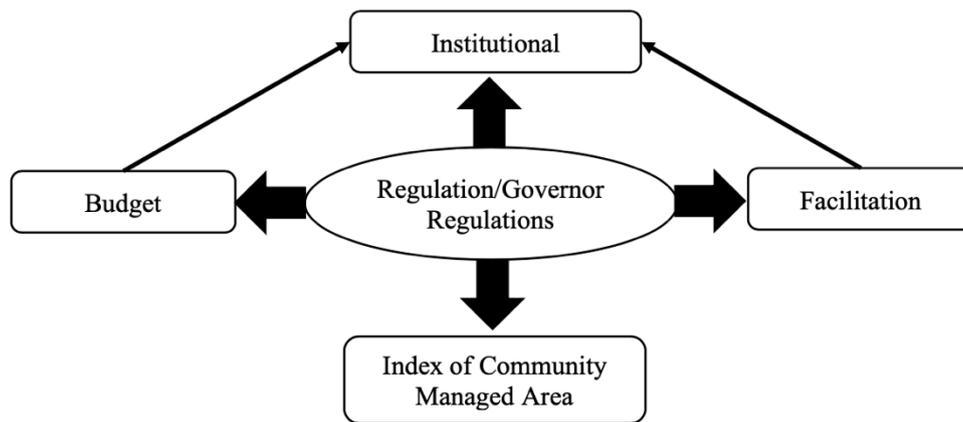


Figure 4 Linkage of Regulation, Budget, Facilitation, and Institutions with the Community Management Area index

IV. CONCLUSION

There is a strong correlation between regulatory, institutional, and budgetary support that has not been optimal with community management areas for forest governance based on forest governance principles in Central Sulawesi Province in general. In particular, it also includes FMU Toili Baturube, which is in the medium category. The problem of the absence of regulations, institutional capacity, and further budget impacts on a) participatory practices, namely the role of the Provincial Government in community involvement in the development of managed areas; b) transparency practices in publications on community management area development (WKM); and c) accountability practices in forest and land management in Central Sulawesi Province.

The Central Sulawesi Provincial Government, as an extension of the Central Government in the regions, until now has not been well equipped with regards to regulations, budgets, and institutions. Support in the form of a Governor Regulation concerning the implementation of Social Forestry facilitation is needed to provide social forestry facilitation performance guidelines. It aims to support the acceleration of facilitation for the community in preparing and developing social forestry enterprises, resolving tenure problems through social forestry, and arranging coordination, integration, and synchronization to improve stakeholders' participation in supporting social forestry. Collaborative governance is often needed as a strategy to address seemingly insurmountable shared resource (CPR) problems so that a significant power imbalance can limit the creation, adoption, and implementation of desired environmental, social policies (Brisbois, Morris, & de Loë, 2019). Finally, complete content and organizational editing before formatting. Please take note of the following items when proofreading spelling and grammar.

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