CONFLICT RESOLUTION CONCEPT: IMPLEMENTATION OF CCA-FM MODEL IN MERANTI FOREST MANAGEMENT UNIT, SOUTH SUMATRA

Ja Posman Napitu[1], Aceng Hidayat[2], Sambas Basuni[3] and Sofyan Sjaf[4]

[1]Directorate General of Sustainable Production Forest Management, Ministry of Environment and Forestry
[2]Department of Resource and Environmental Economics, Faculty of Economics and Management, Bogor Agricultural University, Indonesia
[3]Department of Forest Conservation and Ecotourism, Faculty of Forestry, Bogor Agricultural University, Indonesia
[4]Department of Communication and Community Development, Faculty Human Ecology, Bogor Agricultural University, Indonesia

Received: 9 November 2017, Revised: 17 September 2018, Accepted: 22 October 2018

CONFLICT RESOLUTION CONCEPT: IMPLEMENTATION OF CCA-FM MODEL IN MERANTI FOREST MANAGEMENT UNIT, SOUTH SUMATERA. Local communities have been using forest land area far before Industrial Forest Plantation (HTI) permit was granted. The overlapping land use among different users potentially leads to conflict. This paper studies conflict resolution creatively and collaboratively with forest management. Conflict resolution is based on the Creativity and Collaboration Action - Forest Management (CCA-FM) model on field exploration that created participation pattern of all parties in the vision of forestry science principles as the basis of policymaking. Convergent Parallel Mixed Method (CPMM) approaches with Rapid Land Tenure Assessment (RaTA) were used. Results show that claim of the community as the owner of the authority rights and dominance of the local elites, greatly affect the action situation. However, the policy options taken by the government towards policy outcomes do not tend to consider the field conditions. The CCA-FM model has been implemented in five villages. The community strongly supports the government to devolve the management rights to the community and to facilitate the transfer of knowledge, technology, market information, supporting all parties, and collaboration on business license management. Research results recommend the CCA-FM model could be a basis for building village self-reliance and improving the performance of the Forest Management Unit (FMU).

Keywords: Collaboration, creativity, FMU, institutionalization of villages, CCA-FM model

KONSEP RESOLUSI KONFLIK: IMPLEMENTASI MODEL CCA-FM DI KESATUAN PENGELOLAAN HUTAN PRODUKSI MERANTI, SUMATERA SELATAN. Masyarakat lokal telah memanfaatkan lahan di kawasan hutan jauh sebelum diberikan izin usaha Hutan Tanaman Industri (HTI). Tumpang tindih pemanfaatan kedua pengguna berpotensi menimbulkan konflik. Tulisan ini mempelajari salah satu bentuk resolusi konflik dengan pengelolaan hutan secara kreatif dan kolaboratif. Resolusi konflik berdasarkan model Creativity and Collaboration Action – Forest Management (CCA-FM) dari temuan lapangan menciptakan pola partisipasi semua pihak dalam satu visi dengan prinsip ilmu kehutanan sebagai dasar penyusunan kebijakan. Metode pendekatan Convergent Parallel Mixed Method (CPMM) dilakukan dengan langkah kerja Rapid Land Tenure Assessment (RaTA). Hasil penelitian menunjukkan klaim masyarakat sebagai pemilik hak otoritas dan dominasi elit lokal, sangat mempengaruhi situasi aksi. Akan tetapi, pilihan kebijakan pemerintah terhadap luaran cenderung tidak mempertimbangkan kondisi lapangan. Model CCA-FM telah dipraktekan pada lima desa, berupa pemberian hak kelola kepada masyarakat dan fasilitasi transfer pengetahuan, teknologi, informasi pasar, dukungan berbagai pihak, dan kolaborasi dalam pengelolaan izin usaha. Hasil penelitian merekomendasikan agar CCA-FM dapat menjadi dasar pembangunan kemandirian desa dan meningkatkan kinerja Kesatuan Pengelolaan Hutan Produksi (KPHP).

Kata kunci: Kolaborasi, kreativitas, KPHP, pelembagaan desa, model CCA-FM

* Corresponding author: jpnapitu@gmail.com, a.hidayat.esl@gmail.com, basuni.sambas@gmail.com, sofyan.sjaf@gmail.com

 doi:10.20886/ijfr.2018.5.2.103-118

I. INTRODUCTION

Forest management by rural communities around forests is not merely an economic and ecological but also sociological and anthropological issue (Charnley & Poe, 2007). The community's role in forest management is also closely related to variety of issues; diversity of knowledge based on their local wisdom (Bushley & Khanal 2012); ease of operational management (Nayak & Berkes, 2008); human environment and livelihood (Nayak & Berkes, 2008; Ming'ate et al., 2014); protection of local resources (Pandit & Bevilacqua, 2011; Bijaya et al., 2016); and easing of government tasks (Suharjito, 2009). In the field, the fact shows that people living around the forest are also involved in illegal logging, shifting cultivation and forest occupation. Community of the surrounding forest doesn't always has conservation efforts, (Rasolofoson, Ferraro, Jenkins, & Jones, 2015) and does not necessarily make sustainable use of it the forest (Meilby et al., 2014). Debate shows different perspectives of forest villages and scientific discourse.

Although, over the last twenty years, the government has made changes to previous official forest management processes by transferring the rights to the community governance, including indigenous peoples and forest farmers through Community Forest (CF) or Villages Forest (VF) program (PSKL, 2015; KLHK, 2015a), however in reality, there is still disbelief in implementing the program. Forest area conversion data related to oil palm and rubber plantations, productive agricultural lands and settlements (FAO, 2015; Tsujino, Yumoto, Kitamura, Djamaluddin, & Darnaedi, 2016) became the basic reason for government to prevent community's claim and enclave to the forest areas. However, it is undeniable that degradation and deforestation in Indonesia occurred, due to the bad forest management system condition during Rights of Forest Concession (RoFC) era (Kartodihardjo, 1998; Holmes, 2002; Colfer & Capistrano, 2006). Reluctance could be seen by overlapping rules and policies in the determination of the right from the law in the minister's decision level (Hermosilla & Fay, 2006). The process of formal legal change is complicating the role of communities in forest management (Kartodiharjo, 2013).

Local community or household leaders who use the land in the forest area are seen by the government as an individu who has illegal accessto forest and forest destruction. Based on that assumption, the government launched the new permit to arise new issues of the conflict due to overlapping use and utilization between users (Wicke et al.,2011; Anderson et al., 2013; Gamin et al., 2014). Thus, owners have legal permits but lack the legitimacy to the local communities. Sustainable forest management targets in the 2010-2014 The Ministry of Environment and Forestry Strategic Plans are not easely achieved due to various factor (Kemenhut, 2014; KLHK, 2015b). The factors include unfairness of land allocation which causes social conflicts across Indonesia and sharpens the uncertainty of property rights; deteriorating forest conditions due to illegal logging, fires and utility rivalries (Hardin, 1968; Dolšak & Ostrom, 2003). There are differences in views between users because it is not possible to understand the wishes of each party. For example, legal permit has not been issued to people who use forest areas and take forest products as livelihoods. The way communities meet their needs is even more likely to be considered as an illegal activity. However, on the other hand, there is unfriendly forest exploitation and non-procedural permits of oil palm and rubber plantations, which are apparently allowed.

The role of rural communities with social and cultural capital actually could be generated within site-level management units. The activities of institutionalization of village communities, i.e.: determining the form of management, providing the rules of use, and determining the user. Ongoing utilization conflict resulting in optimal management objectives which is a form of policy failure (Kartodihardjo, 2013). Exogenous institutional factors, particulaly attributes of communities, are expected to

affect deteriorating conditions and biophysical attributes. Rules in use and conditions of biophysical characteristics resulting in competition between management patterns and community land claims (Dolšak & Ostrom, 2003). Conflict due to the competition between users (Sheil & Wunder, 2002; Ribot et al., 2006) and the lack of well-built social interaction cause inoptimal institutional performance (Ostrom & Basurto, 2011). The absence of a community's role in attribute community actually can turn the outcome into conflict input or attribute community that could change the outcome (Charnley & Poe, 2007; Gibson, McKean, & Ostrom, 2000). Institutionalization of rural communities which has social capital could drive socio-economic and socio-ecological aspects on forest management (Pretty & Ward, 2001; Gilmour, 2016). The study of communities' roles in forest management is not something new. Researchers' attention has highlighted the role of communities in forest management. This paper studies the institutional form of the community in regulating the use of forest areas, and in designing the role of local residents to legitimize the government's concession permit.

II. MATERIAL AND METHOD

The research is located in Musi Banyuasin Regency, South Sumatera Province from September 2015 to September 2016. This research used the Convergent Parallel Mixed Method (CPMM) approach (Creswell, 2013) for the complete research. For this part it use the qualitative method by constructivism approach. Data collection included information about land use and land use change (LULUC), literature studies, and history of the villages. Data were collected from respondent with open interviews to obtain the communities' perspective. The next steps were Focus Group Discussions (FGDs) to summarize the open interviews and discused it with stakeholders. The total number of key informants was 123, consisting of 97 informants from community members in eight villages, 4 persons from the Ministry of Forestry, 8 persons from the District Forestry Service, 4 persons from the Provincial Forestry Service, 5 persons from the technical implementation office (UPT) and 5 persons from the Industrial Forest Plantation as forestry business license holders. Data were collected by step work of RaTA (*Rapid Land Tenure Assessment*) (Galudra et al., 2010) see Figure 1.

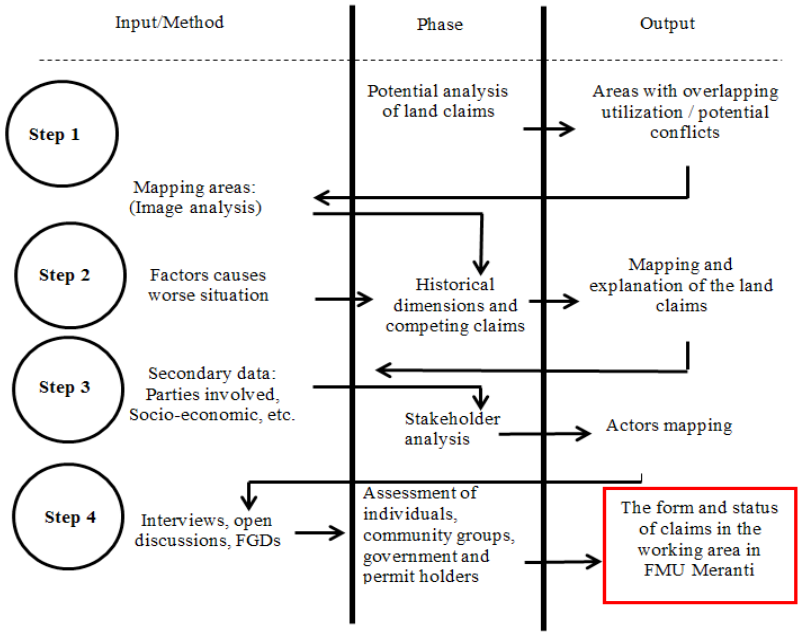

Figure 1. Four stages and RaTA targets

Source: Modification of RaTA (Galudra et al., 2010)

III. RESULT AND DISCUSSION

A. Collaboration of Community Roles

1. Encouraging villagers as agents of change

In this study, the operational definition of the community's authority is a social power in a general relationship to determine the legitimacy of others (Nurrochmat et al., 2016). The authority of the village community is their authority in building the legitimacy of other users outside the village. The community's authority was built from collective action for collaboration and creative activities for taking care of the forest and improving the community economically. The operational definition of the collective action is a will and one vision among all parties through collaborative and creative action on forest management. The collective action among all parties (local community, permit owners, FMU Meranti, and other stakeholders) is to be in a new form of forest management (see Maryudi et al., 2018). The mobilization of ethnic identity in the local political economy is shown in Figure 2.

The interest domination of the local elite will control the decision, although these issues are still debated. (Mills, 1956), explained that the elite can gain its power from inheritance, and from the control of the highest position in the hierarchy of politics, business, and shared values and beliefs. Moreover, it is also caused by the nature of people does not want to be opponent in the group. Sjaf et al. (2012) explained that the results of the actor's practice will reflect in his identity as modus operandi. It is influenced by experience in interpreting the reality that happened. The modus operandi becomes an identity which isolates the actor. The actor at this village-level is associated with the dominant symbolic power as happened in the Musi Banyuasin community as part of a clan group. Symbolic powers appear in the family of former "pesirah" or religious leaders (doxa of symbolic power). The establishment of the elite identity either individually or collectively is in a space called the structure of ethnic identity formation (Nayak & Berkes, 2008). The existence of the dominant position of the local elite from its ethnic identity needs to be changed in the forest utilization arrangements by mobilizing ethnic multiculturalism. Local elites in the indigenous Kubu and Banyuasin tribes are very dominant. It needs to mobilize the spontaneous migrants to change the autonomous rights of the symbolic power of the elite to become heteronomous and have the

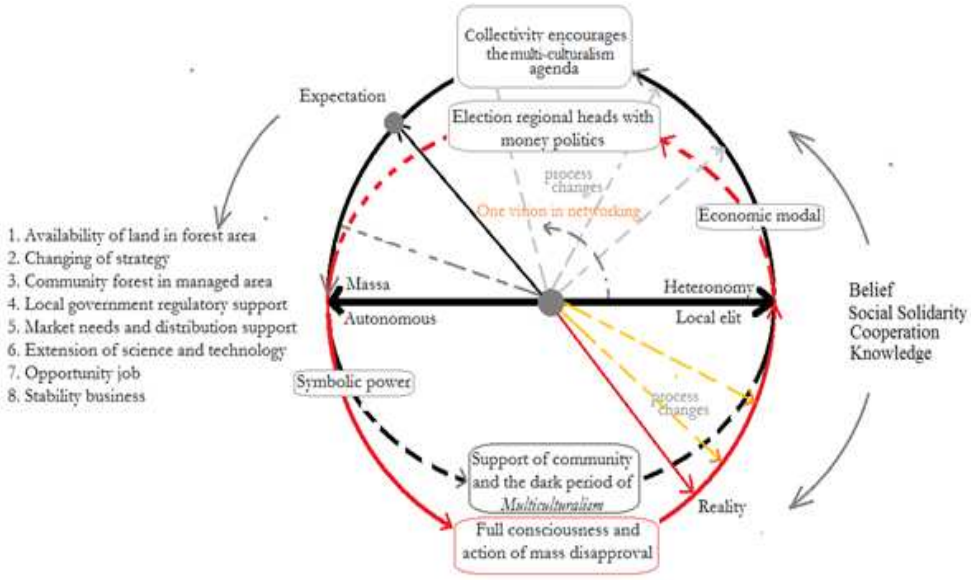

Figure 2. Mobilizing ethnic identity in the local political economy arena

Source: Sjaf et al. (2012)

communities multiculturalism/mass. This step is the last choice, if the negative impacts from the local elite continuously happening, it will lead to forest damage (land transaction, illegal logging).

The position of local elites in field conditions which strengthen the autonomous position with symbolic capital becomes a separate constraint in forest management. The act of buying and selling land which is done by the local elite is expected to be changed by the collective action of multiculturalism. All parties protect the forest with a collective consciousness (Sjaf et al., 2012). The community's participation is necessary to strengthen the concept of collective action at operational level of forest management (Mazur & Stakhanov, 2008; Ningsih, 2008) which can ease government tasks (Suharjito, 2009).

2. One vision in networking

The community's claim to the land which has become rubber plantation usually called "pararimbo", it became a capital demand for the enclave land from the forest area. In logical dialectics when elite networking is formed in interaction with society or groups it is a shadow and it usually has the personal interest. For example, when a company has to apply for the boundary of a work area, the local elites mobilize communities to impede the implementation of the boundaries, and commence work on the sites. It could happen because the village community has one vision in networking.

Perceptions of community groups was influenced by different factors, i.e.: the inability of economic capital, the will to preserve culture that is seen from their daily activities in forest areas including livelihoods, and the influence and ability of local elites who wants to gain benefit of land utilization versus charism of symbolic power from the customary leader who wants to keep his uniqueness in local traditions (Sukwika et al., 2016). These three factors have caused land controlling motives as follows: direct personal gain, assisting the company with the purpose of personal gain and the solidarity motive of the ethnic groups in order for indigenous peoples to retain the land. The

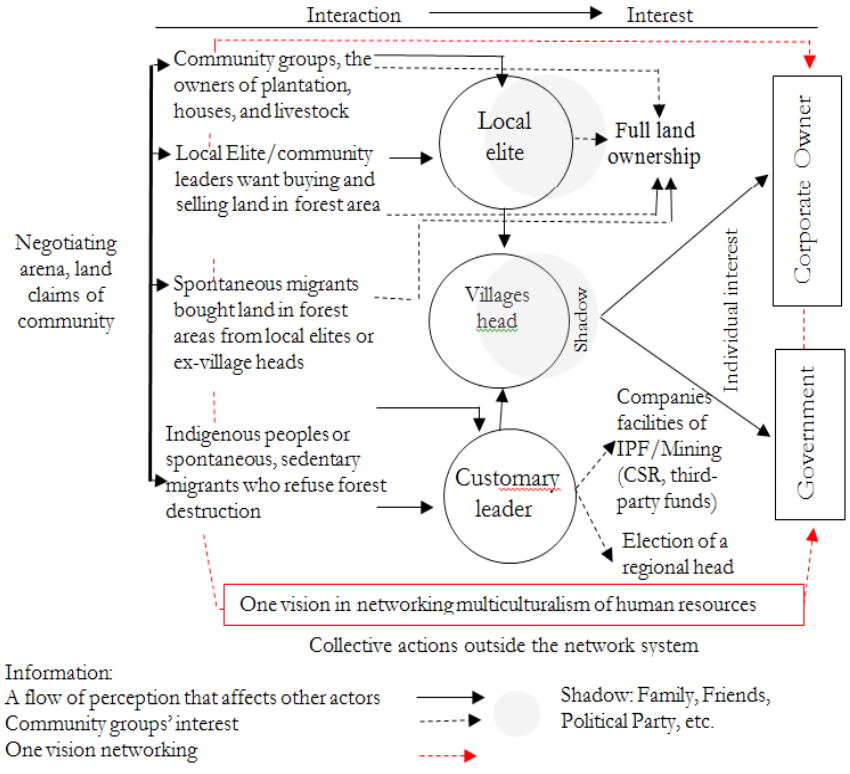

Figure 3. Flow of interaction with interest parties

flow of interest between all parties is shown in Figure 3.

The three interests influence each other on the role of the village head as the government representative in land claims. Based on the pattern of interactions, perception of community groups are expressed to the Village Head and the company, and also hidden interests: to get CSR funds, to get full ownership of land and to cut logs by logger known as "*anak kapak*". The symbolic power of customary leaders is used to refuse company by jargon their heritage land and also to support village head elections. Another story is that community group convey their interest to the local elite or customary leader and it will be continued to the village head. Then, the village head will deliver their aspiration to the government and company. The village head often has a hidden personal interest from a shadowing interest such as families or colleagues.

3. The human resources from multiculturalism

The lack of capacity of the human resources has always been the discourse of forest management for participating rural communities. The human resource also underlies the government's argument in building its exclusiveness on forest areas, despite that the real welfare of the community is part of the government's development goals. Forest management to support development is understood differently from the concept of development at operational level. In many other cases, however, communities have improved their economies by agroforestry systems in forest areas such as in West Sumatera through the concept of community forest (Hamzah, 2015). Many research explained that the agroforestry system has financial benefits and vocation for the community (Kusumanto, & Sirait, 2001). It was supported by research developed by researchers from the Bogor Agricultural University in Krui-Lampung. It was explained that the "damar" agroforestry could increase the community's income and absorb labour better than oil palm and rubber plantation (IPB (2002) in Contreras-Hermosilla and Fay (2006)). Based on this result, the role of community in forest management is not a crtitical problem. Discourse about the uncertainty of land ownership and the role of the community is not a critical promblem either (Yasmi et al., 2012; Silalahi & Erwin, 2013).

B. Institutionalization of Villages

Institutionalization of village communities in regulating and determining forest area management was recognized by various academics and experts. It is believed that there is a potential development in managing forests based on existing cultural structures for effective and participatory resource management. The same thing was built by the people of Baduy, Ammatoa and Rumahkayu (Iskandar et al., 2017; Ichwandi & Shinohara, 2007; Husain, & Kanasih, 2010; Ohorella et al., 2011). Institutionalization of the village community in the FMU Meranti area is coming from various community origins, so collectivism is necessary to ecourage the multicultural agenda. There is an area that claimed, it has been managed by the community was given the management right with its village institutionalization. Therefore, FMU is expected to be driving and facilitating the technology and knowledge to encourage the economic increase of community and forest sustainability.

Institutionalization of the village and the community development is required, as stipulated in Law No. 26/2014, as a basis for the development of local institution independently. In fact, the concept to reposition unit level manager by establishing FMU Meranti as the real management rights is not optimal in the field. Village institutionalization by establishing Village Owned Enterprises (BUM-Desa) for forest management as village fund, and then village fund allocations are applied to manage the forest area in FMU Meranti optimally. Village institutionalization was done through collective action by creativity and collaboration to support the government.

C. Strategy of Village Institutionalization

The strategy of forest management could be implemented with village institutionalization through collective action in creativities and collaborative actions. Understanding the strategy of village institutionalization is repositioning the local elite and community leader in collective action on forest management through Model Creativity and Collaborative Action Forest Management (MCCA-FM) based on field exploration.

The solution of utilization conflict in FMU Meranti could be overcome by the role of the community or institutionalization of the community in forest area arrangement. The village government as the smallest form of government should be able to regulate itself. Local elites who feel the authority to regulate forests are organized to participate in collective action. Local communities from various stakeholders have to work together in a local management institution which is called village institution to develop the BUM-Desa. FMU Meranti who has the management rights should be willing to hand over the management rights to public authorities. FMU Meranti could support and disseminate farm knowledge, technology sharing, inviting the investors and promoting community products on the open market as described in Figure 4.

D. Villagers Become Forest Managers

Forest areas claimed by communities and community managers are the focus of development. Community's land claims are defined as "village assets". Forest management is an individually managed forest area but is used as village asset. Smallholder plantations in forest areas are granted management rights to the community as plantation land. The management rights of the community are determined by the government or the Ministry of Forestry (MoF) in the forest area. Therefore, the rules in use for production forest areas, which prioritize the interests of large capital owners, need to be changed. Furthermore, the government through FMU Meranti management level unit should support the science, technology and also provide facilities. The strategy of policy change remains based on the functions and forestry science as policy analysis. Rural communities' role can be seen from field problems and activity objectives. Creativity and collaboration scenarios (MCCA-FM) are started ranging from reality, problems, expectations, strategy, and output.

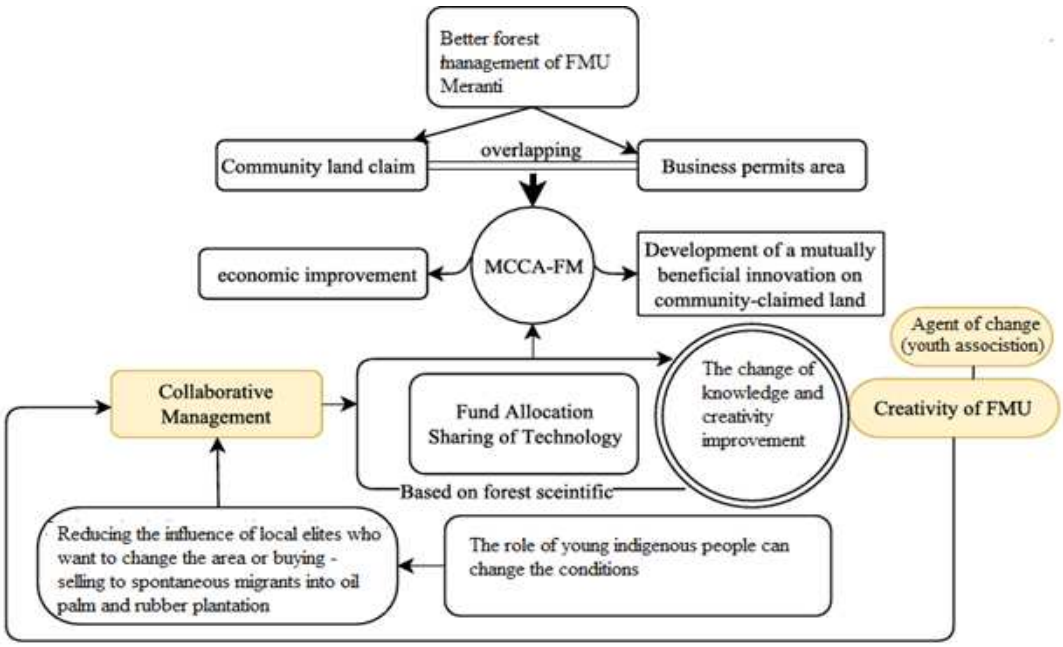

Figure 4. Strategy of village institutionalization

The actual conditions and problems that occurred at FMU Meranti became the basis for model development. The fact that the community has managed the forest area cannot be denied and it is a risk element. The field condition is a real condition which does not match the expectation and became the problem. This condition has to change in accordance with expectation and its output. Therefore, the changing can be done through creativeness and collaboration. Creativity is the addition of the idea, whereas the collaboration is the collective action for better forest management. Collaboration can be implemented through socialization, dissemination, and changing of regulation and law.

The realities of field conditions: forest area which is state property was claimed by community; oil palm and rubber as main local commodities; the prevailing regulations with prohibition of oil palm plantations; production forest areas have IFP and mining business licenses; low benefits of forests to support the community's economy; and lack of information and technology to improve capacity of human resources. Expectations in forest management include: Stability and legitimacy of IFP and other permits, State/non-tax revenues from production forest areas are increased, and communities land claim can be managed intensively. Implementation of MCCA-FM will provide the output of FMU expectation as follows: availability of community land in the forest area; changing the strategy of FMU Meranti into optimal performance; granting forest management license to community; local government support and regulations; availability of market product and distribution process; extension of science and technology and availability of vocation. The element of reality, problem, strategy and process of MCCA-FM, is shown in Figure 5.

E. Village Roles in CCA-FM Model

1. User determination

In determining forest area users, the community is considering various factors, among others: capital capability; management capability; public convenience and understanding the community's condition. The community's expectations to the new users are those that can support and improve the

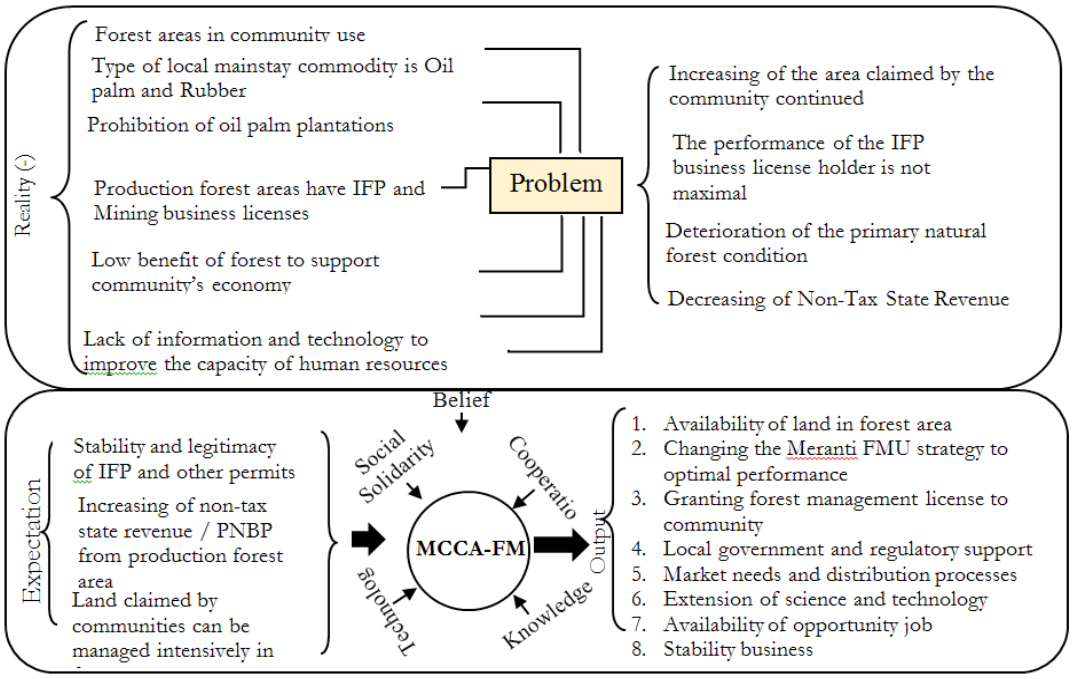

Figure 5. Element of reality, problem, strategy and process MCCA-FM

economy of the community (Nurrochmat et al., 2017). To achieve that, the community needs to select the users. It is possible for the FMU in supporting activities to provide investors with what the community is expecting and provide business stability. It becomes a challenge for FMU.

Government and all related parties support investors who can collaborate with the community and will deliver healthy business conditions and forest health. User choice will be influenced by biophysical characteristics, community characteristics, laws and regulations, financial ability, social and economic conditions, and technology (Došlak & Ostrom, 2003). Linking the two choices between the community and the capital owner or investor, role of the government in support of technology, knowledge, and rules are indispensable.

2. Determination of forest commodity production

Determination of production type is decided by the village meeting and the capital owner. The determination of the kind of forest product production was set to consumer's choice theory (Smith 1759) that the type of business is strongly influenced by market sentiment. Market sentiment is influenced by the availability of goods and services. The choice of the kind of forest commodity production is a concept of one village one product. The two main factors in determining the kind of production are having commercial value and product that is appropriate to the growing site.

The arrangement for the forest commodity production is needed to avoid the practice of clearing forest land due to the fact that the company already has the same kind of commodity with the community. Consumer's choice tends to choose the same products as other users due to the ease of access to the market, and the availability of infrastructure facilities. The concept of the similarity on product types in forest management is avoided as far as possible to prevent new land clearing in the forest area. It could be seen on the development of palm oil and rubber plantations in FMU of Meranti area, which is land clearing of the forest area converted by the community, generally into palm and rubber plantation due to there is market for both kinds of these commodities. In addition, the limited land will lead to new land clearing in forest areas and threaten it. The factors to determine the forest commodity production follows the availability of good quality seeds, having commercial value, and natural growing site besides avoiding similarity of products. The role of community in managing commodities with the concept of one village one product is expected to balance the income between the villages. FMU can promote the research and development to support community to select product for the market. Delivering technology input is expected to improve the production of society's choice.

3. Determination of benefit-sharing in collaboration

The community village role in determining the benefit sharing in collaboration with forest commodity production is set through deliberation and consensus between the capital owners and the community. Benefit sharing is a net profit after deducting operational costs and liabilities for the state (Nurfatriani et al., 2015). The benefit-sharing becomes village asset and the capital of Village Owned Enterprises (BUM-Desa). The parties who are involved in the collaboration undertake the management sharing between community, company and FMU of Meranti. The mentioned profit sharing shall be calculated from business income with an agreed portion of profit sharing. The management shall take the following matters into account for distribution of the profit: the profit-sharing portion at least is based on the stipulated tariff; roles and risks are borne by the parties; result of the agreement between the community, company and FMU and realization of benefit. The agreements are achieved through a participatory and transparent process. If the income is below the specified target, the results are prioritized to compensate for all the expenditures of the capital owner, and if any

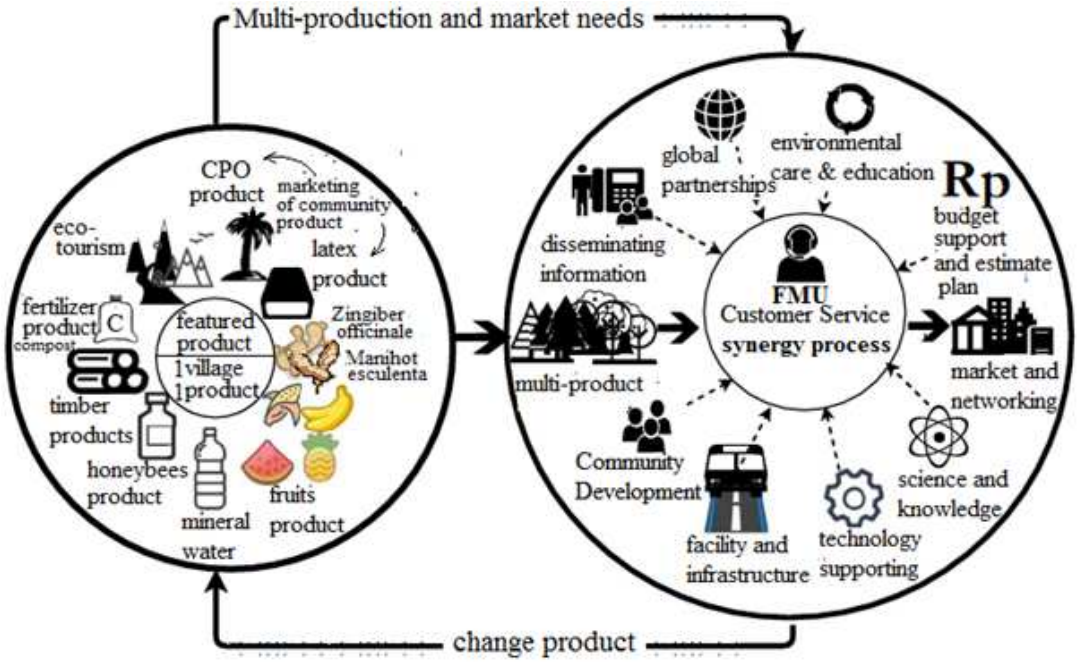

Figure 6. Synergizing between the community's agricultural products and the market

income is remaining, the parties receive profit sharing proportionally already set, and the income sharing also considers the sustainability of forest management. Hereafter, if the value of income sharing has been fulfilled, the parties can extend or terminate the cooperation agreement, and the assets such as buildings and equipment or machinery will belong to the village.

F. Implementation of Villages Institutionalization

Synergizing the implementation of activities between the community's agricultural products and the market in the concept of one village one product to meet market needs is done dynamically. Products have variations according to market demand. The role of FMU as the provider of information or customer service for villagers shall provide information regularly based on market needs. Synergy of activities is coordinated by FMU through creatively combining communication science and technology. Synergizing between the community's agricultural products and the market is shown in Figure 6.

Collaboration is the involvement of all teams in efforts to optimize forest management. Effective collaboration could be materialized if there are cooperation, appreciation of local knowledge, knowing the needs, concerns and beliefs among all parties (Di Gregorio et al. 2017; Nurrochmat et al. 2016). Collaboration could be successful if it has one vision in mind, activities and find the effective action through developing new ideas. To be successful in collaboration requires professionals, technologies, machines, and best quality seeds to get optimal results. All parties involved must understand that if one part fails that is the failure of all parties. CCA-FM is a model that involves all parties in forest management and village position as managerial unit in areas claimed by the community. The function of FMU has changed to provide technical support and knowledge, and control of state revenue (PNBP). Collaboration between companies and communities can use budgeting as capital assets.

The role of extensions in the field should be increased in capacity to provide input for the community. The development of CCA-FM

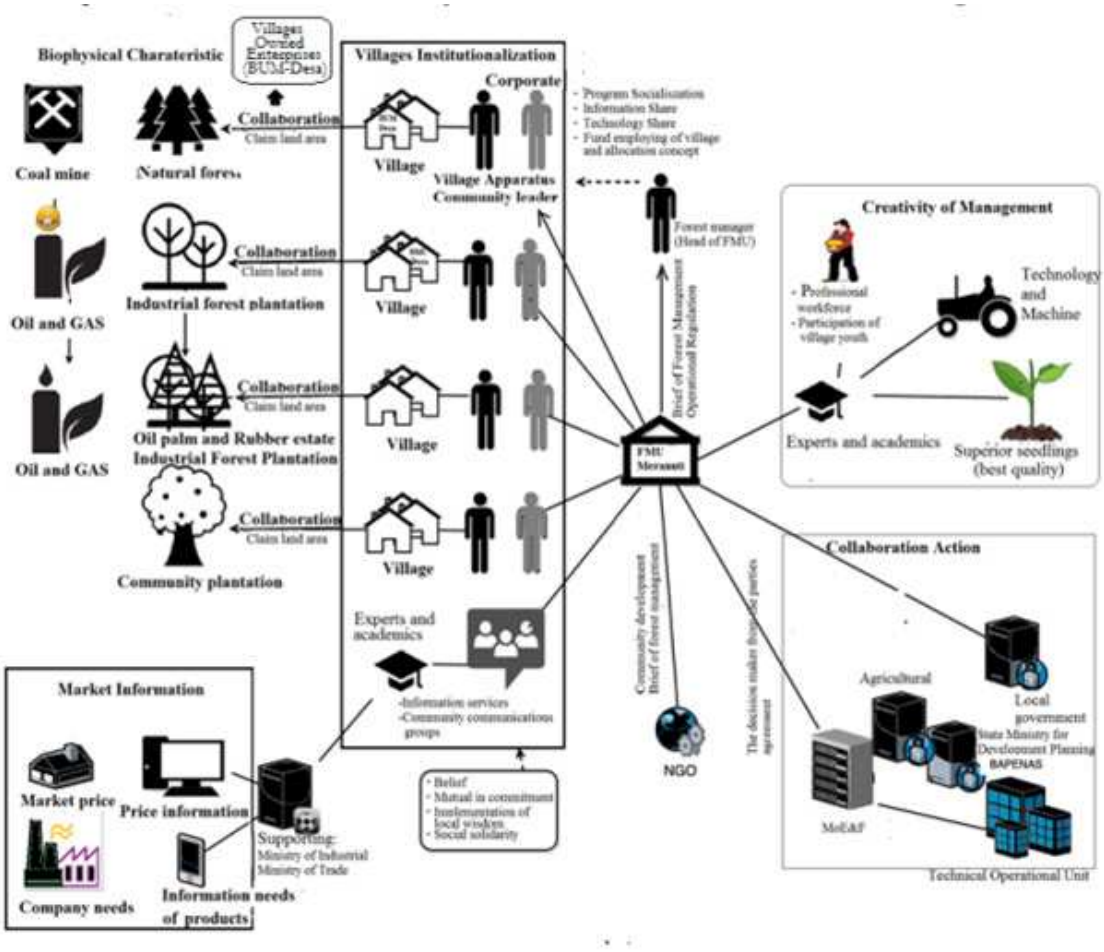

Figure 7. A concept of conflict resolution using CCA-FM

in FMU Meranti continues to be conducted with various cultivation of various commercial valuable crops with the collaboration of all parties. The creativity of FMU head is urgently needed to convince the public and the company to collaborate on the claimed land in accordance with the community without coercion. This is necessary to provide awareness for the local elite who is fanatic to the specific kind of crops such as oil palm and rubber. FMU and companies provide technical support and knowledge, and open markets. Dissemination of information and technology is delivered through extension which is close to the community and provide training for the village youth. A concept of conflict resolution using CCA-FM is shown in Figure 7.

Model Creativity and Collaboration Action-Forest Management (MCCA-FM) has been implemented in FMU Meranti. The form of collaboration between FMU and community villages in developing area planting, i.e.: *Peronema canescens* (sungkai), *Neolitsea javanica* (kalimuru), *Zingiber officinale* (jahe merah), *Zea mays* (jagung), and *Manihot esculenta* (ubi kayu). Furthermore, they also developed livestock (goat and cow). Another business is buying and selling plant seeds and natural fertilizers. Plots of working area in five locations are shown in Figure 8. The process of MCCA-FM implementation in the field is shown in Table 1 and Figure 9.

IV. CONCLUSION

Institutionalization of villages as an alternative solution to resolve forest area utilization conflict could be implemented in FMU Meranti. The local elites who have one vision need to be embraced to participate

Table 1. MCCA-FM Implementation

MCCA-FM Program	User	Areas (hectares)
Creativity		
Land allocation	Community groups and individuals in specific area (FMU Managed area)	35,641.00
Technology **Plant seeds - fertilizers business**	Mr Suparno and colleagues related to business collaboration on selling and buying plant seeds and fertilizers with target 2 ton per month	
Developing area plantation		
Kalimuru *(Neolitsea javanica)* *and Water Melon*	Kalimuru Co. (partnership) Community village in surrounding forest (*Pangkalan Bulian* Village)	20.00
Sungkai *(Peronema canescens*)	*Sakosuban* Village	5.00
Jahe Merah (*Zingiber officinale*)	Mr Alex (BBP Co.) and community village in surrounding forest (*Simpang Bondon* Village)	16.00
Ubi Kayu (*Manihot esculenta*)	Community groups *Pangkalan Bayat* Village Community groups *Pagar Desa* Village	active active
Jagung *(Zea may*)	Community groups *Pangkalan Bayat* Village Community groups *Bintialo* Village Community groups *Bayat Ilir* Village Community groups *Pagar Desa* Village	active active active active
Development livestock i.e.: Goat and cow	Community *Bayat Ilir* Village *Pangkalan Bayat* Village	active in process
Collaboration		
Rubber plantation	Pinago Utama Co (active)	1,300.00
Sungkai (*Peronema canescens sp.*)	SBB Co.	120.00
Oil Palm plantation	SSB Co PAL Co. PTPN VII Co.	in process in process in process

together with creative and collaborative action in forest management. Their existence is expected to change behaviour of other elite for solving the problems of forest management. Facilitating multi-ethnic collaboration actions are needed in reducing elite domination, so local elite will not be dominating which has occurred in many areas where they gained from their symbolic power.

MCCA-FM is the best solution to prevent conflict in utilization of land inter parties in FMU Meranti because this model can compose the community's creativity and FMU manager creativity to increase the community's economy and forest management sustainability. It has been implemented in a small scale in FMU Meranti (5 locations) by collaborating with all parties. The result showed that communities and village administrators fully support the MCCA-FM. Therefore, it needs to be developed in other location too.

It is recommended that the choice of government decisions does not ignore the biophysics attribute and existing community as user in forest area, the existing community activities are facilitated by granting the community forest permit and the collective action need to encourage community activities and FMU manager activities more creatively.

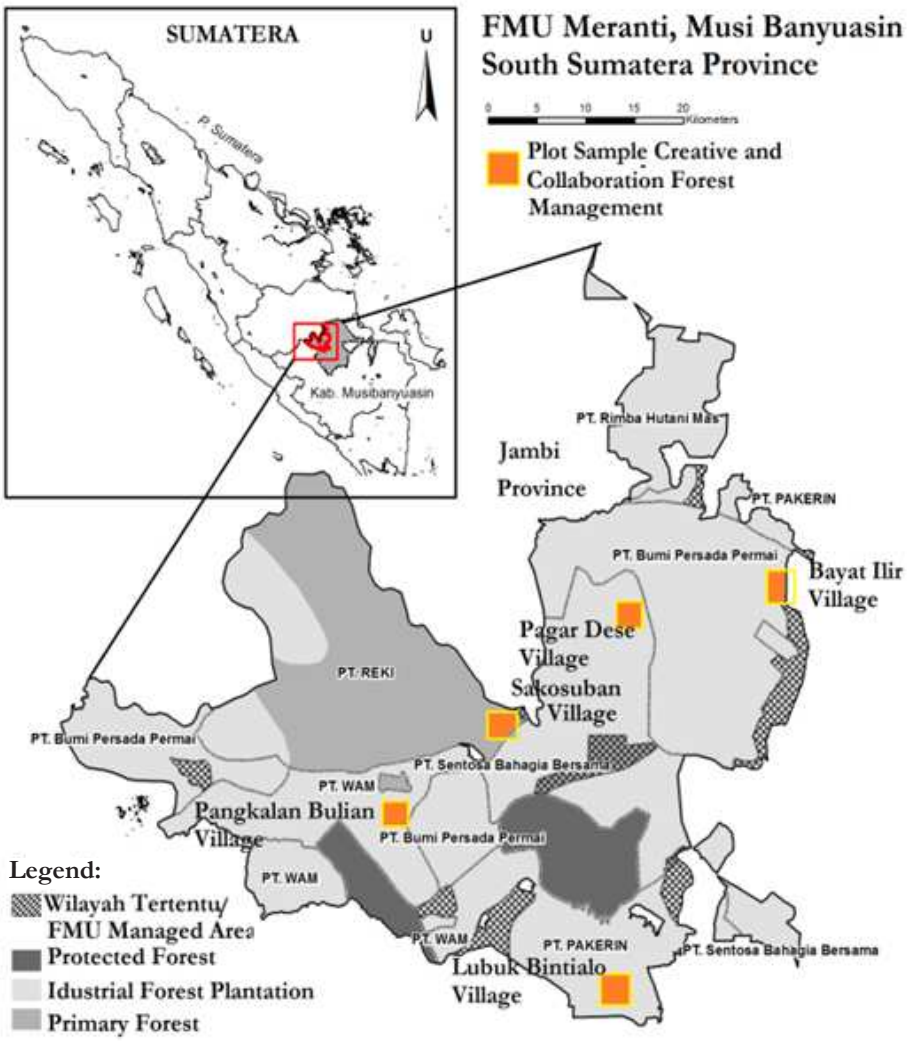

Figure 8. Implementation area of MCCA-FM

Figure 9. Implementation in business collaboration of *Zingiber officinale*

ACKNOWLEDGEMENTS

Thanks to The Centre for Education and Training of Environment and Forestry Human Resources, Ministry of Environmental and Forestry (MoEF) and FMU Meranti in South Sumatera and to the particular villages and also community leaders in Meranti area that has assisted the research.

REFERENCES

Anderson, N. M., Williams, K. J. H., & Ford, R. M. (2013). Community perceptions of plantation forestry: The association between place meanings and social representations of a contentious rural land use. *Journal of Environmental Psychology, 34*, 121–136. doi:10.1016/j.jenvp.2013.02.001.

Charnley, S., & Poe, M. R. (2007). Community forestry in theory and practice: Where are we now? *Annual Review of Anthropology*, *36*(1), 301–336. doi:10.1146.35.081705.123143.

Colfer, C.J.P., & Capistrano, D. (2006). *Politik desentralisasi: Hutan, kekuasaan dan rakyat pengalaman di berbagai negara*. Bogor, Indonesia: CIFOR.

Contreras-Hermosilla, A., & Fay, C. (2006). *Memperkokoh pengelolaan hutan Indonesia melalui pembaharuan penguasaan tanah: permasalahan dan kerangka tindakan*. Bogor: World Agroforestry Center .

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. (4th ed.). Los Angeles. USA, London. UK: SAGE. doi.10.1007/s13398-014-0173-7.2.

Bijaya, G.C.D., Cheng, S., Xu, Z., Bhandari, J., Wang, L., & Liu, X. (2016). Community forestry and livelihood in Nepal: A review. J*ournal of Animal and Plant Sciences*, *26*(1), 1–12.

Di Gregorio, M., Nurrochmat, D.R., Paavolaa, J., Sari, I.M., Fatorellia, L., Pramova, E., Locatelli, B., Brockhaus, M., & Kusumadewi, S.D. (2016). Climate policy integration in the land use sector: Mitigation, adaptation and sustainable development linkages. *Environmental Science & Policy*, *67*, 35-43. doi:10.1016/j.envsci.2016.11.004.

Dolšak, N., & Ostrom, E. (2003). The commons in the new millennium: Challenges and adaptation. In Dolsak, N. & Ostrom, E., (Eds.), *Politics, science, and the environment*. London, England: The MIT Press. doi.10.1007/s11077-005-2857-5.

FAO. (2015). Global forest resources assessment 2015. Desk reference. *FAO Report*. Rome. doi.10.1002/2014GB005021.

Galudra, G., Sirait, M., Pasya, G., Fay, C., Suyanto, Noordwijk, M. van, & Pradhan, U. (2010). *RaTA: A rapid land tenure assessment manual for identifying the nature of land tenure conflicts*. Bogor: World Agroforestry Centre.

Gamin G., Nugroho, B., Kartodihardjo, H., Kolopaking, L. M., & Boer, R. (2014). Resolving forest land tenure conflict by actor 's conflict style approach in Forest Management Unit of Lakitan. *Journal of Islamic Perspective on Science, Technology and Society*, *2*(1), 53–64.

Gibson, C. C., McKean, M. A., & Ostrom, E. (2000). Explaining deforestation: The role of local institutions. In Gibson, C. C., McKean, M. A., & Ostrom, E. (Eds.), *People and forests: Communities, institutions and governance*. London, England: The MIT Press.

Gilmour, D. (2016). Forty years of community-based forestry. *Report No. 176*. Rome: FAO.

Hamzah, H., Suharjito, D., Istomo, I. (2015). Efektifitas kelembagaan lokal dalam pengelolaan sumber daya hutan pada masyarakat Nagari Simanau, Kabupaten Solok. *Risalah Kebijakan Pertanian dan Lingkungan*, *2*(2), 117–128. doi:10.20957/jkebijakan.v2i2.10979.

Hardin, G. (1968). The tragedy of the commins. *Science, 162*, 1243–1248.

Holmes, A.D. (2002). Indonesia where have all the forests gone?. Environment and social development East Asia and Pacific region Discussion Paper. Washington DC: The World Bank.

Husain, S.B., & Kanasih, S.E. (2010). Pasang sebagai modal sosial pengelolaan hutan pada masyarakat adat Ammatowa. *Masyarakat, Kebudayaan dan Politik*, *23*(3), 229–235.

Ichwandi, I., & Shinohara, T. (2007). Indigenous practices for use of and managing tropical natural resources : A case study on Baduy community. *Tropics*, *16*(2), 87–102.

Iskandar, J., Budiawati, S., & Iskandar (2017). Local knowledge of the Baduy community of South Banten (Indonesia) on the traditional

landscapes. *Biodiversitas, Journal of Biological Diversity*, *18*(3), 928–938. doi.10.13057/biodiv/d180309.

Kartodihardjo, H. (1998). *Peningkatan kinerja pengusahaan hutan alam produksi melalui kebijaksanaan penataan institusi.* (Doctoral dissertation). Bogor Agricultural University, Bogor.

Kartodihardjo, H. (2013). Challenges for interdisciplinary use in forest management prompts of coalition of forest management, economic and institutional sciences: 2005, 361 pages. *Jurnal Manajemen Hutan Tropika*, *19*(3), 208–210. doi:10.7226/jtfm.19.3.208.

Kartodiharjo, H. (2013). Masalah cara pikir dan praktik kehutanan: Refleksi dan evaluasi II. In H. Kartodihardjo (Ed.), *Kembali ke jalan lurus: Kritik penggunaan ilmu dan praktik kehutanan*. Bogor, Indonesia: Forci Development.

Kementerian Kehutanan [Kemenhut]. (2014). Rencana Strategis Kementerian Kehutanan Tahun 2010-2014. Jakarta, Indonesia.

Kementerian Lingkungan Hidup dan Kehutanan [KLHK]. (2015a). Statistik Kementerian Lingkungan Hidup dan Kehutanan. Pusat Data Infomasi, KLHK, Jakarta, 1–20. doi.10.1017/CBO9781107415324.004.

Kementerian Lingkungan Hidup dan Kehutanan. [KLHK]. (2015). Rencana strategis tahun 2015-2019 Kementerian Lingkungan Hidup dan Kehutanan. Jakarta, Indonesia.

Kusumanto, Y., & Sirait, T. (2001). Community participation in forest resource management in Indonesia: Policies, practices, constraints and opportunities (RETA 5711 No. 28). *Southeast Asia Policy Research Warking Paper*. Bogor, Indonesia. doi.10.1007/s11629-005-0032-2.

Mazur, R. E., & Stakhanov, O. V. (2008). Prospects for enhancing livelihoods, communities, and biodiversity in Africa through community-based forest management: A critical analysis. *Local Environment*, *13*(5), 405–421. doi.10.1080/13549830701809700.

Meilby, H., Smith-Hall, C., Byg, A., Larsen, H. O., Nielsen, J., Puri, L., & Rayamajhi, S. (2014). Are forest incomes sustainable? Firewood and timber extraction and productivity in community managed forests in Nepal. *World Development*, *64*(S1), S113–S124. doi:10.1016/j.worlddev.2014.03.011.

Mills, W. C. (1956). *The power elite* (New Edition). Boston: Colombia University Press.

Ming'ate, F. L. M., Rennie, H. G., & Memon, A. (2014). Potential for co-management approaches to strengthen livelihoods of forest dependent communities: A Kenyan case. *Land Use Policy*, *41*, 304–312. doi:10.1016/j.landusepol.2014.06.008.

Nayak, P. K., & Berkes, F. (2008). Politics of co-optation: Community forest management versus joint forest management in Orissa, India. *Environmental Management*, *41*(5), 707–718. doi:10.1007/s00267-008-9088-4.

Ningsih, E. S. (2008). Peran kelembagaan dan tindakan komunikasi dalam penyelesaian konflik di Taman Nasional Ujung Kulon. (Doctoral dissertation). Bogor Agricultural University, Bogor.

Nurfatriani, F., Darusman, D., Nurrochmat, D.R., Yustika, A.E., & Muttaqin, M.Z. (2015). Redesigning Indonesian forest fiscal policy to support forest conservation. *Journal of Forest Policy and Economics*, *61*(2015) 39–50. doi:org/10.1016/j.forpol.2015.07.006.

Nurrochmat, D.R, Dharmawan, A.H., Obidzinski, K., Dermawan, A., & Erbaugh, J.T., (2016). Contesting national and international forest regimes: Case of timber legality certification for community forests in Central Java, Indonesia. *Journal of Forest Policy and Economics*, *68*(2016), 54-64, doi:10.1016/j.forpol.2014.09.008.

Nurrochmat, D.R., Nugroho, I.A., Hardjanto, Purwadianto, A., Maryudi, A., Erbaugh, J.T., (2017). Shifting contestation into cooperation: Strategy to incorporate different interest of actors in medicinal plants in Meru Betiri National Park, Indonesia. *Forest Policy and Economics*, *83*(2017), 162–168. doi:10.1016/j.forpol.2017.08.005.

Ohorella, S., Suharjito, D., & Ichwandi, I. (2011). Efektivitas kelembagaan lokal dalam pengelolaan sumber daya hutan pada masyarakat Rumahkay di Seram Bagian Barat, Maluku. *Jurnal Manajemen Hutan Tropika*, *XVII*(2), 49–55.

Ostrom, E., & Basurto, X. (2011). Crafting analytical tools to study institutional change. *Journal of Institutional Economics*, *7*(3), 317–343. doi:10.1017/s1744137410000305.

Pandit, R., & Bevilacqua, E. (2011). Forest users and environmental impacts of community

forestry in the hills of Nepal. *Forest Policy and Economics*, *13*(5), 345–352. doi:10.1016/j.forpol.2011.03.009.

Pretty, J., & Ward, H. (2001). Migration, social capital and the environment. *World Development*, *29*(2), 209–227. doi:10.1016/S0305-750X(00)00098-X.

Perhutanan Sosial dan Kemitraan Lingkungan [PSKL] (2015). *Rencana strategis Direkrorat Jenderal Perhutanan Sosial dan Kemitraan Lingkungan*. Jakarta: Kementerian Lingkungan Hidup dan Kehutanan.

Rasolofoson, R. A., Ferraro, P. J., Jenkins, C. N., & Jones, J.P.G. (2015). Effectiveness of community forest management at reducing deforestation in Madagascar. *Biological Conservation*, *184*, 271–277. doi:10.1016/j.biocon.2015.01.027.

Ribot, J. C., Agrawal, A., & Larson, A. M. (2006). Recentralizing while decentralizing: How national governments reappropriate forest resources. *World Development*, *34*(11), 1864–1886. doi:10.1016/j.worlddev.2005.11.020.

Sheil, D., & Wunder, S. (2002). The value of tropical forest to local communities: Complication caveats, and cautions. *Ecology and Society*, *6*(2), 1–16.

Silalahi, M., & Erwin, D. (2013). Collaborative conflict management on ecosystem restoration concession : Lessons learnt from Harapan Rainforest Jambi-South Sumatra-Indonesia. *Forest Research*, *4*(1), 1–9. doi:10.4172/21689776.1000134.

Sjaf, S., Kolopaking, L. M., Pandjaitan, N. K., & Damanhuri, D. S. (2012). Pembentukan identitas etnik di arena ekonomi politik lokal. Soladity: *Jurnal Sosiologi Pedesaan*, *6*(2), 170–178.

Suharjito, D. (2009). Devolusi pengelolaan hutan di Indonesia : Perbandingan Indonesia dan Philipina. *Jurnal Manajemen Hutan Tropika*, *XV*(3), 123–130.

Sukwika, T., Darusman, D., Kusmana, C., Nurrochmat, D.R. 2016. Evaluating the level of sustainablity of privately managed forest in Bogor, Indonesia. *Biodiversitas*,*17*(1), 241-248. doi: 10.13057/biodiv/d170135.

Tsujino, R., Yumoto, T., Kitamura, S., Djamaluddin, I., & Darnaedi, D. (2016). History of forest loss and degradation in Indonesia. *Land Use Policy*, *57*, 335–347. doi:10.1016/j.landusepol.2016.05.034.

Wicke, B., Sikkema, R., Dornburg, V., & Faaij, A. (2011). Exploring land use changes and the role of palm oil production in Indonesia and Malaysia. *Land Use Policy*, *28*(1), 193–206. doi:10.1016/j.landusepol.2010.06.001.

Yasmi, Y., Kelley, L., Murdiyarso, D., & Patel, T. (2012). The struggle over Asia's forests: An overview of forest conflict and potential implications for REDD+. *International Forestry Review*, *14*(1), 99–109. doi:10.1505/146554812799973127.