

## **Ostrom's Principles in Assessing Institutional Effectiveness Decentralized Community Forestry. Evidence from Indonesia**

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**Abstract.** Transitional government that is experiencing a shift from a decentralized system to a re-centralization system will have major consequences for the bureaucratic system in managing social forestry schemes, especially community forestry in Indonesia. Therefore, this article analyzes how actors (in this case, local institutions) use their authority in managing community forests, as well as how regulations as bureaucratic ties have implications for wider forest planting schemes at the local level. The purpose of this study was to investigate the effectiveness of local institutions in community forest management with a centralized system. The method used in this research is semi-structured interviews, observations, and Focus Group Discussion (FGD). Research findings suggest that Ostrom's (1990) design principles can provide a useful analytical framework to explore the role of local institutions as actors and the capacity of natural resource governance structures for centralized community forest resource management. Although in general, the centralization policy has a strong role in determining the direction of community forest management in Indonesia, this has an impact not only on the stagnation of the social forestry program but also creating unclear roles for local institutions. This paper contributes to the identification of forest governance in a decentralized system, as well as how the eight design principles serve as strong institutional characteristics for managing shared resources.

**Keywords:** Institutions, community forestry, Centralized

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Date of Submission: 20-09-2020

Date of Acceptance: 05-10-2020

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### **I. Introduction**

The problem in forest management in Indonesia is the low income of the community from forestry businesses. This problem shows that the role of community forest and production forest has not functioned optimally. The low income of the community through forestry businesses has an impact on the high conversion of forest land into non-forestry businesses. In addition, village communities around the forest cannot be separated from the forest, because forests are a place to make a living. (Andrasgoro *et al.*, 2017).

Different perspectives in interpreting policies also often occur and cause prolonged problems, due to the absence of solutions offered by the central government as the absolute holder of the power of natural resources owned by the state. The misuse of forest functions is widespread due to the absence of clear guidelines from the Ministry of Forestry. Local governments from the village to district levels are competing to use the forest as a source of income.

A unidirectional forest management direction needs to be established immediately, in order to achieve a comprehensive management concept, although later on in the implementation in the field there will be differences following the specific characteristics of each region. Improvements at all levels of government to society must be carried out openly to guarantee democratic freedom. In addition, evaluation also needs to be carried out to accommodate the needs of each stakeholder in order to achieve sustainable forest management and achieve a prosperous society.

Research on tropical rainforest mapping conducted by Matthew Hanson of the University of Maryland and released in 2016, states that Indonesia has 160.9 million hectares of tropical rainforest, ranking the world's third largest after Brazil and the Democratic Republic of Congo. The area of tropical forest we have from year

to year is decreasing (deforestation), mostly for economic and investment reasons. From Indonesia's secondary forest data based on 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.

Until now, the Indonesian government has made efforts by various parties to address the rate of deforestation and land degradation. The government has actually taken various measures and policies to ensure that the wisdom of forests and land is preserved, as well as it is economically beneficial for the community. There are at least 7 laws that have been issued by the State and, directly or indirectly, related to forest and land governance arrangements. This means that on paper, there are actually many regulations which, if obeyed and practiced in forest governance, can have positive implications for economic growth and environmental sustainability. There are many gaps, especially in the coordination between institutions at various levels, including the local government which has 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 a properly coordinated manner so that it is able to respond quickly, strategically and efficiently to any development guidance without sacrificing the environment.

Community Forestry is one of the policies issued by the Ministry of Environment and Forestry to reduce the rate of deforestation in Indonesia, by involving the community, in addition to Village Forests and Community Plantation Forests. Many parties view this policy as state recognition of forest management by the people which has been neglected so far. For the community, forests do not only have ecological meaning, but also social, cultural and economic significance. Currently there are more than 50 million poor Indonesians living in and around forest areas, who depend for their livelihoods from forest resources. Therefore, the Community Forestry policy is not only aimed at empowering the community, but also for overcoming the problem of poverty by opening up access and space for the forest area for the community. (Prasetyo, 2013).

Community forestry is one of the community-based forest development policies which embodies the principles in Law Number 41 of 1999 concerning the importance of community empowerment accompanied by fair distribution of forest benefits and optimization of forest functions. The existence of HKM aims to support the welfare of the local community. Through the Community Forestry Program, it is hoped that forest resources can be utilized by the community in an optimal, just and sustainable manner, in addition to preserving aspects of the preservation of forest and environmental functions. The concept of Community Forestry aims to reduce the process of deforestation, by involving communities in and around the forest. In addition, Community Forestry is aimed at empowering the community so that they have the ability and independence in utilizing the forest.

Community Forestry is only one manifestation of various forms of forest management designed to improve local forest resource management. For this study, community forestry is defined as an entity with an explicit mandate and legal authority to manage forest areas for the benefit of local communities (Krogman and Beckley 2002). Forest is a form of shared resource that is important for rural communities (Das, 2010). In addition, forests are the most important ecosystems for biodiversity protection (Matthews et al., 2000). Community forestry as a local institution and community-based natural resource management has been widely studied in recent decades as a means of rural livelihood (Adhikari, Williams, & Lovett, 2007). Local efforts to develop Community Forestry have often met with considerable resistance. This is partly a result of rapid deforestation across the country (Chan and Sasaki, 2014; Ehara et al., 2016). In addition, favorable control over natural resources has generated constant tug of war between local and central actors (Phelps et al. 2010).

The Ministry of Environment and Forestry has identified 532 Forest Management Units, which already have 321 institutional units (Kontan.co.id, 2018). In addition, social forestry programs that are expected to be managed by the Forest Management Unit, one of which is Community Forestry (HKM), has yet to show success. Strong commitment and support from the government does not automatically spur the success of developing social forestry programs (Suharti et al., 2017).

Policies and management of Protected Forest Management Units and Production Forest Management Units are generally difficult to implement in the field, due to several obstacles such as lack of skilled human resources to support the operationalization of Forest Management Units, unavailable budgets, lack of community participation in supporting Management Unit activities Forest. Based on the results of research conducted by Bungawali (2012), the Jeneberang Production Forest Management Unit found the main problems in the management of the Jeneberang Production Forest Management Unit, namely: 1) unsynchronized government policies, 2) ineffective and efficient organization of Forest Management Units, 3) unavailability of funds, 4) unavailability of data and information, 5) incompatibility of management with the function of forest areas, 6) low levels of community participation and 7) ineffective enforcement.

According to Ekawati (2014), the development of a Forest Management Unit is seen from an institutional concept interpreted as an institutional development of a Forest Management Unit in forest management. The goal to be achieved is how a Forest Management Unit organization works by using its attributes (organizational structure, roles, funding, work relationship arrangements) in managing forests, so that common goals can be achieved. The common goal is sustainably managed forests and prosperous communities.

The development of operationalization of Forest Management Units when viewed from the perspective of institutional science, is basically the outcome of a combination of the structure of the action situation and the characteristics of the participants who interact in the arena of action to develop the Forest Management Unit concerned. The structure of action situations and participant characteristics do not directly produce outcomes, but rather through the formation of incentive / disincentive structures faced by the participants. This structure then encourages / leads to the formation of certain patterns of behavior from the participants. The aggregate of all participants' behaviors (interaction patterns) then produces the outcome (Suwarno, 2014).

According to Ostrom (2005), the behavior of the participants, which then forms a pattern of interaction in the arena of action, is influenced by the structure of the action situation it faces and the characteristics of the participants themselves. Meanwhile, the arena of action (consisting of action situations and participants) is influenced by exogenous factors (regulations, biophysical conditions, and community attributes). The aggregate behavior of participants (i.e. patterns of interaction) over a certain period of time will produce a certain impact which is often referred to as the outcome of an institutional or policy arrangement..

Forests are common pool resources (CPR) that are vulnerable to overexploitation that will threaten their sustainability (McKean, 2000). In the management of CPR there are 2 different opinions. First, the solution to controlling the excessive exploitation of CPR is done by privatization and government control. Excessive exploitation of CPR by individuals to maximize satisfaction will result in the destruction of forest resources due to the absence of those responsible for preserving the forest (Hardin 1968; 1991). Second, the monitoring and management of CPR is carried out by the user community, in accordance with the evidence that CPR users can create institutions that form interactions between resources and communities that help them protect resources and allocate benefits fairly, and efficiently in a sustainable manner and are implemented in collective action ( Brommley 1992; McGinnis & Ostrom 1996; Agrawal & Gibson 1999).

Not all CPR users are successful in protecting and managing their own resources in a sustainable manner. The success of CPR management is influenced by several important factors related to the success of collective action as reported by researchers, namely forest scarcity and importance (Gibson 1999); state policies, changes in demographics, technology, markets, characteristics of local communities, institutions, and resources (Agrawal 2001). Ostrom (1990) proposes 8 design principles that are consistently encountered in effective and sustainable CPR management institutions, namely the existence of clear resource and user limits, the appropriateness of costs and benefits for users, collective choice management, adequate monitoring systems, application of multilevel sanctions, effective conflict resolution mechanisms, institutional design rights, and core managers (CPR being part of a larger system).

Based on the description above, this study aims to explain the impact of centralized policies and regulations on the effectiveness of local institutions in community forest management, using the principles of Ostrom (1990) through a case. Research conducted in Nambo Lempek Village, Nambo District, Banggai District. Central Sulawesi. which is one of the villages that has a community forest utilization business license in Indonesia

## **II. Literature Review**

### **2.1 Institutional Concept**

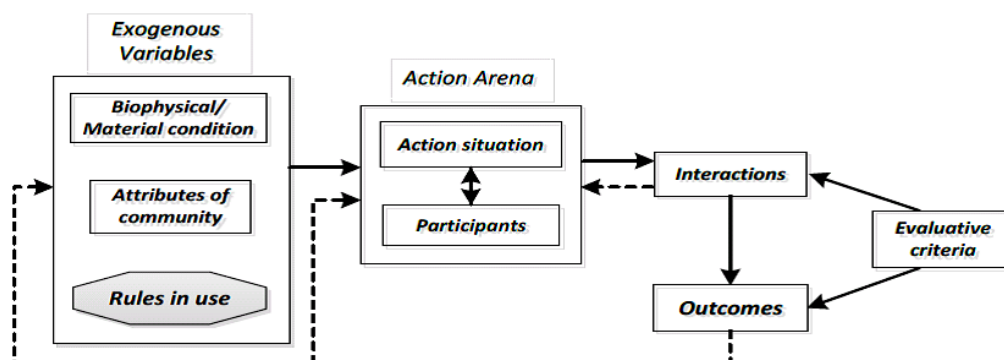
Ostrom and Crawford (2005) define institutions as rules that are understood broadly, as norms, or as strategies that create incentives for behavior in recurring situations. Rules are shared prescriptions (of what should, shouldn't, or may be) that prohibit, allow or require certain actions or results, and sanctions related to violation of the rules. Furthermore, Ostrom (2005) defines norms as prescriptions that are usually informal in nature, which are enforced jointly by members. While a strategy is a very regular plan made by individuals, in the incentive structure generated by the rules and norms, and the expectation of the possible behavior of others in situations influenced by relevant biophysical conditions. Furthermore, Ostrom (2005) states that relief is a rule that humans use to regulate all forms of social interaction that occur at all levels such as in family, company, market, government, and others. These rules are guidelines that are used by members in a group to manage mutually binding or interdependent relationships.

Institutional is a term to describe practices for managing social interactions. In a broader sense, institutions can be activities, values, norms, social structures and role systems that exist in society (John W. Mohr & Harrison C. White, 2008). The assumption built from this opinion is that social institutions consist of types of networks that are interconnected. This includes the actors linked together to form relationships and systems of rules.

One of the institutional analysis instruments that have received wide recognition in the international community is the Ostrom Institutional Analysis and Development Framework (IAD). According to Schlager & Blomquist (1996), the IAD framework is a well-established and robust framework that emphasizes the analysis of the influence of regulations on individual or organizational decision-making and actions. In the IAD framework, there is a component / concept called 'rules-in-use'. In institutional analysis, this concept is used to

analyze the content of regulations in relation to the structure of the action situations that are formed and the resulting performance.

The IAD framework (Figure 1) was developed by Elinor Ostrom with colleagues at the Center for the Study of Institutions, Population and Environmental Change (CIPEC) at Indiana University, United States. This framework is an integrated approach that aims to explain the relationship between the interaction patterns of actors in the midst of a number of existing institutional constraints (Sabatier et al., 2005).



Source: Ostrom (2005)

**Figure 1. Institutional Analysis and Development Framework**

In the exogenous variables group, the Institutional Analysis and Development framework has a component of 'rules-in-use' or 'rules used'. According to Ostrom (2005) and Ostrom et al. (2006), the rules used are the rules that are referred to by participants if they are asked to explain and justify their actions to other participants. According to Blomquist (2006), the regulatory component plays a role in shaping action situations by influencing the incentives and choices available to actors, then rational actors will respond by behaving and adopting certain strategies, which in turn will affect the results. Therefore, according to Blomquist, modifying the rules can motivate individuals to behave and adopt certain strategies so that they have the potential to produce different results. Basically, the regulation modification is to find a combination that is more effective than other combinations (Ostrom, 2008). Arena of action according to Ostrom et al. (2006) consists of two components, namely the action situation and the participants. The action situation refers to the social space in which individuals interact, exchange goods and services, resolve problems and disputes, etc..

## 2.2 Community Forestry.

According to Minister of Forestry Regulation No. P.37 / Menhut-II / 2007 the definition of community forest (HKm) is state forest whose main use is aimed at empowering local communities. Nandini, (2012) states that community forestry aims to improve the welfare of local communities through optimal, fair and sustainable use of forest resources while maintaining the preservation of forest and environmental functions. The existence of community forestry is expected that the welfare of the local community can increase through optimal, fair and sustainable use of forest resources while maintaining the preservation of forest and environmental functions.

Casse and Milhøj (2011) mention three characteristics of community forestry, namely: accountability, degree of devolution and local collective action. Executive management accountability consists of three layers, top, bottom or ambiguous. Upward if the executive management board reports primarily to the forest department, downward if the board is accountable for its decisions to communities and ambiguous if practices are unclear or unclear. The degree of devolution is defined as the degree to which society is given power over the powers of making, decision-making, implementation and adjudication.

Furthermore, Casse and Milhøj (2011) explain about local collective action options forming another aspect of community forest management regulations. If clear rules on harvesting and these rules are enforced, when unauthorized people enter the forest or rules are not followed by community members, local collective action is high. When there are few rules governing the use of forest products, but no structured enforcement and no executive management committee, local collective action is being. Collective action is low when few rules exist, but no enforcement is in place. For each article considered in our review, at least one version of community forestry is described in the article, with three exceptions (see next section). In these three cases, the level of community forestry, determined by accountability, did not take place devolution or local collective action.

The basic concept developed in community forestry is the active participation of communities in and around forest areas, in managing forests with the aim of increasing their welfare and improving the sustainability of forest functions (Forestry Ministerial Decree, 2001). Community forestry development uses the method of utilization of

growing space or certain parts of forest plants so as to improve community welfare and the quality of forest resources. The commodities that can be developed are various forestry businesses or multi-purpose tree species.

### 2.3 Concept of Community Forestry Institutions

In general, the institutional forms of community forestry are almost the same in all regions, both in organization, leadership, capacity building and in conflict management as well as in tangible forms that regulate the relationship between its members. Some examples of institutions include credit, extension services, cooperatives, research and development and land use.

Discussing institutions in community forest development can be interpreted as an organization that deals with all activities, both formal and non-formal institutions, which have an interest in it. The institutional form in an area is likely very much influenced by the socio-cultural conditions of the local community and in discussing forest institutional issues. The institution in community forest development is generally a farmer association whose members have the same interests and environmental conditions, be it social, economic, cultural or natural resources and human resources, in addition to familiarity, harmony, and have the same desire to realize the preservation of natural resources.

The development of appropriate forest management institutions will create good forest management performance and can be designed through the development of appropriate incentives (Ostrom 1993; Peters 2000) or by tracing the factors that influence the behavior of actors in forest management so that the institutions developed are in accordance with the character of forest management. as CPR and meet the criteria of a sustainable forest management institution This can be traced through the factors that influence the behavior of actors in forest management so that the institutions developed are in accordance with the character of forest management as common pool resources and meet the criteria of institutions for sustainable forest management (Ostrom 2008).

Based on lessons learned from 14 cases of community-based management on CPR's in various parts of the world, Ostrom (1990) proposes eight draft principles characterized by the configuration of rules made and used by sustainable CPR institutions. Ostrom defines "design principles" as "the essential elements or conditions that help explain the success of this institution in maintaining CPR and obtaining compliance from generation to generation according to the rules used". Ostrom's eight principles which are indicators of the performance of resource management institutions are as follows: 1) Clarity of boundaries. The boundaries of the area are clearly defined so that it is easy for everyone to identify and recognize them; 2) Compliance with the rules with local conditions (local); 3) Rules are compiled and managed by resource users, where the community is able to make rules based on local knowledge and local wisdom through local institutional mechanisms. Local institutions function to regulate management mechanisms, make rules, revise rules and decision-making mechanisms; 4) The implementation of supervision is respected by the community. Communities have their own monitoring instruments and mechanisms with supervisory actors who have community legitimacy; 5) The imposition of sanctions. The measure of the success of a rule is the enforcement of sanctions for violators, whether social sanctions, administrative sanctions or economic sanctions; 6) Conflict resolution mechanisms. Communities have alternative mechanisms for conflict resolution outside the formal mechanisms; 7) Strong government recognition, can be in the form of laws, government regulations or regional regulations; 8) The existence of ties or networks with external institutions, namely networks between communities and outside the community such as universities, NGOs and the private sector.

### III. Research methods

This research was conducted using a qualitative approach, conducted to reveal contextual holistic symptoms. Irawan (2007) states that the truth according to qualitative research is an intersubjective truth, not an objective truth. Intersubjective truth is truth that is built from the interweaving of various factors that work together, such as culture and the unique characteristics of human individuals. Therefore, reality is something that is perceived by the observer and not just a fact that is context-free and free from any interpretation. Therefore, truth is a building (construction) compiled by a researcher by recording and understanding what happens in social interactions.

This research uses the case study method of Nambo District, Banggai Regency, Central Sulawesi, Indonesia. Nambo Subdistrict is one of the areas that has obtained a Community Forest Utilization Business Permit (IUPHKm) in 2009 covering an area of 500 hectares, with six Community Forest farmer groups. Data collection was carried out through four different methods, namely: content analysis of policy documents, semi-structured interviews, questionnaires, and field observations. Primary data taken is mainly related to the measurement of the institutional effectiveness of the Social Forestry. The measurement of institutional eectivity uses the institutional concept (Ostrom 1990). Institutional effectiveness is evaluated using the principles of the Ostrom (1990) model which characterizes a set of rules designed for sustainable management of shared resources. The design principles are presented in table 1.

**Table 1. Summary of the design principles for robust common-pool resource institutions**

Ostrom's principles	Description
Clearly defined boundaries	The resource system's boundaries and the individuals who have rights to use the resource and need to contribute to its maintenance, are clearly articulated. This underpins the development and enforcement of rules
Congruence between appropriation and provision rules and local conditions	The rules in play that allocate benefits to different participants are fair and equitable, that is, they ensure the benefits derive from the resource are in proportion to the contributions they provide. Rules also conform to local resource conditions, such as fluctuations over time and space. If rules are seen as fair there is less chance that resource users will challenge or violate them
Collective choice arrangements	Individuals affected by the rules have a say in their design and modification. This ensures greater support for the rules; rules are better understood, are more likely to fit local circumstances, norms and values, and are adjusted when needed. It provides locals with the opportunity to experiment and fine-tune rules over time
Monitoring	The condition of the resource is regularly monitored as well as risk contributors' compliance with the system's rules. Monitoring is done in a way that complements trust and reciprocity, rather than causing antagonism
Graduated sanctions	Users who do not abide by rules first receive a signal that their breach has been noticed followed by more onerous consequences if the breach continues. Such an approach makes allowance for exceptional circumstances, misunderstandings or mistakes and focuses on encouraging the violator to resume compliance. It is also important for other participants to witness that rule breaches are followed up, to maintain trust in the system.
Conflict resolution mechanisms	Participants and officials have ready access to low-cost, local arenas to address conflicts between stakeholders and to get it resolved quickly with minimal impact on the trust between participants
Minimal recognition of rights to organise	The rights of participants to develop their own rules are recognised and supported by external authorities, such as local or state governments, thereby contributing to the legitimacy and enforceability of these rules
Nested enterprises	Where the resource is part of a larger scale system, institutions are developed in a nested approach, where different layers complement each other. Smaller units adapt rules to local circumstances and larger-scale institutions regulate the interdependencies between smaller units and address larger-scale issues

#### **IV. Results and Discussion**

##### **4.1 Local Institutions in the management of Common Resources**

According to Ostrom (1990), community institutions have been considered as important mechanisms in society to manage environmental and social challenges through the application of a set of rules, to facilitate coordinated action and to solve free riding problems, there is a common property regime in which a community regulates and manages its own resources. so that no damage occurs.

So far, privatization and government control are considered to be the right solutions to control overexploitation of common property resources or CPRs. The main problem of privatization or management by the state is a lack of understanding of the existence of various community institutions, which function to regulate the use of these resources. Much empirical evidence shows that the management of CPRs by community institutions is able to create institutional rules that shape the interaction between community members and resources, thereby helping them to protect existing resources and allocate benefits fairly among themselves with a reasonable level of efficiency in a sustainable manner ( Ostrom 1990; Agrawal and Gibson 1999; Nursidah *et al.*, 2012)

The research findings show that the principles of community forest management are based on clear boundaries and user group rights. Based on Ostrom Principle 1, community forest areas in Nambo District, the boundaries are clearly defined using trees or Gamal Plants in each area of the Forest Farmer Group. This method of zoning has been implemented for a long time, long before social forestry programs such as community forestry entered Nambo District. Although it looks simple, this clarity of territorial boundaries in the end provides a sense of certainty in land ownership for residents, it also eliminates conflicts between local communities and outsiders. Clarity of resources and groups entitled to use resources can reduce the chance of conflict and increase their commitment to established rules.

Based on Ostrom Principle 2, namely the suitability of regulations and local situations, empirical facts are found that in the framework of forest protection and security, it is carried out through rotating patrols that are regulated and scheduled by groups and involving related agencies, such as extension workers and forest

rangers. These mutually agreed rules are ensured to run well and are adhered to by all group members, given the growing collective awareness of the importance of forests for community life. The existence of a stable institution is the first step for economic growth and improvement of community welfare.

In relation to Ostrom Principle 3, namely an Agreement that allows User Participation, it was found that a meeting of all members of the Radakon II Forest Farmer Group was routinely held once a month, which discussed improvements in operational rules in the use and management of community forests. In the monthly meeting, several agreements were made which were later used as material for revisions to improving the rules which were felt to be still lacking. These rules are a collection of the aspirations of the community in general, especially those who live around community forests. Although the operational rules have been made and have been mutually agreed upon, there are still many shortcomings that need to be fixed, and need to be revised again, adjusted to the needs of changes in the environment that have occurred, so that a sense of belonging among members of the Forest Farmers Group arises regarding the existence of the institution.

Ostrom's fourth principle demands effective monitoring by the owner as part of the owner's responsibility for these resources. The findings of the study showed that the form of monitoring carried out by the Radakon II Forest Farmer group in securing community forestry was previously mentioned, namely in the form of patrolling activities carried out in rotation among group members. This rotating patrol activity involves coordination with forest rangers and extension workers. Apart from rotating patrols, another activity in the form of monitoring is the implementation of an evaluation meeting which is held once every three months, in which the meeting is re-evaluating the implementation that has been carried out in relation to forest management.

The results of the study refer to the Ostrom Principle 5, it was found that during the operation of the Community Forestry program from 2000 to 2018, there had not been any serious violations committed by members of the Forest Farmers Group against the existing regulations, so that automatically until now no group member has been sanctioned. for violations committed. This is why we say that the form of sanctions for violations that have arisen until now is not clear. Although according to Ostrom (1990), the imposition of sanctions is very necessary because each member of the group has been given a prior understanding to obey the rules set together and every violation committed will result in sanctions, but due to awareness of responsibility and the impact that must be borne as a result of behavior negative in forest management, in the end breaking the collective rules becomes an option that does not appeal to members of the Forest Farmers Group.

The conflict resolution mechanism in Nambo Lempek Village, so far, has generally been resolved in a friendly manner. Although in this study we did not find a very serious conflict, the mechanism established by the group in resolving the problems that occurred between them, especially in community forest management, was purely a sense of mutual trust and mutual understanding. This conforms to Ostrom's Principle 6 Conflict Resolution Mechanisms through features of social organization, such as networks, norms and trust that facilitate coordination and cooperation for mutual benefits.

The 7th Ostrom design principle focuses on empowering communities or group members to organize themselves with little or no interference from local, district and national governments, this is very important to deepen and sustain collective action (Ostrom, 1990). The research findings show that members of the Community Forest Farmers group in Nambo Lempek realize the importance of an organization that is managed to realize common interests and adapted to the local context. This cannot be separated from the support of the Regional and Provincial Governments, in this case the Forest Management Unit (KPH). Governance activities in a successful system are often organized in networks between user groups and the role of government both horizontally and vertically (Cox *et al.* 2010). The research findings show that the role of the Government, in this case the Forest Management Units (FMU) in community forest management has not been maximized, but it has facilitated community forest farmer groups in coordinated forest resource management.

Related to the Ostrom Principle 8, which is a smaller and locally based organization, the research findings show that there is a relationship between these institutional organizations, starting from the Forest Management Units, as a management unit at the site level, one of which is managing community forests. Then at a higher level is the Department of Environment and Forestry, which is domiciled in the Province, as an extension of the Central Government. Although in simple terms, it looks like this connectivity network will run easily, the research findings show it is not as easy as imagined. Our research finds that there are still complications, especially in terms of licensing to obtain community forestry permits, limited budgets, and the relationship between Forest Farmers' Groups and Forest Management Units and the Local Government. So that the application of the 8th Principle Design is categorized as unclear.

#### **4.2 Community forest management policies through Property Rights**

Forest management policies that favor the welfare of local communities, are reflected in Law no. 41 of 1999 concerning Forestry. This is stated in the general explanation of the law which reads "In terms of production function, taking sides with the people at large is the key to the success of forest management. Therefore, forest management practices that are oriented only to timber and that do not pay attention to rights

and involve the community, need to be changed to a management that is oriented towards all the potential of forestry resources and is based on community empowerment.

The follow up of Law no. 41 of 1999 was the passing of Government Regulation (PP) No. 6 of 2007 jo PP. 3 of 2008 concerning Forest Administration and Formulation of Forest Management Plans, and Forest Utilization. PP No. 6 of 2007, specifically mentions that the involvement of local communities in forest management is facilitated through the Village Forest, Community Forestry and Partnership schemes. Furthermore, a more operational policy regulation was issued in the context of implementing PP. 6 of 2007, namely the Minister of Forestry Regulation No P.37 / Menhut-II / 2007 concerning Community Forest Management. The next development of the Community Forest management policy was the passing of the Minister of Forestry Regulation No. again through Minister of Forestry Regulation No. P.88 / Menhut-II / 2014, where the role of Community Forest is increasingly emphasized as state forest whose main use is aimed at empowering local communities.

The statement of state property as constitutionally so explicitly narrated in the 1945 Constitution articles 33 and 34. which was later downgraded one of them to Law 41 of 1999. Based on these two provisions, the Nambo community forest land is an area controlled by the State. The main problem of privatization or management by the state is the lack of understanding of the existence of various community institutions that function to regulate resource use. In fact, the commons themselves are institutions that recognize collective ownership, not without ownership at all. These conditions and management options have become the main criticism of Ostrom (1990) and his support group through "Governing the commons", Ostrom has documented various examples of the success of communities in various countries and led them to the formulation of principles and institutions for sustainable resource management. Thus, in fact, in the midst of the community, there are various institutions available to manage fish, forest, wildlife, irrigation systems and other CPRs resources in a sustainable manner. This collective response is a form of collective action and this action is a way out to face the dilemma and save resources.

Community forest management is carried out through a formal juridical determination process, both physically in the field, and by design of the area as the basis for efficient, effective and sustainable forest management, in other words the determination of forest area is an affirmation of legal certainty regarding the status, boundaries and size of an area. certain that have been appointed based on legally binding decisions, while forest area stabilization is the process of negotiating forest areas aimed at obtaining legitimacy from individuals or community groups and organizations (Sadino, 2006).

The process of determining and stabilizing community forest areas, begins with a proposal from the local community to obtain a Community Forest Utilization Business Permit (IUPHKm) from the Regent / Mayor, which is then submitted to the Minister with a copy to the Directorate General of Forestry Planning. The Verification Team, which is formed by the Director General, verifies the proposal of the Regent / Mayor, the result of which becomes the basis for the Director General's recommendation to reject or accept all or part of the proposed determination of Community Forest working areas. The Directorate General of Forestry Planning and Designation of Community Forest Working Areas by the Minister shall prepare a map of the work area.

The findings of the study show that the role of the Government, especially the Regional Government in strengthening community institutions is very weak. Since the enactment of Law 23/2014 on Regional Government, the role of district governments has been limited, especially in the forestry sector, where most of the powers and policies fall under the authority of the Central and Provincial Governments. So that it has an impact on optimizing the role of local government in facilitating the formation and strengthening of local community groups. This is ironic when community forestry is expected to continue to develop and function optimally, the independence of the local community in forest management in Nambo Lempek village needs support from various parties, especially the local government which has authority over the status of community forestry. In fact, according to Article 3 of Government Regulation No. 6 of 2007, it is clear that the authority and policy for managing forest areas is a joint responsibility of the Central, Provincial and District Governments, besides that it also states the role of Forest Management Units (KPH) as forest managers at the forest level. site in an integrated integrated forest management system.

However, since the enactment of Law Number 23 of 2014 concerning Regional Government in lieu of Law Number 32 of 2004, there have been enormous changes, especially in forest management and policies in Indonesia. One of the crucial amendments to this law is the division of government affairs between the Central Government, Provincial Government and Regency / City Government. Responding to this transitional period, after the enactment of Law Number 23 of 2014, the Ministry of Forestry and Environment subsequently issued a Circular Letter Number SE.5 / MenLHK-II / 2015, concerning the Implementation of Forestry Government Affairs between the Central Government and Regional Governments. This Circular is required in providing direction of implementation, especially for Regional Governments. One of the important contents in this circular of the Minister of Forestry and the Environment is the Sub-affairs of the Forestry Sector Government related to Community Forest Utilization Business Permits (IUPHKM) implemented by the Provincial Government, so that



it becomes a clear picture of the role of the Regional Government and how strong is its dominance. Government.

One of the main impacts arising from the change in regulations is the weakening of local institutions and independence to regulate the hierarchy, due to the strong influence of the bureaucracy at the central and provincial levels. On the other hand, the community forestry program is still unclear in its format because it is not supported by clear directions and objectives from the Forest Management Unit (KPH) as the agency responsible for its management.

#### **4.3 Establishment, supervision and financing of community forest management**

Establishment and supervision in the framework of forest management aimed at maintaining orderly implementation of forest management is a joint task of all parties, starting from the Central Government, Provincial Governments and Regional Governments, even more broadly forest supervision can be carried out by the general public, as contained in Article 60 of Law 41 of 1999.

Establishment and forest supervision are further clarified in Article 123 of Government Regulation No. 6/2007 which states that Establishment and supervision powers are exercised by the Minister to control forestry policies carried out by Governors, Regents / Mayors. Establishment and supervision activities include the provision of guidelines, guidance, training, direction, supervision, monitoring and / or evaluation related to the preparation of forest management plans, as well as forest utilization guidance for the preparation of work procedures and procedures, training for human resources and apparatus, direction for planning. program and periodic assessment of sustainable forest management.

The research findings show that the application of this rule in the field is unclear. Until now, the budget for community forestry funding has only been sourced from the central and provincial governments, while from the regional governments there has been no budget allocation for community forestry programs. The success of the community forestry program (HKm) and Forest Management Units (KPH) as the managing elements is largely determined by the budget allocation of the central or regional government. Forest Management Units, although formally assigned to oversee site level implementation in forest management, still face budget problems. The system implemented by the Ministry of Environment regulates the operational budget for Protected Forest Management Units through the Director General of Management of Protected Forest Watersheds, while for Production Forest Management Units it is carried out through the Director General of Sustainable Production Forest Management. However, the inconsistency of budget allocation from the central government with increasing the rehabilitation budget has resulted in a reduction in budget allocation for the operations of the Forest Management Unit. As a result, many Forest Management Units did not receive operational budget allocations from the central government. The budget allocation from the local government also turned out to be very limited and did not fully support the operations of the Forest Management Unit.

In addition, the budget for the development of Social Forestry, including community forestry comes directly from the ministry or in coordination with the Social Forestry and Environmental Partnership Agency, while the Forest Management Unit faces budget constraints and does not receive a special budget allocation to support Social Forestry. Of the 18 samples of Forest Management Units, budgeting still depends on state allocations with a small additional allocation for the Social Forestry (SF) program. Although there appears to be a substantial budget from some Forest Management Units for the allocation of Social Forestry, this budget is generally for the development of partnership programs between Forest Management Units and communities, and does not fall into the category of SF permits that follow community partnership procedures. This condition shows the government's low commitment in budget allocation for the development of Social Forestry through a location-level management system (Suhirman *et al.*, 2012). The issue of budget allocation not only affects the role of local governments in their duties as supervisors and supervisors, but also the role of the Forest Management Unit in providing optimal support for community forestry program development.

The findings of the study show that the role of the Banggai Regency Regional Government and the Baturube Toili Forest Management Unit has not optimally exercised the authority in carrying out guidance and supervision of the management of the Nambo Lempek community forest. This indicates the lack of concern of the Regional Government and Forest Management Units in supervising their jurisdictional boundaries and the lack of concern of local governments in securing their ownership rights to the area. However, this dilemma cannot be fully directed at the Regional or Regency Government. Since the enactment of Law No. 23/2014, the role of local governments has become limited in managing public resources, including forestry, so that the authority and further policies of local governments in developing community forestry programs in their areas, including the development of local institutions, are practically limited. This is one of the facts that can answer in general why the role of district governments is not synergized with the presence of Forest Management Units (KPH) along with community forests and other social forestry programs in the district

## V. Conclusion and Policy Recommendations

Based on the research findings, it can be concluded that the existence of local institutions as actors in managing community forest resources sustainably in Nambo Lempek is supported by the existence of several conditions that facilitate collective community action, namely; clarity of management area boundaries; relevance of rules, collective and participatory rule-setting; effective monitoring; Determination of strict sanctions for each violation, the existence of a conflict resolution mechanism between the parties, and the existence of a smaller, locally based organizational layer. The use of Ostrom's Design Principles (1990) to evaluate institutional effectiveness and content analysis of formal rules governing aspects of the establishment, consolidation of community forest areas, management, guidance and supervision as well as financing of community forest areas. Our research suggests that Ostrom's (1990) Design Principles can provide a useful analytical framework for exploring the role of local institutions as actors and the capacity of natural resource governance structures for sustainable forest resource management. Using Ostrom's Design Principles in analyzing forest resource governance structures, this research provides insight into the interrelationships and linkages between local institutions and Design Principles for sustainable forest resource management.

Since the enactment of Law No. 23/2014 on Regional Government, the role of district governments has been limited, especially in the forestry sector, where most of the main powers and policies are assigned to the Central and Provincial Governments. The role of the Regional Government is taken over by the Forest Management Units (KPH) as an institution that manages forests at the site level, as well as an extension of the Central and Provincial Governments in the Regency.

Based on the content analysis of the formal rules governing ownership rights, stipulation and consolidation, management and guidance, supervision and financing of community forestry, this study finds that formal rules regarding community forestry place how strong the dominance and control of the Central Government administration through its arm under the Government. Provinces in forest management, which have an impact on the suboptimal role of local governments in facilitating the formation and strengthening of local community group institutions, and the weakening of local institutions and independence. On the other hand, the community forestry program is still in unclear format because it is not supported by clear directions and objectives of the Forest Management Unit (KPH) as the institution responsible for its management, as well as the problem of the minimum budget allocated by the Central and Provincial Governments for operationalization of Forest Management Units ( KPH).

Based on the research findings, the Community Forestry (HKm) institutional model is formulated as follows: (1) institutional strengthening. The implementation of community forestry depends on the role of the Forest Management Unit which has a bureaucratic structure to the location level, so it is necessary to: (a) emphasize community forestry programs as one of the main tasks and functions of the Forest Management Units; (b) strengthening the institutional independence of Forest Management Units by reducing the dominance of the Central Government and provincial forestry offices, through amendments to existing regulations, (c) stipulating a special budget allocation for the development of community forest programs in Forest Management Units. (2) Synchronization of Regulations; through reviewing and improving various regulations to synchronize policies on community forests and Forest Management Units, (3) Synergy of Regional Governments and Forest Management Units and Local Institutions; through increasing the active role of the District Government in developing local institutions as well as a solid collaboration between all relevant stakeholders including private investors

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