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Land Use Conflict Mapping in Mount Rinjani National Park Pesangrahan Village East Lombok District

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Abstract. This study aims to map the conflict in the use of forest resources in the area of Mount Rinjani National Park as an implication of the management model implemented, then formulate several alternative solutions to reduce the negative impact of the conflict. This research used a case study approach. The data collected in this research was through several data collection methods such as field observations, interviews using questionnaires, in-depth interviews, Focus Group Discussions, Participatory Rural Appraisal, and literature studies. Analysis of the data used in this study adopted the concept of dispute style analysis. Based on the results, using Analysis of Dispute Mode (AGATA), in the Pesangrahan village, the actors are divided into three categories, namely compromise, negotiation, and collaboration. The results also illustrate that there are still multiple interpretations related to the utilization of national park areas in the region, and thus, a definite collaboration mechanism is needed principle-based on principles of co-ownership, co-operation, and responsibility.

1. Introduction

Forest Watch Indonesia states that the deforestation rate for the period of 2009-2013 reached an average of 1.13 million ha per year, whereas the remaining forest cover in 2013 was 82 million ha [1]. On the other hand around 48.8 million Indonesians live in and around forest areas, and approximately 10.2 million people are under the poverty rate or classified as under poverty [2]. In general, these people utilize forest products for the daily livelihoods, both wood, and non-wood, including rattan, resin, agarwood, and honey bees.

The transformation process of resources authorization, managed by the local community into a state-owned resource, in many countries, has led to (1) the removal of local wisdom institution; (2) weak monitoring capacity and state institutional control, especially on large scale resources and complex, which is claimed and controlled by the state, and (3) use of available resources trapped in conditions of de facto open access and the tendency of the parties competing for maximum utilization of resources for an individual benefit [3]. These have implications on high conflicts and weak management capacity at the site level. In 2012, the Association for Law Reform of Community and Ecology Based (HuMa) noted that there been 278 conflicts over natural resources and agrarian, which took place in 98 cities/regencies in 23 provinces, with a conflict area that reached 2,416,035 hectares [4].

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A similar situation also occurs in the Province of West Nusa Tenggara, particularly in Mount Rinjani National Park (TNGR), where the problem of encroachment, conflict, illegal logging, poaching, and livestock grazing in the forest area is still problems faced by managers of Mount Rinjani National Park [5]. Based on information from BAPPENAS, in 2015, the total land area of TNGR, which had been encroached by the community, reached 300 hectares [6].

This situation demands proper and comprehensive handling. Thus, a systematic effort is needed to optimize the function of forest areas. Particularly for conservation areas that function as a buffer for the community's existence and as a natural habitat for the ecosystem components contained within. Zuhud 2011 [7] states, the government policies in managing conservation forests that have generally applied, until currently, need to be reviewed. Experience proves that the "prohibition" and "protection" approach used in managing national parks and other conservation districts tend to be counterproductive, resulting in inevitable resource conflicts, especially with local communities. There is also pressure from other parties to change the concept of conservation area development. World Conservation Strategy 1980 [8] states, to ensure the achievement and integration of the conservation goal between conservation and development, it is recommended that each country review with a concentration on priority needs and main constraints, one of which is by ensuring sustainable use of species and ecosystems to support livelihoods millions of rural people.

The above description illustrates that the conservation area management model tends to apply the security approach that needs balancing with other adaptive approach methods at the local level. Thus, a study is required to map conflicts related to forest resource usage that arise due to the management implications carried out until now. Then, formulate several alternative solutions to reduce the negative impact of the conflict.

2. Method

The research started from August to December 2018, located in Pesangrahan Village, East Lombok Regency. The study uses a case study approach, which is an approach that describes and explains thoroughly various aspects, such as individuals, groups, programs, or a social situation, where this research is attempted to examine as much data as possible on the subject under study and uses various instruments as the focal data collection tool [9] [10]. The data collected through several data collection methods such as field observations, interviews with questionnaires, in-depth interviews, Focus Group Discussion (FGD), Participatory Rural Appraisal [11][12][13][14], and literature study. Representatives from Mount Rinjani National Park Office (BTNGR), village government, community organizations, and community leaders were select as informants. Theselection was base on the characteristics developed by Spradley in ([15]. Informants' determination used the Snowball sampling method to represent the actors involved in the conflict in the TNGR area. Analysis of the data used in this study, developed by Pasya and Sirait (2011), is called the Analysis of Dispute Mode (AGATA). This analysis aims to map the attitudes of conflicting actors in dealing with disputes. These attitudes or styles are in the form of 1) avoiding, 2) accomodating, 3) compromising, 4) competing, and 5) collaborating.

3. Result and Discussion

The research has obtained information about the description of the community's rights to land resources in the TNGR area. So far, the people have used the TNGR area as a source of water to fulfil their daily needs, including irrigation and ponds. Furthermore, the community often uses the TNGR area to find food (ferns), look for firewood, and gather grass to feed their livestock.



Figure 1. Activities of Collecting Firewood

The community has carried out these activities for a long time. Based on its historical background, people living in the Pesangrahan village have lived in the area for a long time and have been active in the forest area [16]. Since the designation of the area under BTNGR in 1997, the BTNGR has prohibited these activities. So, the community began to use the TNGR area covertly. In 2003, the village communities around the TNGR area were given the opportunity, informally, by the BTNGR officers to utilize grass in the TNGR area as their livestock feed. However, in practice, these utilization activities are not limited to the use of grass but also utilizes the TNGR area for several other activities such as collecting NTFPs, firewood, hunting, and farming, causing conflicts between the BTNGR officers and the local community.

The results show that each party has its characteristics in responding to the conflicts that occur. Referring to the concepts of dispute style analysis developed by Pasya and Sirait 2011 [17], the styles of each party are classified into five (5) categories, namely:

- 1) Avoiding mode occurs when one party does the following: rejects a dispute; changes the topic of the cause of the controversy to that of subjects that are not the cause of the argument; avoids discussion about the disagreement; behaves in an unclear manner (noncommittal) or does not want to build commitment. This mode is useful in situations where there is a danger of physical violence; there is no chance of achieving a goal; or a situation that is so complex that it is impossible to resolve.
- 2) Accommodating mode occurs when one party: sacrifices the interests of themselves/the group and puts the other party's interests first. This mode is useful in the following situations: when a party realizes they do not have many opportunities to achieve their interests; or when there is a belief that satisfying their group's interests will result in damaging their relationships with other groups.
- 3) Compromising mode occurs when each party: acts together to take a middle ground, for example, by giving to each other, and in these actions, it is not clear who wins and who loses. This style is useful in situations where the parties refuse to cooperate while at the same time a solution is required; and when the final purpose is not an important part. In this style, true satisfaction is usually not achieved.
- 4) Competing Mode. Characterized by the following: aggressive actions, putting one's interests first, pressuring others, and behaving in a non-cooperative manner. This mode is useful when making decisions made as soon as possible; the number of the option chosen is very limited or even just one; one party does not feel disadvantaged even by suppressing the other party; most importantly, there is no concern about the potential damage to relationships and social order.

5) Collaborative Mode. Characterized by actively listening to each other's interests between parties, focused care, empathetic communication, and mutual satisfaction. This force is useful in situations where there is a balance of power; and there are sufficient time and energy to create an integrated dispute handling.

The conflict handling styles are combinations of two elements, namely (Thomas and Kilmann in [18]): cooperativeness and assertiveness. Cooperativeness is an attempt to satisfy the other party when faced with a conflict. Assertiveness/Firmness is an attempt to meet oneself when faced with a dispute. Based on the above description, the characteristics of the disputing style of each party in Pesangrahan Village are classified into three main categories, namely collaborative, compromising, and accommodating modes as presented in the graph below:

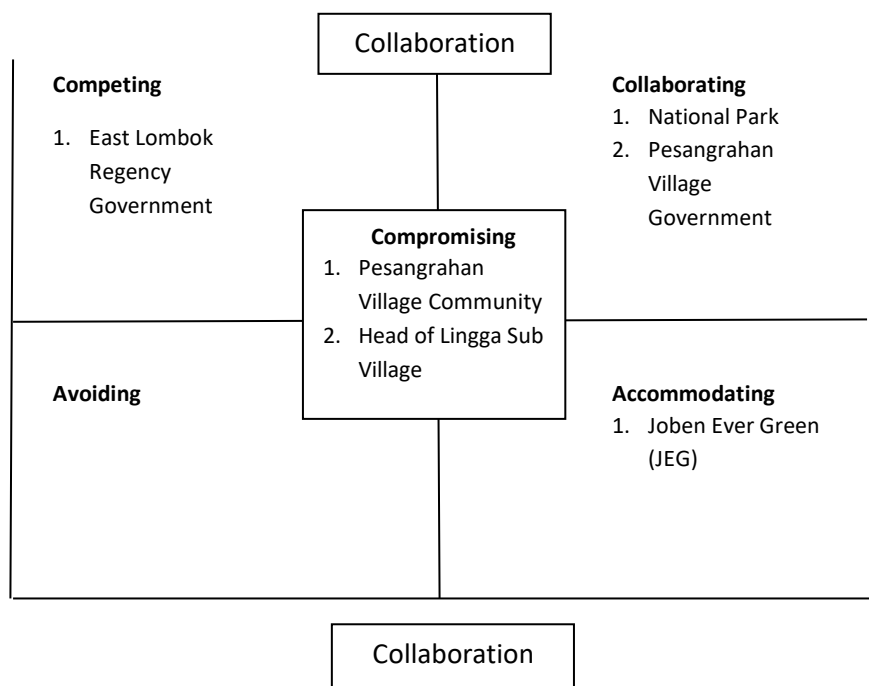


Figure 2. Result of dispute style mapping in Pesangrahan Village

The people of Pesangrahan Village and the Head of Lunggu Sub-Village demonstrated the compromising style because they acknowledged the forest area and hoped that agricultural and grass utilization efforts carried out in the area could continue. The community wants the Mount Rinjani National Park and the local government (local government and BPN) to coordinate the land legality. The people will accept the results of the coordination decision with TNGR and the local government. If the TNGR wins the land disputes, the people want compensation for land released.

The national park and the village government demonstrated the collaborative style. The village government wants to solve the problem of land conflicts in the national park area. The village government is willing to participate actively, if needed, in the settlement process. Whereas the National Park wants a settlement just like the village party, the National Park has held several meetings with the village government, but the local government has never attended the meeting. Regarding the pool tourism management, the village government and the national park plan to collaborate with Joben Ever Green (JEG) as the managers in terms of contributions, both economically and ecologically. The accommodation style is shown by Joben Ever Green (JEG), as the manager of pool tourism in the area that already has a management permit. Until now, JEG has not entirely managed the region because they are still waiting for the conflict resolution related to a claim by the local government, which states that the pool tourism area is an asset of the Regency of East Lombok.

The competition-style is demonstrated by the East Lombok Regency Government, who claims, unilaterally, that the pool tourism area is part of the national park area. The local government is still taking retribution from the pool tourism management, without any collaboration with JEG. Also, the local government never present and active in any resolution attempt made by the national park.

The avoiding style is shown by the BPN of East Lombok Regency because the BPN has never attended any meetings, both related to the discussion on area boundaries, and certificates of cultivated land that is part of the national park area. From the above description, it can be explained that the dispute style of each party is in the style of compromising, collaborating, and accommodating. Thus, based on the viewpoint of Pasya and Sirait [19], which states that if the parties in a dispute show styles of compromising, accommodating, and collaborating, it can be concluded that the social capital owned by the disputants is at least sufficient to initiate a mediation.

Mitchell et al 2003[20] stated that mediation has the characteristics of negotiation, coupled with the involvement of a neutral third-party as the mediator. The third-party does not have the power to decide the agreement but functions as a facilitator and problem formulator to help the disputing parties to agree. Several schemes that can be carried out in the context of a conflict mediation process based on the Analysis of Dispute Mode framework are described as follows:

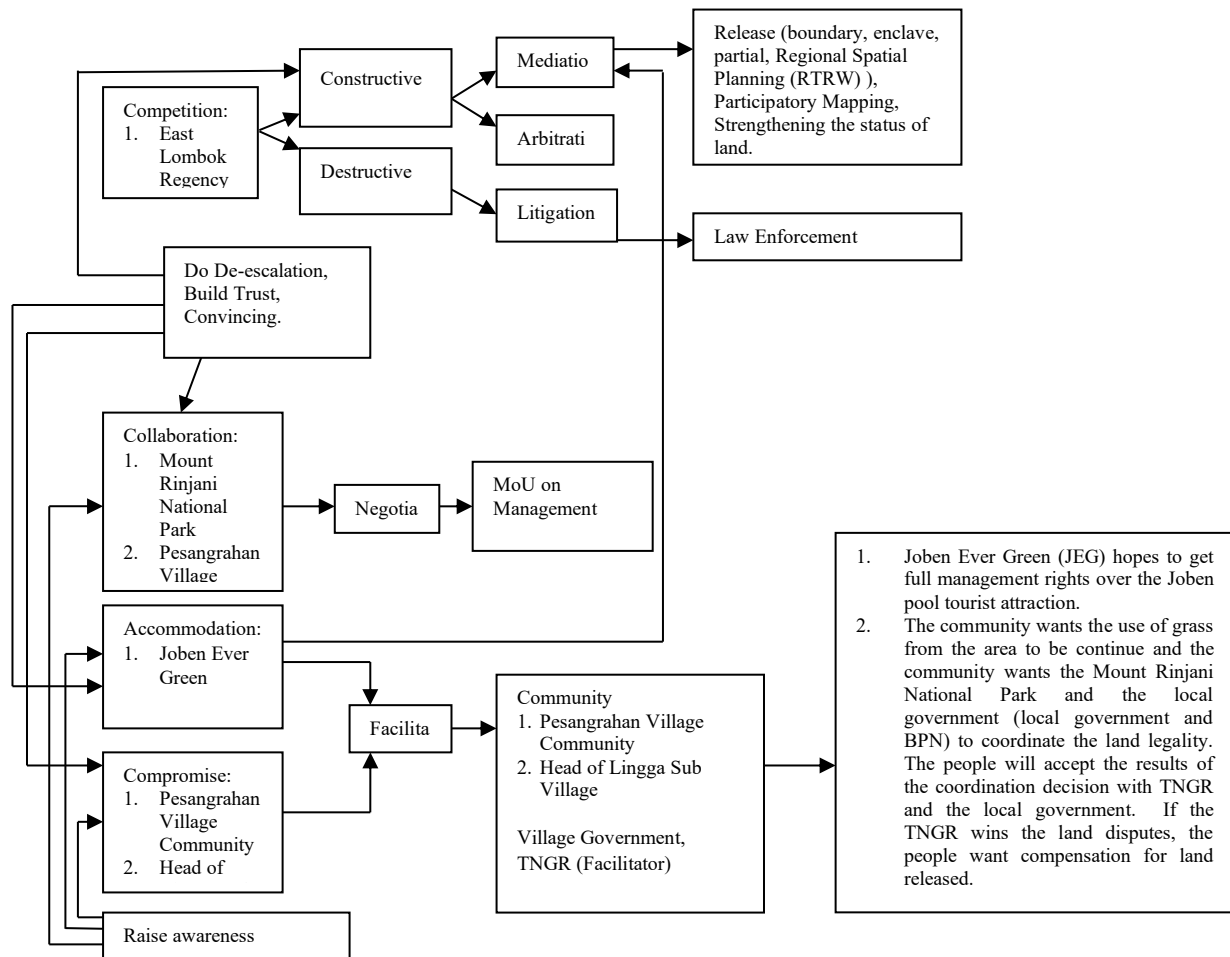


Figure 3. Analysis of Dispute Mode Framework in Pesangrahan Village

Based on the picture above, two strategic approaches can be done to reduce potential conflicts that occur. The two approaches are:

1. Facilitating compromising style and accommodating style parties.

Joben Evergreen (JEG) institute has an accommodating style, while the community in the Pesangrahan Village and the Head of the Lingga Sub Village have a compromising style. So far, there has never been a facilitation meeting between the two parties to find a solution, so that the community can carry out organized trading activities and so that JEG can also carry out full management.

2. Find an agreement with parties who have a collaborating style.

The management of Mount Rinjani National Park and Pesangrahan Village Government have a collaborating style. Both parties need to make a memorandum of understanding on management and not prioritizing their interests because the area is also part of a national park area.

This situation requires an adequate negotiation process to build better collaboration. Suporahardjo 2005[21] and Mayer 2005 [22] suggest that actors who are working on collaboration should anticipate and evaluate their ability to cope with reality and potential obstacles that may be faced. One of the conditions that cause the low success rate is when one party has the power to take unilateral action. Therefore, the collaboration implementation process must be based on the principles of co-ownership, co-operation, and co-responsibility:

1. The principle of Co-ownership

Areas to be developed for Conservation Areas are shared property, the use and protection are carried out jointly based on the wisdom of local technology and culture.

2. The principle of Co-operation

Conservation area management is carried out with the principle of regulating the respective roles carried out by the community and all stakeholders.

3. The principle of Co-responsibility

In conservation area management, area protection, and development activities are a joint responsibility of the government, communities, and stakeholders.

Collaborative management can also run effectively if stakeholders pay attention to stakeholder aspirations with program implementation[23] [24]. Collaboration can also be enhanced by ensuring that no single group's views or knowledge dominate this process. This is also expressed by Borrini Feyerabend G 2000 [25] and Wollenberg 2005 [26], which state that collaboration must be able to guarantee fair sharing from each party to management functions, distribution of rights, and responsibilities in certain areas or natural resources.

4. Conclusion

The management of the Mount Rinjani National Park (TNGR) area cannot be separated from the interaction with the people around the area. The conflict situation in Pesangrahan Village is one of the manifestations of the failure to adapt the management of the TNGR area in interpreting the conditions of the local community. The results of mapping using Analysis of Dispute Mode in Pesangrahan Village divided actors into three categories, namely compromising, negotiating, and collaborating. However, the results also illustrate that there are still multiple interpretations related to the use of the national park area so that a clear collaboration mechanism is needed based on the principles of co-ownership, co-operation, co-responsibility.

Reference

- [1] Forest Watch Indonesia 2014 *Potret Keadaan Hutan Indonesia Periode Tahun 2009 – 2013* No Id (Bogor Forest Watch Indonesia)
- [2] Wiyono et al 2006 *Kehutanan Multipihak Langkah Menuju Perubahan*. (Bogor: Center For International Forestry Research)
- [3] Ernan R 2005 *Sumberdaya Bersama-Kerangka Teori Dasar: Isu dan Tantangan Masa Depan di Indonesia* (Bogor: Institut Pertanian Bogor)
- [4] HUMA 2012 *Outlook Konflik Sumberdaya Alam dan Agraria* (JAKARTA: Perkumpulan Untuk Pembaharuan Hukum Berbasis Masyarakat dan Ekologis)
- [5] BTNGR 2014 *Rencana Pengelolaan Taman Nasional 2014- 2023* (Mataram)

- [6] Badan Perencanaan Pembangunan Nasional 2015 *Perambahan di Taman Nasional Rinjani Semakin Meluas*
- [7] Zuhud EAM 2011 *Pengembangan Desa Konservasi Hutan Keanekaragaman Hayati Untuk Mendukung Kedaulatan Pangan Dan Obat Keluarga Indonesia Dalam Menghadapi Ancaman Krisis Baru Ekonomi Dunia Di Era Globalisasi* [Orasi Ilm. Bogor: Institut Pertanian Bogor]
- [8] International Union for Conservation of Nature and Natural Resources 1980 *World conservation strategy: Living resource conservation for sustainable development* (Gland: IUCN)
- [9] Mulyana D 2006 *Metode Penelitian Kualitatif* (Bandung: PT Remaja Rosdakarya)
- [10] A C Ichsan, I M L Aji, K Webliana, and D P Sari 2019 *The Analysis of Institutional Performance of the Village Conservation Model in Gunung Rinjani National Park IOP Conf. Ser. Earth Environ. Sci.* vol 270 no 1
- [11] R Chambers 1992 *Rural Appraisal, Rapid, Relaxed and Participatory* (England: Inst.Dev.Studies, Univ.of Sussex)
- [12] Sevilla CG et al 1993 *Pengantar Metode Penelitian* (JAKARTA: UI Press)
- [13] S P Raja 2012 *Indonesia Climate Adaptation Tool for Coastal Habitats* (JAKARTA: USAID IMACS)
- [14] A C Ichsan, I M L Aji, H Anwar, T Waru, and I G Febryano 2020 *The implementation of conservation village model program in mount Rinjani national park (A regulation perspective)* (*Ecol. Environ. Conserv* vol 26 no. 3) pp 1100–1109
- [15] B Bungin 2003 *Analisis Data Penelitian Kualitatif* (JAKARTA: Radja Grafindo Persada)
- [16] A Chairil, R Soekmadi, and S Adiwibowo 2017 *Relation between Preferences Community Land Use with Conservation Village Model Development at Mount Rinjani National Park (Ijsbar, vol. 4531)* pp 375–388
- [17] F C Galudra G, Pasya G, and Sirait M 2006 *Rapid Land Tenure Assessment (RaTa) Panduan Ringkas Bagi Praktisi* (Bogor: World Agroforestry Centre-Asia Tenggara)
- [18] Wirawan 2010 *Konflik dan Manajemen Konflik Teori, Aplikasi, dan Penelitian* (JAKARTA: Salemba Humanika)
- [19] S M Pasya G 2011 *Analisa Gaya Bersengketa-AGATA. Panduan Ringkas untuk Membantu Memilih Bentuk Penyelesaian Sengketa Pengelolaan Sumberdaya Alam* (Bogor: Samdhana Institute)
- [20] D H R Mitchell, Bruce, B Setiawan, *Pengelolaan Sumberdaya dan Lingkungan* (Yogyakarta: Gadjah Mada University Press)
- [21] Suporaharjo 2005 *Manajemen Kolaborasi* (Bogor: Pustaka Latin)
- [22] J Mayer 2005 *Stakeholder Power Analysis* (London: International Institute for Environment and Development)
- [23] T Herawati, N Widjayanto, Saharuddin, and Eriyatno 2010 *Analisis respon pemangku kepentingan di daerah terhadap kebijakan hutan tanaman rakyat (Analysis of Stakeholders Responses to Community Forest Estate Policy)* (*J. Anal. Kebijak. Kehutan* vol 7 no 1) pp 13–25
- [24] A C Ichsan, A P Prayoga, and N Dalya 2021 *Study of forest management unit performance in Indonesia IOP Conf. Ser. Earth Environ Sci* vol 681 no 1
- [25] Borrini Feyerabend G 2000 *Co-management of Natural Resources: Organising, Negotiating and Learning by Doing* (Cameroon: IUCN)
- [26] E Wollenberg, E David, B Louise, B Jeff, S B 2005 *Pembelajaran and P Hutan Pembelajaran Sosial dalam Pengelolaan Hutan Komunitas* no Id (Bogor: Pustaka Latin)