Model of conflict resolution at KHDTK Carita through participatory action research

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**Abstract.** The Minister of Environment and Forestry has designated 52 units of Special Purpose Forest Areas (KHDTK) in 2015, in which the Research Development and Innovation Agency manages 35 units with an area of 37,569 ha. In fact, almost all of the KHDTK areas are inseparable from land conflicts with local communities, including in KHDTK Carita. More than 600 farmers have encroached 80% of the area by developing non-forestry crops. This study aims to provide a policy recommendation for conflict resolution in KHDTK and encourage the acceleration of implementation and achievement of national priority policy targets for social forestry. For this study, a participatory action research (PAR) approach is used to encourage social change at the local level and policies at national level. The results of the study reveal that there are two types of conflict namely management conflict involving three different institutions, and utilization conflict involving residents who live in two different villages. A combination of a local elite approach and a formal (legality) approach are needed in conflict resolution. Recognition and protection of forestry partnerships (Kulin KK) is also one of the solutions offered in conflict resolution.

1. **Introduction**
During the last 40 years, the achievements of the Social Forestry (PS) regime have continued to grow in various countries and regions with different contexts, politics, history, culture, economy \([1]\). Social Forestry in Indonesia is a forest management system that is carried out sustainably, both in state forest areas and private forest/customary forests. According to Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (PermenLHK) 83/2016, PS implementers are local communities or customary law communities as the main actors to improve their welfare, environmental balance, and socio-cultural dynamics\([2]\). Nationally, PS is targeted at 12.7 million hectares for 5 (five) years from 2014 to 2019, but based on data from the Ministry of Environment and Forestry, so far the PS has only reached 30% of the target set \(+ 4.4\) million ha \([3]\). One of the main objectives of PS development is to resolve conflicts or as one of the resolutions of social conflicts and justice for communities related to land or tenure that often occurs in various regions by involving community participation.
Forest Areas with Special Purposes (KHDTK) are forest areas specifically designated for: 1) forestry research and development, 2) forestry education and training, and 3) religion and culture [4]. KHDTK has strategic value because it plays an important role as a learning medium for the ongoing forestry research and innovation which is the source or material for research-based government decision making [5].

The Minister of Environment and Forestry has designated 52 units of Special Purpose Forest Areas (KHDTK) in 2015, in which the Research Development and Innovation Agency manages 35 units with an area of 37,569 ha. In fact, almost all of the KHDTK areas are inseparable from land conflicts with local communities, including in KHDTK Carita. The KHDTK management has actually done several things in resolving conflicts, such as dialogue/mediation, collaboration, and law enforcement approaches. Law enforcement is felt to be ineffective in resolving conflicts that occur so that it is only used in certain situations [6] [7] [8]. The collaborative approach is one solution for resolving conflicts within the framework of social forestry (PS), wherein the implementation of this collaboration provides access to the community to be involved in managing forest areas.

Based on the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia 83/2016, then the resolution of conflicts in KHDTK is very necessary. This is because considering the huge potential that exists in KHDTK, both natural potential, environmental services, agroforestry, to eco-tourism/environmental education tourism. Almost all KHDTK have the potential for educetourism such as observing animals (birds, deballancer, tigers, black bears, hummingbirds, civets, and some of them), elephant patrols, eucalyptus oil processing, river crossings, waterfalls, hot springs, and camping ground. This potential becomes an object that can be collaborated with the community as an effort to resolve conflicts, so that forest management can be sustainable and forest sustainability is maintained. Sustainable KHDTK management is an integration between the implementation of special forest functions for R&D activities and sustainable forest management[9]. If the results from the utilization of forest resources can be used directly to finance the management of KHDTK, then this flexibility will greatly help managers to be able to manage their forests well. In this regard, the KHDTK management funding policy must be clear, uncomplicated and flexible, and accountable.

The resolution of this conflict must be carried out continuously in order to provide broad benefits. However, there seems to be a tendency to ignore the conflicts that arise. This omission will result in a build-up of symptoms or initial conditions that are increasing every year and will increase the complexity of the conflict, expand the actors involved, and make resolution actions difficult. Ignorance will also cause conflicts to grow large slowly and be difficult to control. Differences in interests become the beginning of forestry conflicts and then developed into complex dimensions of conflict. Conflicts in a certain period may be able to stop or be stopped, but at a time when the elements that formed the conflict re-unite, the opportunities for further conflict are greater [10].

Likewise, the conflict in Carita KHDTK has been going on for quite a long time. Based on research results [11], it is known that there are two types of conflicts in Carita KHDTK, namely; management conflicts and utilization conflicts. To carry out this conflict resolution, conflict resolution is carried out which does not only use one approach model but also uses several approaches to various parties involved in the conflict, both in conflict management and in utilization conflicts. The purpose of this study is to provide policy recommendations for conflict resolution in KHDTK and encourage the acceleration of implementation and achievement of social forestry national priority policy targets. Based on the research objectives presented, the study would like to answer several questions, such as why is KHDTK inseparable from tenure conflicts, what is the impact of conflict on the effectiveness of KHDTK management, and what is the conflict resolution approach.

2. Research method
2.1. Logical framework
In the logical framework (figure 1), the potential for conflicts and conflicts in forest area management from time to time is rife and is often heard in various types of forest area management involving various parties. It is alleged that these conflicts were only left unattended without a good (complete) resolution,
even if there were efforts to resolve them slowly. These conflicts are often related to the management of forest areas that involve the community. In addition, there is still a lack of policy and government support in developing conflict resolution, limited research and development on the implementation of conflict resolution in various forest area management, and a lack of information on the potential of forest resources (other than timber forest products) with economic value (Non-Timber Forest Products/NTFPs and environmental services). For this reason, conflict resolution efforts need to be carried out immediately to reduce and resolve various conflict cases that occur. Conflict resolution can be done using participatory conflict resolution techniques that actively involve the parties involved in the conflict and several conflict resolution methods.

![Logical Framework](https://example.com/framework.png)

**Figure 1.** Logical framework.

2.2. *Data collection*

The data collected in this study include primary data and secondary data. Primary data was collected by interviewing various related parties (using questionnaires), both those directly involved in the management and use of the Carita KHDTK forest area and other parties (cultivators, village officials, academics, and observers). Primary data collected include conflicts that occur, conflict resolution techniques that have been carried out, who plays a role, causes of conflict. The secondary data needed in this study were collected in various ways such as; search for information through various sites related to research, from government agencies (central and local), NGOs, and other related parties (in the form of books, reports, and other documentation). The secondary data collected includes the parties involved in the conflict resolution that has been carried out. In addition, in-depth interviews and Focus Group Discussions (FGD) were also conducted with the parties involved.
2.3. Data analysis
This research is participatory action research (PAR). Participatory action research involves selecting issues and using findings for strategies to address issues with the ultimate goal of bringing about social change through policy, institutional and other interventions [12]. The success rate of PAR is measured through several indicators, both technical and institutional socio-economic. For the technical side, such as the application of the principles of sustainability in forest management practices. For the socio-economic side of the institution, it can be measured based on the level of adoption of strengthening the institutional capacity of farmers in their organizational culture. Farmer's institutional capacity, level and quality of citizen participation, farmer's economic institutional capacity.

![Figure 2. The spiral Participation Action Research (PAR) [13]](image)

Figure 2 illustrates that participatory action research (PAR) involves the respondent or the community in every activity process. PAR is carried out through the following stages of activity. First, define the issue or diagnose the problem to be studied. Second, planning together to take action; Third, take concrete actions to make changes; Fourth, evaluate the action or reflection. This kind of process is a kind of spiral that will continue towards continuous improvement.

The complexity of the conflicts that occur requires modifications and innovations to improve policies at the level of managers and policyholders (government) and the community as development subjects. Management policies that are still centralized indicate that there is still unpreparedness of the parties, especially local governments in forest management responsibilities. More accurate data and information at the site level will improve policies in forest management going forward.

PAR is an inclusive process by which communities identify and analyze problems, and act to find solutions and to promote social, economic, and political transformation [14]. This PAR activity is very relevant to be developed in conflict resolution in Carita KHDTK because of the high dynamics and changes at the site level due to the increasing pressure of social, cultural, and economic life of the people living around Carita KHDTK. Continuous research is needed to strengthen the database and information at the site level so that it can provide input in the form of information, data, and real field problems to the Government in strengthening future forest management policies.

3. Result and discussion
3.1. Condition of KHDTK Carita
The existence of KHDTK began in 1978 along with the appointment of the Carita forest area as a Nature Tourism Park (TWA) based on the Decree of the Minister of Agriculture No. 440/Kpts/Um/7/1978 June 1, 1978 with an area of 95 ha. In addition, the Decree of the Minister of Forestry No. 284/Menhut-
II/1990 June 4, 1990 gave Perhutani the right to manage natural tourism. At this time, the use of forest area land by the community is still ongoing. In fact, based on information, the community's use of Carita forest area land has been going on for quite a long time and long before the appointment in 1978. Where people are accustomed to entering the forest, some even practice plant cultivation/cultivating crops (planting cassava/cassava). In addition, illegal encroachment and illegal logging practices occur, which are carried out 'hidden'.

During the end of the new order and the beginning of reforms/ 1998-2002, illegal logging practices could not be overcome, the officers did not dare to go to the field and even avoided/fear the perpetrators of massive illegal logging practices. There is an increasing scale of escalation of illegal logging practices. In 2003, the Carita forest area was designated as a Special Purpose Forest Area (KHDTK) with an area of 3,000 ha based on the Decree of the Minister of Forestry No. 290/Kpts-II/2003. Continued in 2012 which divided the KHDTK area of 3,000 ha into two parts, namely; TAHURA and KHDTK, even this conflict still exists. Many people have already entered the forest area and controlled the forest area which was used as arable land for their farming activities. The forest area lands are divided into plots and recognized as cultivated land by the community.

The condition of the many cultivators in the Carita KHDTK forest area is no different from other KHDTK conditions. Due to the fact that many people have worked on forest land, currently, there is a good solution from the government, namely through the Social Forestry scheme which allows the community to obtain permits for the right to work on forest areas in partnership with KHDTK management permit holders through the Kulin KK program. Currently, in Carita KHDTK, the farmers working on forest areas are in the process of obtaining the right to cultivate the land from the Ministry of Environment and Forestry.

### 3.2. Typology and types of conflict

Carita's forest area in its management can be said to be inseparable from conflicts, like other forest area management in Indonesia. The causes of the conflict include; the existence of rules that prohibit entry into the forest let alone activities in the forest, changes in forest area management with various policies that are also different, the determination of forest areas that can be said to be late while on forest land there are already many people in it, management of forest areas that are not good (the forest looks like a no man's land area/location), and there are different interests of the parties.

In general, there are two typologies of conflict that occur in the management and utilization of Carita’s forest area. First, the conflict of use, the second is the conflict of management authority. Utilization conflicts include (1) conflicts between smallholder farming communities and area managers, (2) conflicts between smallholders, (3) conflicts between other forest potential users (individual managers of tourist destinations) and managers, (4) conflicts between individual communities managing tourist destinations, and (5) conflicts between villages around tourist destinations.

There are two types of conflict management identified: (1) between the KHDTK manager and the TAHURA Center, and (2) between the Banten Provincial Government and the Pandeglang Regency Government in the management of TAHURA. Conflicts that occur between TAHURA and KHDTK include area boundaries, the existence of KHDTK assets which are actually in the TAHURA area.

### 3.3. Impact of conflict on KHDTK management

The conflicts that have occurred so far in the KHDTK forest area have had a significant impact on the effectiveness of management. The existence of conflicts that occur affects the relationship between KHDTK managers and the community to be disturbed (tenuous), especially at the operational level at the site level. Technical programs run by managers are less effective, for example; the invitation to carry out tree planting activities in accordance with the KHDTK management program activities did not get a positive response from the community. Likewise, the activities of securing and supervising forest areas have not received optimal support.
3.4. Conflict resolution approach

So far, the KHDTK management has tried to reduce/resolve conflicts that occur in several ways. Some of the solutions carried out include; legal approach, case approach, dialogue, to mediation. These approaches tend to be formal and unsustainable. As a result, it is felt that these efforts still do not have a significant impact and the solutions produced do not seem to be very tangible, in order to reduce and resolve various conflicts that occur at the site level. Taking into account the existing conditions, it is necessary to do good conflict management. Conflict management that is applied properly and systematically is expected to reduce and or resolve conflicts that occur.

Conflict management that is applied to help reduce and or resolve conflicts that occur, can be done using a combined approach model using several conflict resolution approaches as an effort to resolve existing conflicts. Conflict resolution is needed using a combined approach model because so far the single approaches that have been used often do not give good results and do not touch the causes of the conflict, only being like firefighters.

The results of conflict resolution using a combined approach model have an impact on starting to build public trust in KHDTK managers. One manifestation of the establishment of this trust is the formation of farmer groups. The phenomenon of the formation of farmer groups is one form of social change that has been successfully driven by the Research and Development Center for Socio-Economic, Policy and Climate Change (P3SEKPI) research team and P3SEKPI management. In addition, the P3SEKPI research team has also succeeded in encouraging social change in policy. One of these social changes is in the form of concrete support from the KHDTK Carita manager to facilitate group legality. Another form of support is in the form of a program currently underway in the form of empowering farmer institutions and empowering tourism groups.

In summary, it can be described as a model of a combined approach to the conflict resolution process that is carried out depending on the existing situation and conditions. How the conflict situation occurred and how the social, economic, and cultural conditions of the community in the conflict location/area must be known. Technically, the conflict resolution process is carried out through (1) identification of actors involved in the conflict, (2) identification of influential actors in the lives of local communities to resolve conflicts, (3) conducting participatory dialogues through FGDs, special visits, until just visiting to lighten the mood, (4) establishing an agreement between the conflicting parties, (5) seeking support from local/village, sub-district, district, provincial and national governments, (6) encouraging the formation of groups to facilitate community organizing and as a forum for conflict resolution that occurs more democratically, (7) communicating the formed group with the KHDTK management in order to build a more constructive understanding, (8) encouraging the KHDTK management to make adjustments to existing policies by providing concrete support to the group.

The research team believes that the ultimate goal of KHDTK management is to achieve sustainable forest management and the welfare of the community. The research team also agrees with the research results [15] which states that this goal can only be achieved when considering the interaction between various institutions both at the site level to sub-national and national levels. Such interaction should provide sufficient space for dialogue from various aspirations, especially local communities in a more democratic manner. Other research results [16] added that conflict resolution in social forestry should give local communities the authority to design and implement programs that suit their needs.

4. Conclusion and recommendation

Based on the case study in KHDTK Carita, reliance on repressive approaches in conflict resolution is not effective. Instead, the dialogue approach, both formal and informal, accompanied by a sufficient understanding of the social structure and local leadership, is one of the more effective methods of resolving horizontal conflicts between communities and vertical conflicts between the community and the KHDTK manager. However, for this dialogue process to yield favourable results, there need to be human resources (mediators) who understand the conflict map and have sufficient conflict mediation knowledge and skills. In addition, learning from the case in the Carita, conflict resolution requires strong
support from the village government and community leaders, such as Religion Leaders and youth leaders.

Conflicts occurring in KHDTK, especially in Carita, are generally caused by structural problems, namely the designation of Carita's development policy as a national priority for tourism development. During the New Order era, there was an emergence of land speculators who encouraged the conversion of agricultural land to hotels and land speculation behavior. As a result, farmers lost their lands and were forced to cultivate forest land in the state forest for their livelihood. Another problem is that the forest management paradigm is more actualized through a security and technical approach rather than a collaborative approach that includes the local people.

The impact of the conflict occurring in KHDTK was that various forms of resistance by local communities occurred, such as ignoring the management's orders to protect forest plants, utilizing the area without considering the capacity of the environment, such as ecotourism in Curug Putri. Another impact is that the legitimacy of the KHDTK management in the community is decreasing. This can be seen in instances where agroforestry farmers often ignore the existence of field officers.

In resolving the KHDTK conflict, the participatory approach offers a better solution in conflict resolution since it goes beyond the explanatory and phenomenological research approaches that only aim to explain the conflict. In contrast, the Participatory approach aims to emancipate or liberate the local community from the domination of the KHDTK management and the hierarchical power structure. This approach places society as a subject, not an object, so they can negotiate their interests towards KHDTK. The participatory approach model is also able to encourage further social change, such as the formation of groups and encourage the emergence of various empowerment programs from the KHDTK managers.

Based on the results of this study, we provide several important policy recommendations. One of the policy recommendations that need to be developed by the KHDTK authorities in Carita is the placement of field workers who understand conflict mediation and are skilled in communicating with local communities and local elites. So far, the KHDTK management has placed more technical field personnel, so that the orientation of their approach is also more technical. The second recommendation is that KHDTK managers need to facilitate the participation of existing farmer groups and ecotourism groups to obtain legal rights to management under the Social Forestry program (Kulin KK). Moreover, the KHDK should empower these groups after the permits are issued. Finally, the third recommendation is that these groups should also be integrated into village government programs so that they can be supported by programs and funds from the village budget. This integration can be done through intensive dialogue and communication with the village government.

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