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PARTICIPATORY LAND USE CONFLICT RESOLUTION: EFFORTS TOWARDS COMMUNITY COLLABORATIVE MANAGEMENT

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ABSTRACT

This research aims to determine the causes of land-use conflicts and formulate a participatory conflict resolution model of the Forest Management Unit (KPH) of Kulawi. Through interviews with respondents using the purposive sampling method. The study included the community around the forest area, local government, KPH, Department of Agriculture, BPDAS-HL, and local government. Data analysis was stakeholder's and land use conflict by using problem trees analysis. The study results show that the battle occurred not only because of the community's factor of accessing the area illegally but also because the KPH has not performed its function correctly. Some factors cause enforcement's failure, such as lack of understanding of the area and community empowerment. Some alternative solutions desired by the community: (1) The government through related agencies should supervise forest areas, (2) Clear boundaries between community-owned land, villages, and forest areas, (3) Community empowerment by utilizing potential forest product resources and (4) Granting management rights to community's forest claimed by the community. There are two models of conflict resolution to be offered. First, the KPH needs the collaboration of parties to resolve land-use conflicts. Second, community involvement as the main subject is significant in every stage of conflict resolution. The KPH supports improving community capacity related to competence in conflict resolution is indispensable.

Keywords: Land use, Conflict resolution, Participatory approach.

INTRODUCTION

Forests have ecological, economic, and social functions, so it becomes its attraction to be utilized (Baynes et al., 2015). In some places, patterns of interaction between humans and forests create a high dependency (Bonsu et al., 2019; Chankrajang, 2019). However, even the dependence made raises conflicts due to various interests in its utilization (Endah et al., 2018; Yusran et al., 2017), in the form of interpersonal and inter-

institutional conflicts (Arts and de Koning, 2017; Paudel, 2018). One of them is land use and ownership (Irawan et al., 2016; Sahide et al., 2019).

Forest areas in Asia, especially in Indonesia, have long attracted various economic, environmental, and social backgrounds (Fisher et al., 2017; Riggs et al., 2016; Roberts, 2016). This situation worsens when forest resources continue, resulting in higher competition between interested parties and more conflicts.

Results of previous studies (Batunacun et al., 2019; Senoaji et al., 2020) explain some of the causes of forest conflicts in Asia, including the destruction of community-owned land, lack of employment opportunities for local communities, and lack of consultation with the district. Furthermore, this is due to the underlying causes of conflict, such as tenurial disputes between state lands and civil rights (Yasmi et al., 2010), weak coordination between government agencies (Golar et al., 2020), conservation and development policies resulting in the banishment of local communities (Sahide et al., 2019). These studies reinforce the paper's assumption that the trigger for forest resource utilization conflicts is an imbalance of function and neglect of the role of communities in forest resource management.

Several previous studies have proven the effectiveness of community roles in resolving land-use conflicts in forest areas (Baynes et al., 2015; Bray, 2015; Okumu and Muchapondwa, 2020; van Haren et al., 2019). However, even in conservation-functioning areas (Ece et al., 2017; Gautam et al., 2002; Paudel, 2018), this potential should be optimized, especially by the forest Management Agency (KPH).

One of the pieces of evidence is the settlement of illegal logging cases in the region of KPH Sintuwu Maroso; Central Sulawesi can be resolved through mediation efforts of community groups and KPH (Golar et al., 2020). Similarly, the success of improving forest conservation through community-based land-use planning. Participatory mapping at Crocker Range Park-Malaysia, good practice on the importance of community participation in the land and forest conservation planning process (Ioki et al., 2019).

This article focuses on optimizing the role of the community as social capital in suppressing land-use conflicts and forest resource utilization and how the collaboration model in solving tenurial problems in KPH-managed areas—in particular, identifying variances and the root of the problem and formulating a model of conflict resolution of forest areas in the KPH Kulawi region.

RESEARCH METHODS

The research was conducted in the KPH Kulawi area (Figure 1), which has high intensity of forest land use in dryland farming, community gardens, and settlements in Bangga Village, Walatana Village, and Baluase Village). The research analysis unit consists of community groups, community leaders, KPH representatives, and other stakeholders. Informants are selected by purposive sampling.

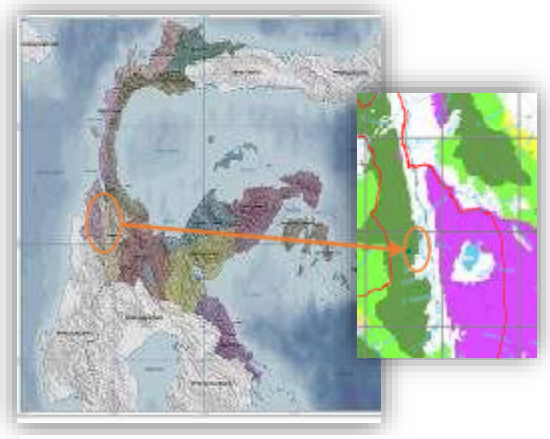

Figure 1. Research locations

Map source: https://sulteng.bpk.go.id/peta- administrasi-provinsi-sulawesi-tengah/

In-depth data mining was conducted through interviews and Focus Group discussions (FGD) with key informants who understood land-use problems in the KPH Kulawi area. FGD is carried out while paying

attention to the covid-19 protocol through restrictions on the number of informants and the use of masks, and the provision of hand sanitizer.

Data Analysis

Stakeholder Analysis

This analysis is used to determine the level of influence and interests of stakeholders. Influence is a force owned by stakeholders to land use in the KPH area, while claims are prioritized through land-use activities to meet each stakeholder's needs. Reed et al. (2019) referred to the stakeholder analysis model with three-stage: stakeholder identification, stakeholder classification, and describing relationships between stakeholders.

The analysis uses a matrix of influences and interests by classifying stakeholders: 1) Key players, i.e., groups that have high stakes and results; 2) Subject, i.e., groups that have high interests, but low influences; 3) Context setters, i.e., groups that have common interests, but strong influences; and 4) Crowd, which is a group that has low interests and influences. A question assessment guide is used to measure stakeholders' level of influence and interests. "Influence" using instruments of the strength of conditions, feasibility, compensation, individual, and institutional stability. "Importance" refers to the needs of stakeholders in the achievement of output and objectives.

Scoring is done by using a list of questions to measure stakeholders' importance and influence by measuring data using scoring assessments (Table 1).

The value of interest between stakeholders is used 5 (five) variable include: Stakeholder engagement (K1); Benefits obtained by stakeholders (K2); Form of stakeholders authority (K3); Stakeholder work program (K4); and Stakeholder dependency level (K5). Furthermore, the value of influence between stakeholders applies 5 (five) variables, namely: The strength of stakeholders (P1); Eligibility conditions (P2); Stakeholder compensation (P3); Level of stakeholders' activeness (P4); and Institutional stakeholders (P5).

Land use conflict analysis

The analysis consists of identification stages, conflict responses, and problem tree analysis. The goal is to help disclose the main issues of land use conflict and connect various causes and consequences.

Table 1. Influence score and Stakeholders' Interests

Score	value	criterion	information
Stakeholders' Interest *Level*			
5	21-25	Very high	Very interested in land use conflict resolution
4	16-20	High	Interest in land use conflict resolution
3	11-15	Quite high	Quite an interest in land use conflict resolution
2	6-10	Less high	Lack of interest in land use conflict resolution
1	0-5	low	No interest in land use conflict resolution
Level of Influence of *Stakeholders*			
5	21-25	Very high	Dramatically affects the land use conflict resolution
4	16-20	High	Influencing land use conflict resolution
3	11-15	Quite high	Affects land use conflict resolution
2	6-10	Less high	Less affect land use conflict resolution
1	0-5	low	It does not affect land use conflict resolution

RESULTS AND DISCUSSION

Results

1. The conflict mapping

The type of conflict in the KPH region is a difference in values, objectives, and beliefs. Disputes between groups arise because of competition. Each group works to achieve its goals (*intergroup conflict*), and disputes that occur themselves (*intrapersonal*) are often manifested due to role competition (Golar et al., 2019).

Regarding tenurial conflict, no matter how small the competition, it will still barrier to KPH in forest management. If left unchecked, it would be a justification for other individuals to do the same. It is used to look at the relationship between the parties involved in the competition, associate it, and identify interventions or actions to evaluate what has been done (Baynes et al., 2015).

The conflict between KPH Kulawi with the villagers

The conflict between the community and the KPH Kulawi began with installing forest boundary that the community has processed for generations. This incident provoked resistance from the community in the form of the repeal of the boundary path. Their reason is that long before the establishment of forest areas, people had already inhabited the area.

The evidenced by some locations that are located deep into the forest, found old coconut plants. Furthermore, the issue has had an impact on people's hateful attitude towards KPH. Currently, the existence of KPH is considered to complicate and provide a sense of community discomfort in utilizing forest resources.

The conflict between KPH Kulawi and the village government

The conflict between KPH and the head of Walatana village is about authority. The case was triggered by several policies taken by the village head related to the permit to buy and sell land/gardens in the area. Also, the person is suspected of unilateral cooperation with one of the plantation companies in Walatana village preparing land for the development of short-type coconut plants in protected forest areas and gardens claimed by the community. Furthermore, road infrastructure construction triggered another conflict to plantation plans' location through the protected forest area of the KPH Kulawi area.

The conflict between villages around the forest

The main problem that causes conflict between villages is the boundary tape, be it the boundary (village administration area or forest area boundary. For example, in Baluase village and Bulubete village in South Dolo sub-district, conflict arises from claims against certain land areas. Initially, the land was a sleeping area within the forest area and was never in question.

The administrative boundary between the two villages has existed since the previous head of the town and has never been a problem. However, a new conflict arose when an unproductive area was already valuable with Forest Program III Sulawesi rehabilitation programs. People in both villages felt they had the right to manage rehabilitation activities at the site.

The conflict between forest farmer groups and communities

The competition was triggered by the hampering of several rehabilitation programs in critical areas due to the disruption of livestock grazed by the community at the tree planting site. The farm system is still traditional by releasing livestock in forest areas. This pattern is one of the obstacles in every reforestation program carried out at the location.

Other activities are derived from the Remote Indigenous Communities (KAT), especially threats to KPH and Forest Farmer Groups. The habit of nomadic farming patterns that KAT still applies is one of the triggers for land degradation. They cleared and burned forest land at the

site of land rehabilitation activities that had previously been planted. It is triggered a conflict between them and several farmer groups.

2. Conflict and its relation to the existence of KPH

The many claims related to the utilization and management of land on the forest raise many conflicts (Figure 2). Three types of levels of competition: without friction; relatively stable situations, disputes with low intensity (latent); conflicts with high intensity (open); and conflict situations that are real and have surfaced (Fisher et al., 2017). The pressure of competition with high power (open conflict) experienced by KPH Kulawi is between the KPH and communities claim, KPH with village government, forest farmer groups (KTH) and communities in the region.

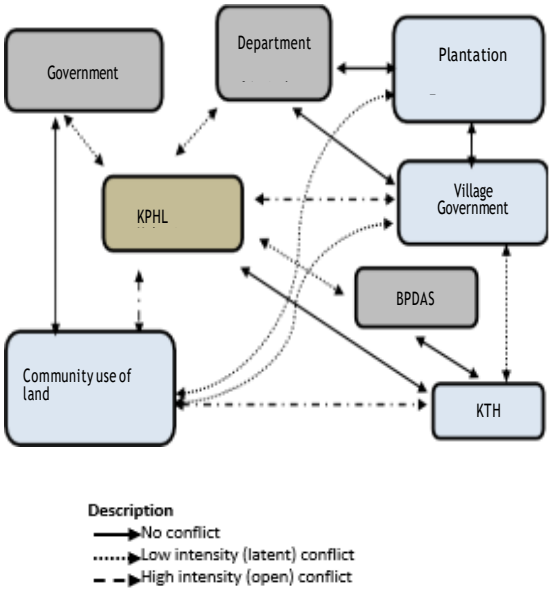

Figure 2. Tenurial conflict map in the village

High horizontal conflict (open) is also described between land use in the area; in this case, cattle farmers and farmers' communities moved with forest farmer groups (Intergroup). Categorized as high conflict (open) because there has been physical contact in fights, intimidation, and expulsion in the conflicted territory. While disputes with low intensity (latent) occur between KPH with local government and agriculture office (Interpersonal), each has different interests in utilizing forest areas.

Low-intensity conflict is also shown between KPH and BPDAS-HL Palu Poso (intrapersonal). However, interests are the same, but there is discomfort between KPH because it is not involved in RHL activities in its territory. As for the non-conflict because there is no relationship of interest or has been established a good relationship.

The conflicts that arise in each case are based on matters of interest. It is in line with the opinions (Handoko and Yumantoko, 2015; Riggs et al., 2016) that the magnitude of interest, especially inland factors, dramatically influences the community's motivation and the desire to defend the land it has controlled. It is also in line with research (García-López and Antinori, 2018) that every actor has an interest, both at the grassroots level and in the political elite, regarding forest resource utilization.

The goods and consequences of each actor's interests in the tenurial conflict in the KPH region are presented in Table 1. In a match that is in the spotlight are actors involved in disputes because they have interests and raise different issues, increased based on each actor's interests (Fisher et al., 2017; Suhadi, 2018; Yusran et al., 2017).

3. Stakeholder Importance and Influence

Each stakeholder has a different level of influence and interest in resolving land-use conflicts. Stakeholders in question include the local government, KPH Kulawi, Department of Agriculture, BPDAS-HL, KTH, Village government, and the community. The interests and influences of each other can be seen in Tables 2 and 3.

Stakeholder's capacity is very influential in the existence and sustainability of land use conflict

resolution. The results of measuring the level of influence of stakeholders can be classified stakeholders into the category of primary stakeholders (primary), secondary stakeholders (supporters), and key stakeholders (Figure 3).

Table 2. Results of Stakeholders' Interest Level Value towards Conflict Resolution.

		value					
No.	Stakeholders	K1	K2	K3	K4	K5	Total
1	Local Government	2	2	2	2	1	9
2	KPH Kulawi	3	5	5	2	5	20
3	Department of Agriculture	2	2	1	2	1	8
4	BPDAS HL	2	2	2	1	3	10
5	KTH	3	4	1	2	4	14
6	Village government	4	4	1	2	4	15
7	community	3	4	1	1	4	13

Description : K1 (engagement); K2 (Benefits obtained); K3 (Authority); K4 (Work program); K5 (Dependency level).

Table 3. Results of Stakeholders' Level of Influence on Conflict Resolution

		value					
No.	Stakeholders	P1	P2	P3	P4	P5	Total
1	Local Government	2	3	1	2	2	10
2	KPH Kulawi	5	3	3	3	3	17
3	Department of Agriculture	2	3	3	2	2	12
4	BPDAS HL	4	3	2	2	3	14
5	KTH	3	3	3	2	4	15
6	Village government	3	3	3	3	3	15
7	community	3	2	2	3	2	12

Description : P1 (Strength); P2 (Eligibility); P3 (Compensation); P4 (activeness) P5 (Institutional)

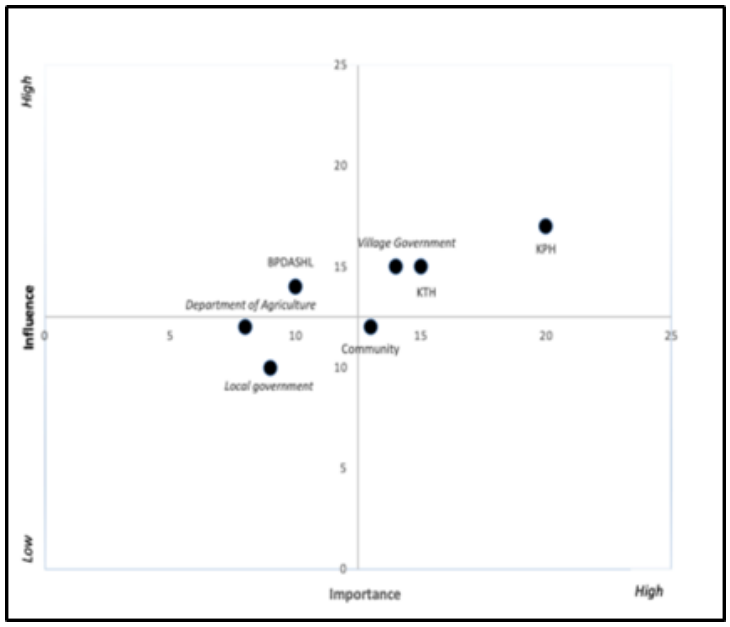

Figure 3. The Matrix of influence and interests level

Figure 3 shows that key players in land use conflict include KPH, Village government, and KTH. Meanwhile, the main subjects identified are the community, and the supporting issues are the local government and the Department of Agriculture. Therefore, key players are highly influential in the intermediation and dissemination of information in the settlement of land tenure cases in the KPH area.

Meanwhile, the community is the main subject that must be facilitated and empowered and actively involved in the mediation processes of land-use conflicts. Similarly, local government and the department of agriculture are expected to play a function of information facilitation for the community in increasing its capacity in solving land-use problems.

4. Problem Tree Analysis

There is a root cause of tenurial conflict that currently occurs in forest areas in the KPH Kulawi region—obtained three main issues that became the cause of tenurial conflict in the forest area of KPH.

Forest encroachment activities and land clearing in the forest area are rampant, especially by remote indigenous communities that inhabit the hillsides. The habit of migrating farming patterns requires them to enter the forest area. The lack of supervision of community activities in the area provides opportunities for the community to access land to be used as crops that lead to land ownership claims. Justification to avoid conflict with the community resulted in the community's control of forest area land, impacting the emergence of tenurial conflicts in several KPH regions.

The poor generally have narrow land, but daily economic needs are inevitable. The unavailable alternative of other businesses causes some communities to take illegal logging activities. This method is an efficient way to earn money. Moreover, the offer of illegal logging results is also relatively high. The rising population's impact is the increasing need for people to find a life source to sustain life, while legally managed land is increasingly tricky, so decided to take advantage of forest areas. It is becoming more complicated and complex experienced by the community at the target location of research when the flood disaster hit; some rice fields that focus on people's lives are no longer producing.

Coconut plants as a local commodity can not help much to support the economy of the community. It is because the selling price value of coconut in the form of seeds is relatively low. People have not been able to sell processed products because of limited capital and knowledge. Economic strains require people to sell coconut trees in trunks for furniture and potions products of houses or rent them out to financiers. Not infrequently, they become coconut farm laborers on their land.

Forest encroachment activities and land clearing in the KPH area are still rampant, especially by KAT communities that inhabit the hillsides. The habit of the nomadic farming system requires them to break into forest areas. The lack of supervision of community activities in the area provides opportunities for the community to access land to be used as crops that lead to land ownership claims. Justification to avoid conflict with the community resulted in the community's control of forest land, impacting the emergence of tenurial conflicts in several KPH regions. The transfer of the site's boundary path out of the community gardens has been done twice to avoid conflict with the community. If this is allowed and becomes the final solution, the district can continue to enter the forest area.

Several factors that cause delays in handling tenurial conflicts in the KPH region are in line with research conducted (Endah Ambarwati et al., 2018; Riggs et al., 2016), among others caused by (1) Systems and mechanisms for handling tenurial problems that appear inefficient and effective (2) Operational funding support for the identification of inadequate conflicts (3) Some disputes that arise.

Involve the public so much that it requires serious and careful handling. Understanding land status in forest areas that are still low is also one of the root causes of tenurial problems. During this time, the surrounding community understands that the forest area is overgrown by dense trees. Lack of understanding and supervision from related parties led to a massive land invasion (Kuckertz, 2019)

The concept of community empowerment around the forest expected to be a solution to reduce the encroachment rate of forests has not been seen and contributed. The empowerment that is only a project and a target of achievement of an agency or NGO only give hope to the community (Handoko and Yumantoko, 2015; Meyer, 2020).

Business training is done quickly. The type of exercise is the same as that done in the surrounding villages (generic), so it is constrained to marketing because its products are relatively the same and abundant. The target group is usually a new formation farmer group that does not yet have a robust institutional capacity, so it is easier to organize and control the program giver's wishes. The emergence of new groups in each program that enters the village is signaled to be one of the obstacles for KPH in fostering and strengthening farmer groups around the forest area. The community hopes that the government and related parties encourage community empowerment by developing existing potentials in forest areas and outside forest areas. From tenurial issues in forest areas that have been discussed before, the root of the problem can be drawn (Figure 4).

Discussion

Alternative Solutions and Policy Recommendations

Alternative solutions and policy recommendations focus on Supervision, PAL boundary, empowerment, and overall rights, alternative resolutions obtained through participatory processes (Table 4). Weak-the vigorous enforcement of the law applied will determine the public's perception of whether or not the rule applies. Suppose law enforcement by the authorities is weak. In that case, the community will assume that the law in its environment does not exist or appear to be in the jungle without rules (Golar et al., 2019b; Okumu and Muchapondwa, 2020). According to (van Haren et al., 2019), law enforcement is needed to improve forest management implementation irregularities.

The reason for community land use activities in the area is ignorant about the area's boundaries due to the lack of forest areas. It is in line with the research results conducted by Irawan et al. (2017) that disagreements regarding forest area boundaries between the community and KPHP Model Poigar are among the triggering factors for the conflict.

Empowerment is an economic development concept that summarizes social values that mirror the new paradigm of forestry development: "people-centered, participatory, empowering, and sustainable" (van Haren et al.,2019). Community empowerment does not make the community increasingly dependent on charity programs and how they produce things with their efforts (Arsyad et al., 2020; Jumiyati et al., 2018). The ultimate goal of empowering the community around the forest is to establish community citizens to improve the family's standard of living and optimize their resources to minimize dependence on forest resources.

Harmony or synergy of an institution is the essential thing to run the program to be done. Therefore, as an operator in forest management, KPH must get support from various parties at the site level. Collaboration is considered a way to reduce conflicts between stakeholders, build social capital, improve the environment and socioeconomic that must be handled together to produce better decisions (Golar et al., 2020; Martínez-Espinosa et al.,2020).

To answer some alternative conflict resolution solutions from the community, of course, with the limitations of KPH's

resources will not be realized without other parties' support. It takes actual steps from all stakeholders to make a mutual agreement by their respective functions and roles. In this agreement, each stakeholder must understand that all illegal activities are stopped, preceded by the empowerment process that loses the opportunity to try by diverting to other legal activities (Harun and Dwiprabowo, 2014). KPH, as stakeholders, must be involved in every process of activities in the region to synchronize with the plans they have compiled.

There are two alternative resolutions to accommodate community-like solutions and problems faced by KPH. Alternatively, in situations where the capacity and resources owned by KPH Kulawi are relatively limited, coordination must still be built between agencies. Second, it is to align the relevant agencies' activity plan with the goal that KPH has prepared. The existing activity programs in the KPH Kulawi region, especially in protected forest areas, do not run alone (Figure 5).

Alternative II, When KPH Kulawi resources are adequate steps that apply, use a one-door pattern. All programs implemented in the KPH Kulawi region's forest area must still coordinate and involve KPH Kulawi in implementing forest areas. Thus, the handling of tenurial problems should not be thought of by one party only. Tenurial issues will get a way of solving if it involves stakeholders in translating and implementing its programs (Figure 6).

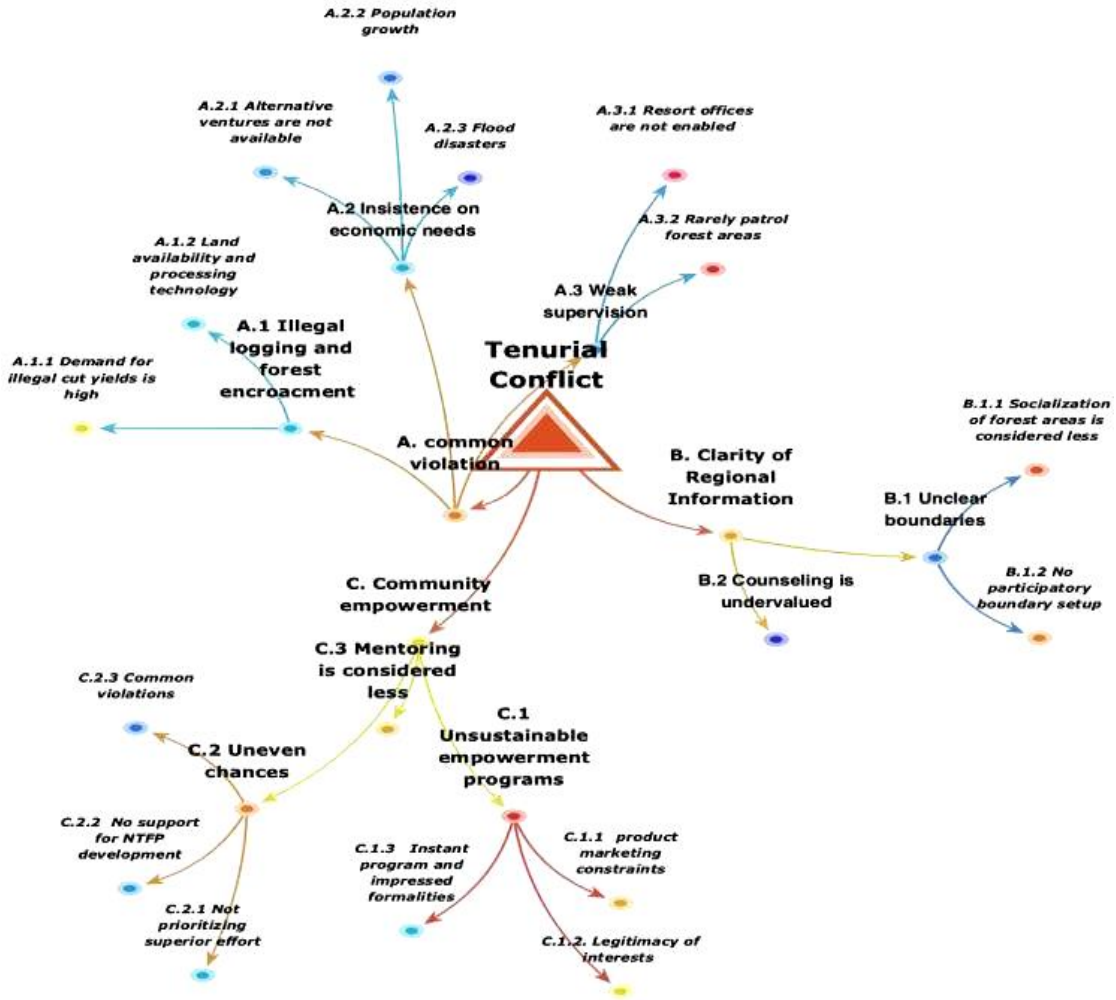

Figure 4. Problem Trees Diagram

Table 4. Alternative Solutions and Policy Recommendations

No	Alternative Criteria/Solutions	Program Type	Priorities
1	The government, through agencies, conducts surveillance on forest areas	1. Law enforcement to illegal logging and financiers (Fences) 2. Surveillance (Routine patrols around the room) 3. Policy Rules (Control of livestock in the area / Perdes / Perda)	I
2	Clarify the boundary between land owned by the community, villages, and forest areas.	1. Socialization of forest boundary 2. Participation mapping with the community	II
3	Community empowerment by harnessing the potential of Forest Resources	1. Training and Mentoring 2. Non-Timber Forest Products business (rattan, sugar palm, resin, and ecotourism) 3. Agroforestry	III
4	Provide management rights to the community over forest areas claimed by the community.	1. Social Forestry (HKM, H.D.) 2. Partnership	IV

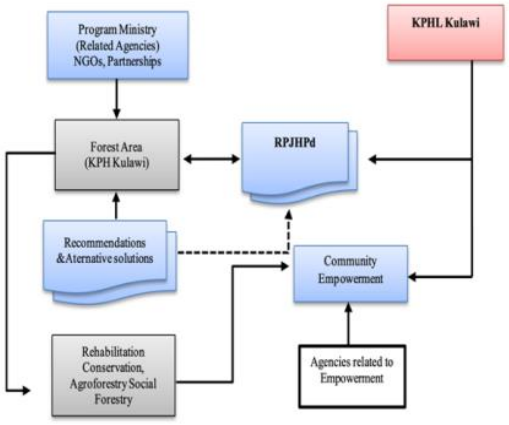

Figure 5. Alternative I, Capacity and limited of KPH resource

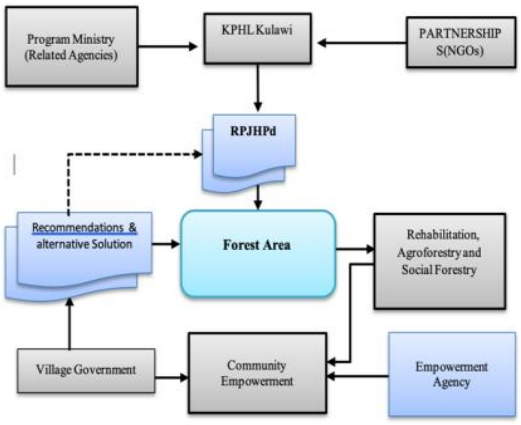

Figure 6. Alternative II, KPH capacity, and resources are adequat

CONCLUSION AND SUGESTION

Conclusions

KPH Kulawi has made some efforts to overcome the tenurial conflict in the region but has not yet maximized it. The steps to resolve the dispute are still generally not based on the conflict's characteristics in each area.

KPH faces some obstacles so that it is not able to perform its roles and functions properly, among others; (1) The limitations of resources possessed (2) weak coordination between relevant agencies (3) support from various parties have not been well established, and (4) there has not been an entire delegation to manage the region it self.

Suggestions

From the analysis of conflict resolution to forest areas in the three villages, some recommendations that need to be considered include supervision and law enforcement, socialization related to understanding forest areas, improving community empowerment, and building synergy between stakeholders. There are two conflict resolution models for addressing existing problems; Firstly, if KPH Kulawi's resources are not adequate,

KPH remains positioned equally in decision making on each program to be implemented in its territory. Secondly, when KPH resources are reasonable steps that KPH must apply a one-door pattern. All programs that will be implemented in the forest area must remain coordinated involve KPH Kulawi.

REFERENCES

Arsyad, M., Nuddin, A., Fahmid, I. M., Salman, D., Pulubuhu, D. A. T., Unde, A. A., Djufry, F., & Darwis. (2020). Agricultural development: Poverty, conflict and strategic programs in-country border. *IOP Conference Series: Earth and Environmental Science*, *575*, 012091. https://doi.org/10.1088/17551315/575/1/012091

Arts, B., de Koning, J., 2017. Community Forest Management: An Assessment and Explanation of its Performance Through QCA. World Development 96, 315–325. https://doi.org/10.1016/j.worlddev.2017. 03.014.

Batunacun, Wieland, R., Lakes, T., Yunfeng, H., Nendel, C., 2019. Identifying drivers of land degradation in Xilingol, China, between 1975 and 2015. Land Use Policy 83, 543–559. https://doi.org/10.1016/j.landusepol.2019.02.013

Baynes, J., Herbohn, J., Smith, C., Fisher, R., Bray, D., 2015. Key factors which influence the success of community forestry in developing countries. Global Environmental Change 35, 226–238. https://doi.org/10.1016/j.gloenvcha.2015.09.011

Bonsu, N.O., Dhubháin, Á.N., O'Connor, D., 2019. Understanding forest resource conflicts in Ireland: A case study approach. Land Use Policy 80, 287–297. https://doi.org/10.1016/j.landusepol.2015.11.009

Bray, D.B., 2015. Community Forestry as a Strategy for Sustainable Management: Working Forests in the Neotropics. Columbia University Press.

Chankrajang, T., 2019. State-community property-rights sharing in forests and its contributions to environmental outcomes: Evidence from Thailand's community forestry. Journal of Development Economics 138, 261–273. https://doi.org/10.1016/j.jdeveco.2019.01.010

Ece, M., Murombedzi, J., Ribot, J., 2017. Disempowering Democracy: Local Representation in Community and Carbon Forestry in Africa. Conservation and Society. https://doi.org/10.4103/cs.cs _16_ 103

Endah Ambarwati, M., Sasongko, G., M.A Therik, W., 2018. Dynamics of The Tenurial Conflict in State Forest Area (Case in BKPH Tanggung KPH Semarang). Sodality: Jurnal Sosiologi Pedesaan 6. https://doi.org/10.22500/sodality.v6i2.23228

Fisher, L.A., Kim, Y.-S., Latifah, S., Mukarom, M., 2017. Managing Forest Conflicts: Perspectives of Indonesia's Forest Management Unit Directors. F.S. 1, 8. https://doi.org/10.24259/fs.v1i1.772

García-López, G., Antinori, C., 2018. Between Grassroots Collective Action and State Mandates: The Hybridity of Multi-Level Forest Associations in Mexico. Conservation and Society 16, 193. https://doi.org/10.4103/cs.cs_16_115

Gautam, A.P., Webb, E.L., Eiumnoh, A., 2002. GIS Assessment of Land Use/Land Cover Changes Associated With Community Forestry Implementation in the Middle Hills of Nepal. Mountain Research and Development 22, 63–69. https://doi.org/10.1659/02764741(2002)022[0063:GAOLUL]2.0.CO;2

Golar, Basir-Cyio, M., Rusydi, M., Bakri, R., Bohari, Pratama, M.F., Laihi, M.A.A., 2019a. Gold Mining and its Impact on Agricultural Land, Public Health, Violation of the Law: A Study on

Poboya Traditional Mining, Palu, Indonesia. Ind. Jour. of Publ. Health Rese. & Develop. 10, 924. https://doi.org/10.5958/0976-5506.20-19.02939.5

Golar, G., Malik, A., Muis, H., Herman, A., Nurudin, N., Lukman, L., 2020. The social-economic impact of COVID-19 pandemic: implications for potential forest degradation. Heliyon 6, e05354. https://doi.org/10.1016/j.heliyon.2020.e05354

Golar, Mahfudz, Malik, A., Muis, H., Khairil, M., Ali, S.S.S., Razman, M.R., Awang, A., 2019b. The adaptive-collaborative as a strategy communications for conflict resolution on the National Park 8.

Handoko, C., Yumantoko, Y., 2015. Local perspectives on tenure rights and conflict in FMU Rinjani Barat, West Nusa Tenggara Province. Jurnal Penelitian Kehutanan Wallacea 4, 157. https://doi.org/10.18330/jwallacea.2015.vol4iss2pp157-170

Harun, M.K., Dwiprabowo, H., 2014. Model resolusi konflik lahan di Kesatuan Pemangkuan Hutan Produksi Model Banjar 11, 16.

Ioki, K., Din, N.M., Ludwig, R., James, D., Hue, S.W., Johari, S.A., Awang, R.A., Anthony, R., Phua, M.-H., 2019. Supporting forest conservation through community-based land use planning and participatory GIS – lessons from Crocker Range Park, Malaysian Borneo. Journal for Nature Conservation 52, 125740. https://doi.org/10.1016/j.jnc.2019.125740

Irawan, A., Iwanuddin, I., Elsjoni Halawane, J., Ekawati, S., 2017. Analisis persepsi dan perilaku masyarakat terhadap keberadaan kawasan KPHP model POIGAR. JPSEK 14, 71–82. https://doi.org/10.20886/jpsek.2017.14.1.71-82

Irawan, A., Mairi, K., Ekawati, S., 2016. Analysis Of Tenurial Conflict In Production Forest Management Unit (FMU) Model Poigar. j. wasian 3, 79. https://doi.org/10.20886/jwas.v3i2.1595

Islam, K., Nath, T.K., Jashimuddin, M., Rahman, Md.F., 2019. Forest dependency, co-management and improvement of peoples' livelihood capital: Evidence from Chunati Wildlife Sanctuary, Bangladesh. Environmental Development 32, 100456. https://doi.org/10.1016/j.envdev.2019.100456

Isoaho, K., Burgas, D., Janasik, N., Mönkkönen, M., Peura, M., Hukkinen, J.I., 2019. Changing forest stakeholders' perception of ecosystem services with linguistic nudging. Ecosystem Services 40, 101028. https://doi.org/10.1016/j.ecoser.2019.101028

Jumiyati, S., Arsyad, M., Rajindra, Pulubuhu, D. A. T., & Hadid, A. (2018). Cocoa based agroforestry: An economic perspective in resource scarcity conflict era. *IOP Conference Series: Earth and Environmental Science*, *157*, 012009. https://doi.org/10.1088/17551315/157/1/012009

Kuckertz, A., 2019. Let's take the entrepreneurial ecosystem metaphor seriously! Journal of BusinessVenturing Insights 11, e00124. https://doi.org/10.1016/j.jbvi.2019.e00124

Martínez-Espinosa, C., Wolfs, P., Vande Velde, K., Satyanarayana, B., Dahdouh-Guebas, F., Hugé, J., 2020. Call for a collaborative management at Matang Mangrove Forest Reserve, Malaysia: An assessment from local stakeholders' viewpoint. Forest Ecology and Management 458, 117741. https://doi. org/10.1016/j.foreco.2019.117741

Meyer, M.A., 2020. The role of resilience in food system studies in low- and middle-income countries. Global Food Security 24, 10356. https://doi.org/10.1016/j.gfs.2020.100356

Okumu, B., Muchapondwa, E., 2020. Determinants of successful collective management of forest resources:

Evidence from Kenyan Community Forest Associations. Forest Policy and Economics 113, 102122. https://doi.org/10.1016/j.forpol.2020.102122

Paudel, J., 2018. Community-Managed Forests, Household Fuelwood Use and Food Consumption. Ecological Economics 147, 62–73. https://doi.org/10.1016/j.ecolecon.2018.01.003

Reed, J., Barlow, J., Carmenta, R., van Vianen, J., Sunderland, T., 2019. Engaging multiple stakeholders to reconcile climate, conservation and development objectives in tropical landscapes. Biological Conservation 238, 108229. https://doi.org/10.1016/j.biocon.2019.108229

Riggs, R.A., Sayer, J., Margules, C., Boedhihartono, A.K., Langston, J.D., Sutanto, H., 2016. Forest tenure and conflict in Indonesia: Contested rights in Rempek Village, Lombok. Land Use Policy 57, 241–249. https://doi.org/ 10.1016/ j.landusepol.2016.06.002

Roberts, K., 2016. It Takes a Rooted Village: Networked Resistance, Connected Communities, and Adaptive Responses to Forest Tenure Reform in Northern Thailand. Austrian Journal of South - East Asian Studies 9, 53.

Sahide, M.A.K., Fisher, M.R., Maryudi, A., Wong, G.Y., Supratman, S., Alam, S., 2019. The bureaucratic politics of conservation in governing land conflict: A typology of capacities. MethodsX 6, 2536–2543. https://doi.org/10.1016/j.mex.2019.10.022

Senoaji, G., Hidayat, M.F., Iskandar, I., 2020. Resolusi konflik tenurial pemanfaatan kawasan hutan di hutan lindung Rimbo Donok Kabupaten Kepahiyang (The Tenurial Conflicts Resolution of Utilization of Forest Areas in Protected Forests Rimbo Donok Kepahiang District). J. Manusia & Lingkungan 26, 28. https://doi.org/10.22146/jml.29250

Suhadi, 2018. The Use of Forest Areas for Infrastructure Development under Leasehold Forest Area License: A Sustainable Development Perspective. SHS Web of Conferences 54, 3013. https://doi.org/10.1051/shsconf/20185403013

van Haren, N., Fleiner, R., Liniger, H., Harari, N., 2019. Contribution of community-based initiatives to the sustainable development goal of Land Degradation Neutrality. Environmental Science & Policy 94, 211–219. https://doi.org/10.1016/j.envsci.2018.12.017

Yasmi, Y., Kelley, L., Enters, T., Regional Community Forestry Training Center for Asia-Pacific (Bangkok, T., 2010. Conflict over forests and land in Asia: impacts, causes, and management. RECOFTC, Bangkok.

Yusran, Y., Sahide, M.A.K., Supratman, S., Sabar, A., Krott, M., Giessen, L., 2017. The empirical visibility of land use conflicts: From latent to manifest conflict through law enforcement in a national park in Indonesia. Land Use Policy 62, 302–315.