Analysis of agrarian conflict resolution through social forestry scheme

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Abstract. Uncertainty of community rights on land becomes the root of agrarian conflict in Indonesia. Efforts to resolve agrarian conflicts have become important issues in each period of government in Indonesia. The Government of Indonesia issued Ministerial Regulation No.83 of 2016 concerning Social Forestry. The objectives of this policy are forest protection, community economic empowerment, and the resolution of social problems. This study aims to analyze the development and dynamics of agrarian conflicts in the forestry sector from 2013 to 2018 and the role of social forestry schemes in conflict resolution. The method used is descriptive statistical analysis and exploration of secondary data. Agrarian conflicts in Indonesia during 2013 - 2018 reached 2,612 cases of agrarian conflicts with a total land area of more than 7.1 million ha. The analysis shows that the contribution of conflicts in forest areas is 5% to 8% to all agrarian conflicts. The average area of conflict in the forestry sector per year reaches 24% of the total area of agrarian conflicts in Indonesia or 263,269 hectares per year. The conclusion of this research is the resolution of agrarian conflicts with social forestry schemes can be effective if the community is more oriented to the protection and legal recognition for optimizing forest use rather than the demands of legal recognition of land ownership.

1. Introduction

Forests have an essential meaning in people's lives, especially for those who depend on forest resources for various products such as firewood, building materials, medicines, and food [1]. Across South East Asian (ASEAN), around 140 million people depend on forest areas and have developed systems for managing resources based on local wisdom [2]. In Indonesia, more than 11 million ha the villages around the forests area (1,500 villages), whose existence supports the lives of 80-95 million people [3].

In many countries, conflict is always unavoidable in natural resources management, including in Indonesia [4]. The reason for the conflict is related to many parties interested in nature, where each party has different needs and goals. Even though Indonesia is an agrarian country with a majority of people living in the agriculture sector, agrarian conflicts are easy to find because of the land key element for livelihood and welfare [5]. The agrarian conflicts occur not only between individuals or between individuals and groups but also between groups. They can develop into long disputes that can provoke physical clashes between disputing parties and potentially weakening national political stability [6][5].

Agrarian conflicts in Indonesia are strongly influenced by national development policies and plans and the emergence of leading sectors and economic potential in certain regions. The New Order Era under president Soeharto brought about significant changes in agrarian politics in Indonesia after 1965. The change was different from the previous regime, which had an agricultural political view of 'land for
the people’ and ‘land to the tiller’ through the land reform program. However, agrarian politics was oriented towards supporting investment through large scale land provision in the new order era. It can be seen in the granting of forest concession for the company, which is a 35-year concession right given to private and state-owned companies to collect timber in designated areas through the Selective Cutting System [4]. In addition, the new order era could also see the significant development of industrial plantations and oil palm plantations in the 1980s and early 2000s.

Agrarian conflicts that occurred during the new order era which were quite significant include conflicts due to large-scale plantation development, construction of public facilities in urban areas, construction of luxury housing and new cities, development of industrial forests plantation, construction of factories and industrial estates, construction of dams and irrigation projects, construction of tourist and hotel facilities, mining, construction of military facilities and establishment of conservation areas and protected forests [7]. After regional autonomy in 2001, land ownership conflicts occurred in many regions in Indonesia [8]. In 2004-2012, there were 618 land tenure conflicts across Indonesia that covered 2,399,314.48 hectares of land and involved 731,342 households [9]. In 2012, 40% of Indonesia's land ownership conflicts occurred in the plantation sector, 30% in the infrastructure development sector, 11% in the mining sector, 4% in the forestry sector, and 4% in the coastal economic development sector [10].

Indonesia's forest area in 2011 reached 81.14 million ha, and an estimated 32.45 million people reside around the forest area [11]. About 10.2 million of them are included in the classification of poor people who are vulnerable because they do not have land rights certainty. Therefore, the problem of agrarian conflicts in forest areas needs to be studied in more depth. Studies on agrarian conflicts in Indonesia, especially in the forestry sector, have been carried out, such as study in Maluku Island, Muna district, East Sumba district [12][5][13][14]. The previous studies are studies on a regional and local scale to not describe the problem of agrarian conflicts that basically occur in almost all forest areas in Indonesia. This study aims to examine agrarian conflicts throughout Indonesia in the year 2013-2018.

2. Method

The data used in this study were secondary data obtained from various publications/reports related to agrarian conflicts in Indonesia in the year 2013-2018. The main data sources for this study were the Annual Report of the Consortium of Agrarian Reform (KPA) from 2013 to 2018 and the Ministry of Environment and Forestry (MoEF) data of the implementation of social forestry.

The KPA is an open and independent people's movement organization in Indonesia with the aim of equitable allocation, the security of ownership, control, and use of land in Indonesia for low-income families. It was established on 24 September 1994 in Jakarta with a total membership of 153 organizations consisting of 85 farmer organizations and 68 non-government organizations. Every year, the consortium issues publications related to agrarian conflicts in Indonesia. This publication contains data and information on agrarian conflicts that are processed from various sources, including reports from consortium members.

Data analysis was done by using descriptive statistics and exploration of the typology of agrarian conflicts and the actors involved in agrarian conflicts in 2013-2018 based on literature studies. Then it was also carried out an exploration of forestry sector-related policies in 2013-2018 and its relationship in the resolution of agrarian conflicts in the forestry sector. The data analysis scheme according Figure 1.
3. Results and discussion

3.1 Agrarian conflict in Indonesia

The agrarian conflict in Indonesia in 2013-2018 covered various sectors such as plantations, forestry, infrastructure, mining, agriculture, and coastal areas. From 2013 - 2018, there were 2,612 agrarian conflicts involving more than 1.1 million families with a total land area of more than 7.1 million ha (Table 1). On average per year, the number of agrarian conflicts in Indonesia is 435 conflicts with an area of conflicting 1,189,294 hectares with the involvement of 196,921 families.

| Year | Number of Agrarian Conflict | Total Area of Agrarian Conflict (ha) | The Number of Involved Family (KK) |
|------|-----------------------------|------------------------------------|-----------------------------------|
| 2013 | 369                         | 1,281,660                          | 139,874                           |
| 2014 | 472                         | 2,860,977                          | 105,887                           |
| 2015 | 252                         | 400,430                            | 108,714                           |
| 2016 | 450                         | 1,265,027                          | 86,745                            |
| 2017 | 659                         | 520,492                            | 652,738                           |
| 2018 | 410                         | 807,178                            | 87,568                            |
| Total | 2,612 | 7,135,764 | 1,181,526 |

Source: [10][15][16][17][18][19][20]

By sector, 2,612 agrarian conflicts were spread in plantations with 1,007 conflicts, Infrastructure 600 conflicts, Mining 138 conflicts, Forestry 156 conflicts, coastal 67 conflicts and other conflicts 664 conflicts (Figure 2).

By sector, agrarian conflicts are spread over plantations covering 3,085,730 hectares, infrastructure covering 213,765 ha, mining covering 170,695 ha, forestry covering 1,579,316 ha, coastal areas covering 1,656,433 ha and other sectors covering 429,825 ha (Figure 3).
Figure 2. Distribution of conflict by Sector [15][10][17][18][19][20]

Figure 3. Area of conflict by sector (Ha) [15][16][17][18][19][20]

3.2 Agrarian conflict in the forestry sector
Based on the processing of agrarian conflicts data in the forestry sector from 2013 to 2018, it shows that on average, the forestry sector contributes 6% of the total agrarian conflicts each year. The total conflict area shows that it contributes 24% of the total conflict area on average. This shows that every agrarian conflict occurs in large-scale forest areas. Data processed shows that from 2013-2018 the average conflicting land was 10,124 ha per conflict (Table 2).

Table 2. Comparison of agrarian conflicts and agrarian conflicts of forestry.

| Year | No of Conflict | Total area of Conflict (Ha) | No of Conflict in Forestry | Total of Conflict in Forestry (Ha) | % | % | Average of Forestry Agrarian Conflict (ha) |
|------|----------------|----------------------------|---------------------------|-----------------------------------|---|---|------------------------------------------|
| 2013 | 369            | 1.281.660                  | 31                        | 545.258                           | 8%| 43%| 17.589                                   |
| 2014 | 472            | 2.860.977                  | 27                        | 271.544                           | 6%| 9% | 10.057                                   |
| 2015 | 252            | 400.430                    | 24                        | 52.176                            | 10%| 13%| 2.174                                    |
| 2016 | 450            | 1.265.027                  | 25                        | 450.215                           | 6%| 36%| 18.009                                   |
| 2017 | 659            | 520.492                    | 30                        | 194.453                           | 5%| 37%| 6.482                                    |
| 2018 | 410            | 807.178                    | 19                        | 65.670                            | 5%| 8% | 3.456                                    |
The trend shows that there is a similar pattern between the total number of agrarian conflicts and the number of agrarian conflicts in the forestry sector. An increase or decrease in the number of agrarian conflicts in Indonesia in a certain year shows the same pattern in the forestry sector. A different pattern only occurred in 2014 where there was an increase in the number of conflicts and the extent of conflicting areas compared to 2013. In 2014 there was an increase in the area of conflicted land compared to 2013, but in the forestry sector it actually showed a decrease in the area of conflicted land (Figure 4).

Agrarian conflicts in 2014-2018 occurred in all provinces in Indonesia with the dominance of the conflict found on the island of Sumatra and Java. The three provinces that contributed the most to agrarian conflicts were Riau Province with a total of 221 conflict cases, 216 cases in East Java Province, and 175 cases in West Java Province. Riau Province during 2014-2018 always ranked first in terms of the many cases of agrarian conflicts and East Java Province consistently ranked second, except in 2017 (Table 3).

### Table 3. The highest agrarian conflict in 3 Provinces.

| Year | Riau | East Java | West Java |
|------|------|-----------|-----------|
| 2014 | 52 (1)| 44 (2)    | 39 (3)    |
| 2015 | 36 (1)| 34 (2)    | 15 (5)    |
| 2016 | 44 (1)| 43 (2)    | 38 (3)    |
| 2017 | 47 (4)| 60 (1)    | 55 (2)    |
| 2018 | 42 (1)| 35 (2)    | 28 (4)    |
| Total| 221  | 216       | 175       |

Source: Processed from the [15][16][17][18][19][20]

Figure 4. The trend of the conflict.
The high number of conflicts in Riau Province is related to the reality of the rapid expansion of industrial plantation forests and oil palm plantations due to concessions given to corporations located in the areas of community land. While the agrarian conflict in the forestry sector in Java is related to the forest area managed by Perhutani. The Perhutani area is bordered by at least 6,172 villages and villages within a forest area of at least 366 villages. This agrarian situation, has placed at least 21 million people living bordering the Perhutani area [16].

3.3 Actors in the forestry sector agrarian conflict

During 2013-2018 there were a number of cases that were prominent and could be an illustration of agrarian conflicts in the forestry sector in Indonesia. Based on the KPA Annual Report, the parties to the conflict in 2014 were: 21 conflicts between residents and private companies; 115 conflicts between citizens and the government (central/regional); 75 conflicts between residents against residents; 46 conflicts between citizens and state-owned company; and 18 conflicts between residents and police/military institution [18]. The most conflicting actors in 2016 were private companies with a total of 172 conflict cases. The next actor is the government with 101 conflicts and the last is horizontal conflicts between citizens with 65 conflicts [18]. According to the KPA, private company and community conflicts indicate that community land grabbing is still massive, indicating that regulations to hinder or stop the practice are still very minimal.

Conflict management in the forestry sector that is generally documented is the clash of authority between the central government and regional governments and competition with local communities regarding living needs [8]. The conflicts that occur in forest areas on Bangka Island tend to be in the form of conflicts for access rights and land management rights contained in forest areas [21]. Forms of community demands for the land include access rights, management rights and use rights where they can still cultivate the land and are free to determine land management patterns. The mechanism for resolving conflicts over forest areas with boundary delineation mechanisms is difficult to apply because the evidence of the rights held in the form of plantation areas that have not been accommodated by existing regulations to be directly excluded from the forest area.

3.4 Indonesia Forestry Sector Policy Development in 2013-2018

There were four policies relating to agrarian and forestry during 2013-2018 that affected the resolution of agrarian conflicts in the forestry sector. The policy consists of:

1. Memorandum of Understanding of 12 Ministries / Institutions concerning the Acceleration of the Establishment of Indonesian Forest Areas
2. Joint Regulation of 4 (four) Ministers concerning Procedures for Settlement of Land Tenure Located in Forest Areas
3. Minister of Environment and Forestry Regulation No. 83 of 2016 concerning Social Forestry
4. Presidential Regulation No. 88 of 2017 concerning Procedures for the Settlement of Land Tenure in Forest Areas

From these four policies, there are two policies relating to the resolution of agrarian conflicts in the forestry sector through social forestry schemes. The two policies are Minister of Environment and Forestry (MoEF) Regulation No. 83 of 2016 concerning Social Forestry and Presidential Regulation No. 88 of 2017 regarding Procedures for the Settlement of Land Tenure in Forest Areas. The MoEF Regulation No. 83/2016 confirms that social forestry is the solution for forest management by local communities to improve social and ecological balance. Schemes in Social Forestry include Customary Forests, Village Forests, Community Forests, Community Plantation Forests, and Forestry Partnerships. Each scheme in social forestry has its own definition according to the MoEF Regulation No. 83/2016. Customary Forest is a forest located in an area of Indigenous peoples. The indigenous people apply to the government for customary forest by fulfilling the regulation relate to customary forest. Village Forest is the state forest managed by the village and aims to social welfare. Community Plantation Forest is a plantation forest in the production forest area and built by community groups to increase the quantity
and quality products based on silviculture. Forest Partnership is a collaboration between local communities with forest permit holders. The permit holders are timber companies or industrial plantation forest companies. Until June 2020, the area of social forestry reached 4,194,689 hectares for 860,770 families [22][23]. In general, the application for social forestry by the community has been approved by the MoEF is a proposal from a community organization accompanied by a Non-Governmental Organization. This shows that the dependence of the community on supporting institutions becomes very vital. Factually, not all people who live in and around the forest area have access to supporting institutions.

The institution's role in social forestry is not only placed as an administrative requirement but also encourages collective effort at the community level and is oriented towards economic aspects and social and environmental aspects. Economically to realize justice and economic equality at the community level, on the social element to be able to become a medium for resolving conflicts or disputes or social dynamics at the community level and maintaining the sustainability of forest functions [24].

In Presidential Regulation No. 88 of 2017 concerning Procedures for Settling Land Tenure in Forest Areas. There are four conflict resolution schemes, namely: (a) the release of forest areas, (b) swapping forest areas, (c) social forestry management rights, and (d) resettlement. The recipient subjects are individuals, agencies, social/religious bodies, and customary law communities. If the conflicting land has been physically controlled for at least 20 years by the community and there is no lawsuit from other parties, then it is included in the forest area release scheme. The province with a forest area of less than 30% consists of all provinces in Java, Bali Province and Lampung Province. There are only two possible options: social forestry or resettlement. Both schemes will not reduce forest area.

Based on data from the MoEF, the resolution of agrarian conflicts in the social forestry scheme reached an area of 103,457 ha spread across 12 Provinces (Table 4). Conflicts generally occur between communities and companies, as many as 18 companies. The 18 companies consist of 3 types of companies, namely logging, timber plantation and forest Restoration Company. Another conflict is between the community and the forest management institution (government unit).

Table 4. Resolving forestry conflicts through social forestry scheme [22].

| No | Province          | Total (Ha) | Description                                      |
|----|-------------------|------------|--------------------------------------------------|
| 1  | Aceh              | 4.070      | Local community vs Government                    |
| 2  | North Sumatera    | 6.509      | Two types of conflict                            |
|    |                   |            | ● Local people vs Company (1 Company)            |
|    |                   |            | ● Local people Vs Government                     |
| 3  | Jambi             | 23.393     | Local people vs Company (7 Company)              |
| 4  | West Sumatera     | 3.865      | Local people vs Company (1 Company)              |
| 5  | Riau              | 3.500      | Local people vs Company (1 Company)              |
| 6  | South Sumatera    | 14.362     | Local people vs Company (2 Company)              |
| 7  | Lampung           | 9.600      | Local people vs Company (1 Company)              |
| 8  | West Kalimantan   | 17.802     | Local people vs Company (2 Company)              |
| 9  | East Kalimantan   | 14.000     | Local people vs Company (1 Company)              |
| 10 | North Kalimantan  | 5.113      | Local people vs Company (1 Company)              |
| 12 | West Nusa Tenggara| 1.243      | Local people vs Company (1 Company)              |
Conflict resolution through a forestry partnership scheme for twenty-eight cases, community forest for four cases, and customary forest for one case. The Forestry Partnership is the most widely implemented social forestry scheme in resolving conflicts between companies and communities. This scheme is the easiest to implement because of the company's openness to resolving conflicts without reducing the concession and open opportunity of business cooperation with communities. The government's role can facilitate the process and establish agreements on social forestry schemes chosen by the conflicting parties. There is only one Customary Forest scheme that is implemented as a conflict resolution, namely the conflict in North Sumatra. Only indigenous peoples can apply for customary forests. To be designated as an indigenous community requires various requirements and proves forest management practices based on local wisdom. This makes it difficult for community groups to make claims on behalf of indigenous peoples. Another scheme implemented is the Community Forest, and this applies to conflicts relating to forest areas managed by government institutions.

The opening of a way out of agrarian conflicts through social forestry is strongly influenced by the meeting of three interests namely, the government's position does not want to reduce the area of forest area, people's willingness to only get management rights, not ownership rights to land, and the does not create the disruption of company business activities. These three interests are not easy to meet, especially in areas where the use of forest areas by communities is very intensive, such as for settlements, food agriculture, and oil palm plantations. In general, people with this condition are more inclined to choose to ask the government to release these lands from forest areas to solve agrarian conflicts. Demands for the release of land from forest areas generally occur in Riau province and provinces in Java.

4. Conclusion
There was an increase in the number of cases of agrarian conflicts and the extent of conflict land in 2013-2018 compared to 2004-2012. Agrarian conflicts in Indonesia during the 2013 - 2018 reached 2,612 cases of agrarian conflicts with a total land area of more than 7.1 million ha. In the 2013-2018 agrarian conflict, the forestry sector was most dominant between the community and the private sector. Agrarian conflicts in the forestry sector, which tend to increase in number, are rooted in forest governance problems and neglect of community interests.

Government policies in the resolution of agrarian conflicts in the forestry sector in 2013-2018 showed changes for improvement. One of the policies that were quite intensive and widespread was social forestry. Social forestry is effective in communities that need legal recognition for forest management rights rather than land rights ownership. The implementation of social forestry still provides government control space because there are periodic government monitoring and forest evaluation.

Increasing the speed to resolve conflicts can be done with proactive action from the government without waiting for open conflict between the community and the company or the community and the government. This proactive step is to identify all community claims in forest areas and offer social forestry schemes in accordance with community conditions. Another thing that needs to be considered is the condition of the community's welfare after conflict resolution. Monitoring and evaluation of the selected social forestry schemes can reduce the potential for the emergence of new conflicts in the future.

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