Outlining the dynamics of forest landscape and farmer lifescape in a village forest profile in Indonesia

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Abstract. This study aims to analyse the dynamics of the forest landscape and lifescape of forest farmer groups in the Labbo village forest, South Sulawesi province, Indonesia. Several stakeholders are identified on a co-managing, protecting and utilizing resources such as villagers, forest farmer groups, farmers, village officials, forest officers. Data collection methods used in this study are resource mapping, social mapping, and interviews. The method is deployed to determine trends in the changes of forest landscape dynamics and the lifescape of farmers in the Labbo village forest. The results show that there is a tendency on good performance both landscape and lifescape dimension due to the good multistakeholder collaboration that not only on capacity building but also introducing good knowledge production

1. Introduction

Recently, the problem faced by the forestry sector is poor performance both on the business [1] and the sustainability issues. Furthermore, forest management application has created a conflict of interest between multi-level governments and local communities [2]. The rate of deforestation occurs due to the overlap between forest areas and plantations, poor forest management, illegal logging, and forest use that are not based on the principle of sustainable forests. The conversion of forest areas into agricultural cultivation and smallholder plantations was the main trigger of forest degradation in Bantaeng District [1] [3]. Based on data from the Bantaeng District Government in 2010, the forest land area in Bantaeng Regency in 1991 was 6,222 ha, while in 2011 was 13,141 ha and in 2015 was at 5,792.32 ha (Bantaeng District Spatial Plan) [4]. This paper observes a momentum, when multiple actors developing village forests in Bantaeng which formally aim to let villagers legally utilize state forest resources to increase their income as well as to increase forest cover in the village and forest institutions [1,5].

Village forest scheme is implemented in Bantaeng in 2010 through a collaborative management model approach by involving various stakeholders such as different government officers, local communities, a University and non-governmental organizations (NGOs). These stakeholders develop agreements that affirm their roles, responsibilities and rights in the management of a forest resource area. The agreements were designed by a different local issue in each level considering complex rules. The implementation of village forests is intended to provide access to local communities through village institutions in utilizing forest resources sustainably with the aim to improving the welfare of local communities in a sustainable manner [6,7,8].

In this paper, it is used landscape analysis to describe and interpret measurement of the geographical territory of the forest area includes mapping of natural resources. Variables in landscape analysis can be
used to evaluate the impact of past disturbances (natural) and to plan and regulate humans further on resource use [9,10]. In lifescape dimension, we refer to people (men, women, various social groups and stakeholders), formal and informal institutions, social structures, and relationships among them and the landscapes that influence lifestyle and potential opportunities to increase their income [11]. Landscape-LL analysis is also used as a participatory tool to assess a landscape and humans’ system in the land use system [12]. This analysis aims to understand how social structures and contexts affect people's livelihoods, the potential and use of natural resources aims to realize the good management in a particular landscape. Hence, this paper use LL analysis to assess the proportionally profile of the landscape lifescape of ongoing village forest scheme implementation in Bantaeng district, South Sulawesi province in Indonesia.

2. Methods protocol

2.1. LL analysis protocol
LL as a descriptive analysis to determine trends in changes in forest landscape dynamics and the tendency of farmer lifescape on the management of Labbo village forest. Descriptive analysis is a method used to examine the status of a human group, an object, a set of conditions, a system of thought or class of events in the present. It aims to create a description, picture or painting in a systematic, factual and accurate, determines the facts, the nature and relationship phenomena investigated [13]. Descriptive analysis is intended to explore and clarify something social phenomenon or reality, by describing a number of variables relating to the problem and the unit under the study framework [14].

2.1.1. Landscape analysis. Analysis of the landscape is divided into two periods before and during the period designated as the working area of the village forest (≤2010), during the period designated as village forests (2005-2010) and the period after designated as village forests (in 2011 -2017).
Furthermore, to know and understand and consider the dynamics of the Landscape of the forest by following the steps according to Rietbergen et al. [15] as follows:
Step 1. Define adequate units and boundaries in the landscape of interest
   • Identify the landscape area whose dynamics that observer wish to understand
   • Identify the components of the landscape mosaic
Step 2. Identify the relevant stakeholders. Identify stakeholders in each of the components of the landscape
Step 3. Identify the actions of relevant stakeholders and their impact on the forest landscape
   • Identify those actions that increase or decrease forest cover and those that improve or worsen forest condition.
   • Identify those stakeholders that are having the largest impacts on the landscape
Step 4 : Identify links among actors action and impact to the landscape

2.1.2. Lifescape Analysis. Analysis of lifescape was carried out to determine the relationship between social groups and communities with landscapes around the Labbo village forest area. Lifescape analysis [15] criteria through socio-economic approaches are as follows:
a. Livelihood strategies. Employment / livelihood sector categories of farmer as the managers.
b. Farm resources. Identify forest resources used as well as land use system applied by communities around the forest.
c. Status of rights. Status of utilization of land in the Labbo village forest working area
d. Institutional. The rule of thumbs and signs as a guide used by members of a community group to set up a mutually binding or mutually dependent on one another.

2.1.3. Dynamics of LL analyses. LL dynamics analysis uses 5 core attributes [10] such as geographical area and place, collaboration, knowledge production, sharing, actors’ commitment to and understanding
of sustainability to find out and analyse trends in forest landscape change and the changing tendency of farmer lifescape on the management of village forest.

2.2. How we collect the data
We observed of current village forest experimentation in Labbo, Bantaeng district for three months from July to September 2018. We also interviewed some key stakeholders such as the leader of forest farmer groups, village business institutions that responsible for managing village forest scheme (BUMDES), individual farmers that who directly making direct involvement on forest resource utilization in different scale of the topography, area and the management and village forest utilization. We also collect all related document resources [17] on formal document (management plan, village forest permit proposal) and rules.

3. Results and discussion

3.1. Village forest landscape

3.1.1. Units and boundaries in the landscape forest. On January 21, 2010, the Minister of Forestry Indonesia determined that the large in size of village forest working area was ± 342 ha. The type of mosaic of landscape on the observed village forest is consist of coffee agroforestry mosaics, the area of several non-timber forest products e.g. honey, rattan, bangga, and fruits trees. The landscape also includes the area of Anoa protection and natural forests preservation. These mosaics landscape can be seen in figure 1.

![Figure 1. The landscape’s mosaic type of Labbo village forest](image)

Figure 1 show a brief description of land tenue layer system. It was previously as legally state protection forest tenure system were people is not recognized and utilized the forest area and resources. Before the village forest was developed, the community farmers as encroachers had cultivated the land managed by ancestral land and then passed on to their grandchildren. In addition, forest resources such as timber forest products, non-timber forest products in the form of honey, agricultural farming land use, rattan, bangga, passion fruit and coffee are found and become a potential in state forests. Logging for sale is also often done. Conflict and disagreement over who manages the forest often leads to deforestation. This statement also in accordance with [3] that almost 54.4% forest area Bantaeng currently in critical condition to be rehabilitated and improved quality. People who initially manage forest land illegally
(encroachment), are disciplined in an organization in the form of a farmer group. The community can manage forest land that has been managed for years and people who do not yet have land and are classified as poor can also manage land with a maximum area of 0.5 ha. However, the community should follow the rules and policies in managing the Village Forest. Before 2010, farmers penetrated these forest products and sold timber in the state forest area. However, in the village forest was classified as protected forest functions. Based on the conditions above, in 2010, the government established a land use typology in the Labbo Village Forest working area based on the potential for finding forest products in certain areas in Labbo Village Forest. Lalijangang river was determined as the block area border which consist as the Pattiroang Block (51.17 ha), the Saroanging Block (168.48 ha), and the Batu Lepa Block (122.56 ha).

3.1.2. Stakeholders action to forest landscape. Stakeholders related to the forest landscape period during the initiation proposal of the Labbo village forest development (2008-2010), namely: (1) multiple agency of government at Bantaeng district (2) village government, (3) forestry agency of Bantaeng district, (4) Watershed agency of forestry ministry (BP DAS) (5) RECOFTC and Universitas Hasanuddin, (6) local communities.

RECOFTC (Regional Community Forestry Training Center for Asia and the Pacific) and Universitas Hasanuddin (UNHAS) facilitated the participatory mapping process of the Labbo Village forest area, increasing community capacity and delivering supervision on the village forest work plans. Local communities acted and involve on some participatory trainings delivered by RECOFTC and UNHAS. BP DAS provide a formal guidance on the preparation of village forest work plans. The village government formally proposed the state forest area to be reserved as the village forest working area to the head of Bantaeng district (Bupati). They also formally directed the BUMDES as the formal institution that will manage the village forest. Bantaeng district forestry agency support participatory mapping of village forest areas and give input on the proposal. Bupati proposed village forest work areas to the forestry ministry. Bupati form the informal task force on facilitating communities accessing village forest in term of business development, and prepares work plans for institutional development (BUMDES).

Stakeholders related to the forest landscape period after the Labbo village forest was established (2011-2017), namely: (1) multiple agency of government at Bantaeng district, (2) Bantaeng District Forest Service, (3) village government, (4) local communities, (5) Balang Institute, (6) BPDAS, (7) Universitas Hasanuddin. Balang Institute provide the facilitation assistance in managing village forests after RECOFTC’s community capacity building project ended, they were continuing the livelihood facilitation. Bantaeng district forest service, made a document on the plan for village forest management and fostering the operationalization of BUMDES. The village government propose management permits over the village forest rights to the Governor through the Bupati. Universitas Hasanuddin worked with Balang Institutes, facilitating the areas arrangement plan through determining management blocks, prepares village forest management plans and BUMDES institution prepartation. BPDAS conducted technical guidance, provided market and capital information.

3.1.3. Determine links. Stakeholders as mentioned earlier have the same goal of developing forest product resources into a commercial business unit commodity that provides high income to the communities in a sustainable manner to improve a community welfare. The forest farmers group is a stakeholder who plays an important role, because they are the direct actor in the activities of the Labbo Village Forest management.

Forest resources that have high economic value are coffee. From 342 ha of Labbo Village forest area, 23% is the area of agroforestry coffee development. This condition is in accordance with the Rencana Kerja Hutan Desa (2013) book that coffee is the main commodity cultivated by farmers in the Labbo Village Forest.

3.2. Livelihood strategies
The livelihoods in Labbo village are quite diverse, ranging from civil servants, honorariums, entrepreneurs, farmers, artisans and drivers. 86.2% of Labbo villagers earn their livelihood as farmers,
14.8% of the types of work are scattered, namely civil servants, businessmen, artisans and drivers. The potential of natural resources in this village allows the community to depend on them as farmers. The potential of natural resources managed by farmers is coffee, clove, honey and ornamental plants, rattan and bangga, passion fruit and banana.

**Table 1.** Types of commodities managed by farmers based on land use.

| No. | Farmer’s garden | Home garden | Village forest |
|-----|-----------------|-------------|---------------|
| 1   | Coffee          | Chili       | Honey and orchid land |
| 2   | Clove           | Cocoa       | Passion fruit  |
| 3   | Banana          | Coffee      | Rattan and bangga |
| 4   | -               | Passion fruit | Agroforestry coffee |
| 5   | -               | Decorative plants | - |
| 6   | -               | Clove       | - |

The types of coffee planted in the working area of the village forest are Arabica (Coffea arabica) and Robusta (Coffea robusta). The price of arabica coffee is higher than robusta coffee. The price of Arabica and robusta which around IDR. 60,000 / kg IDR 25,000 / kg respectively. The farmers pay their coffee levies with a ratio of 25% of contributions reward to BUMDES and 75% obtained by farmer. The types of commodities managed based on land use by the farmers that represented in table 1. Farmers cultivate commodities that have economic value in their own gardens, yards and in the village forest work area. The type of commodities are vegetables, fruit and Decorative plants. The amount of production of coffee and honey represented in Tables 2 and 3 respectively.

**Table 2.** Coffee production in Labbo village

| Respondents | Status of rights and land area (ha) | Ex-rehabilitated program area | Occupational agroforestry coffee | Large size of Land (Ha) | Coffee type | The amount (kg) |
|-------------|-----------------------------------|-------------------------------|--------------------------------|------------------------|-------------|----------------|
|             | Own land                          | Ex-rehabilitated program area | Occupational agroforestry coffee | Large size of Land (Ha) | Coffee type | The amount (kg) |
| Dg. Sallang | 1.5                               | 1.5                           | 1.5                            | 80                     | Arabica     | 160            |
| Sati        | 0.5                               | 0.5                           | 0.5                            | 40                     | 80          | 120            |
| Sambe       | 1                                 | 1                             | 1                              | 80                     | 80          | 160            |
| Banti       | 0.5                               | 0.47                          | 0.97                           | 80                     | 80          | 160            |
| Taho        | 0.5                               | 0.42                          | 0.92                           | 20                     | 20          | 40             |
| Ruddin      | 0.5                               | 0.5                           | 0.5                            | 80                     | 80          | 160            |
| Alimuddin   | 0.5                               | 0.5                           | 1                              | 80                     | 120         | 200            |
| Sapu        | 0.25                              | 0.25                          | 0.25                           | 0                      | 20          | 20             |
| Sukma       | 0.5                               | 0.5                           | 0.5                            | 40                     | 40          | 80             |
| Tahir       | 1                                 | 1                             | 1                              | 80                     | 40          | 80             |
| Mala        | 1                                 | 1                             | 1                              | 80                     | 120         | 200            |
| Salasi      | 0.5                               | 1.98                          | 2.48                           | 200                    | 200         | 400            |
| Soeryi      | 0.5                               | 0.42                          | 0.92                           | 80                     | 80          | 160            |
| Mustari     | 3                                 | 3                             | 3                              | 400                    | 400         | 400            |
| Umar        | 1                                 | 0.54                          | 1.54                           | 0                      | 160         | 160            |
| Rahmawati   | 0.5                               | 0.5                           | 0.5                            | 80                     | 80          | 80             |
| hj. Umar    | 2                                 | 2                             | 2                              | 360                    | 360         | 360            |
| bai Dani    | 1                                 | 1                             | 1                              | 280                    | 280         | 280            |
| Ina         | 0.5                               | 0.5                           | 0.5                            | 80                     | 80          | 80             |
| Jamaluddin  | 1                                 | 1                             | 1                              | 120                    | 120         | 120            |
| Ahmad toton | 1                                 | 1                             | 1                              | 120                    | 120         | 120            |
| Sinta Alzahra | 1                         | 1                             | 1                              | 120                    | 120         | 120            |
| Sangkala    | 0.5                               | 0.31                          | 0.81                           | 0                      | 160         | 160            |
| Bido        | 1                                 | 1                             | 1                              | 200                    | 200         | 200            |

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Table 2. shows that harvested coffee in the village forest area is around 160-400 kg with an area of 0.5-1 ha. Coffee obtained from outside the area (owned garden) an average of 120-400 kg with a land area of about 0.5-3 ha. The price of arabica coffee is higher than the robusta coffee. Arabica coffee is sold as the *peco* form. While robusta coffee is sold in the more marketable form. Farmers sell coffee to the markets and collectors.

The amount of coffee plant production is increased, it can be caused by several factors, namely the increase used of protective tree on the agroforestry system, and the involvement of the village government and local NGOs (Balang Institut) on supporting the business facilitation. According to its formal village forest management document (RKHD), the village government together with Balang institute made a business development plan to utilize the types of business for coffee agroforestry in the Pattiroang, Saroanging and Batu Lappa blocks. Protective trees are a complex shade that protects the soil surface from exposure to rainwater; increase nutrient content in the soil, and affect the amount of sunlight intensity that can be absorbed by coffee plants. Agus et al [18] also states that a sovereign, when the protective tree planting distance can be set so as to provide shade around 30% then this system will be able to increase coffee production.

Coffee harvesting activities involve family members, both male and female. Female have the task of picking coffee fruit and preparing food supplies, while male also play a role in picking coffee fruit and transporting harvests. Coffee fruit drying activities are carried out both male and female. Farmers need machetes and pesticides in maintenance activities. Furthermore, in harvesting farmers use hands or hooks.

### Table 3. The amount of honey production in Labbo village forest area

| Respondents | Amount of harvest (bottle) | Frequency of harvesting (times/month) | Frequency of harvest calendar (times/year) | Amount of harvest/year (bottle) |
|-------------|---------------------------|--------------------------------------|-------------------------------------------|-------------------------------|
| Sampe       | 3                         | 3                                    | 3                                         | 27                            |
| Taho        | 3                         | 3                                    | 3                                         | 27                            |
| Bido        | 3                         | 3                                    | 3                                         | 27                            |
| Budi        | 4                         | 3                                    | 3                                         | 36                            |
| Banang      | 8                         | 5                                    | 3                                         | 120                           |
| Asdar       | 5                         | 5                                    | 3                                         | 75                            |
| Nurdin      | 5                         | 4                                    | 3                                         | 60                            |
| Abiba       | 5                         | 4                                    | 3                                         | 60                            |
| **Total**   |                           |                                      |                                           | **432**                       |

Besides coffee, farmers also use village forests to develop passion fruit plants. The community has also utilized the growing space and tree stands in the Village Forest working area to plant passion fruit plants. According to Supratman dan Sahide [3]) Production of passion fruit an average of 20-30 fruit / tree. Passion fruit, consisting of 2 types, namely passion fruit yellow (*Passiflora edulis forma flavicarva*) and passion fruit edulis (*Passiflora edulis forma edulis sims*). According to Sahide and Ekaputra (2011), the number of yellow passion fruit and Edulis passion was at 2,559 and 330 respectively.

Another potential managed by the communities is honey bees. The amount of honey production in the work area of Labbo village forest is presented in table 3.

In the table 3 shows that there are 8 farmers who took honey from natural forests. The ratio of honey production was 3-8 bottles/month, and the rate in every year was 27-120 bottles. The total production was 432 bottles. According to Supratman and Sahide [3] in a year, the farmer the honey bee business unit can only harvest honey averaging 25 bottles.
There are 2 types of honey marketing in the Labbo represented in figure 2. Farmers harvest honey from natural forests in September, October and November. Farmers can enter the forest to harvest honey 3-5 times per month. Honey production showed a slight increase caused by farmer’s understanding and participation in honey bee cultivation. This productivity increased, especially in the period of formation of village forests and after that which was caused by the capacity of community groups (farmer groups) also increased. Supratman and Sahide [1] revealed that honey bee farmer training and technical guidance of bee farmers were held on 10-13 January 2010 in Labbo Village. The forestry office again conducted honey bee training in 2013 for community groups around the village forest [19].

Before 2009, honey bee cultivation by farmers was traditional. They rely on bee colonies originating from village forests. Collection of honey depends on the season, from August to October. In 2010, the village administration organized effort to strengthen the capacity of farmers and reduce dependence on the production of honey from the area of Forest Village. Furthermore, Supratman and Sahide [3] also stated that after attending the training, participants were given 5 boxes of bee colonies for each village as the initial trigger to develop honey bee cultivation. This was also reinforced by Nurhaedah and Evita's statement [20] that in one harvest, farmers could produce 40-80 bottles. In total, in a year the number of bottles produced by the five farmer groups of 20-30 people in Labbo Village is 400-800 bottles per year.

3.2.1. Status of rights. The status of land use in the Labbo Village forest area is presented in table 4. It shows the land used by farmers in Borrowed (occupation with closure of coffee agroforestry and Ex Gerhan) which was at 8,915 ha. While that in form of open access, it was 333.01 ha that can be utilized by the communities.

**Table 4. The form of land tenure system in the Labbo village forest area (source: existing village forest management plan)**

| No. | Land use status | The number of farmer and area in size |
|-----|----------------|-------------------------------------|
|     |                | Name of the owner | area (ha) |
| 1   | Agroforestry coffee (claimed as the land owner) | Salasi | 1.98 |
|     |                    | Banti    | 0.47 |
|     |                    | Alimuddin | 0.5 |
|     |                    | Umar    | 0.54 |
|     |                    | Taho | 0.42 |
|     |                    | Soriy | 0.42 |
|     |                    | No Name | 0.48 |
|     |                    | Jumanang | 0.53 |
|     |                    | Rullah | 0.57 |
|     |                    | Ardi | 0.6 |
|     |                    | Kasi | 0.96 |
| 2   | Ex Gerhan land (ex-land of national rehabilitation project) | Sampe | 1.135 |
|     |                    | Sangkala | 0.31 |
| 3   | Open Access       |          | 333.01 |
It was noted that there were 899 heads of households in Labbo Village who could access the village forest. There are 3 farmers claimed the ex-land of Gerhan area (ex-land of national rehabilitation project) and 10 farmers occupied the land with semi-intensive farming with coffee agroforestry type. The Ganting BUMDES recognized this rights by transforming into BUMDES' regulation. It is regulated that to manage village forest land a maximum of 0.5 ha and prioritized farmers who are classified as poor. For farmers who have used land of ≥5 ha because of their historical mastery background, before the village forest was formed, a dispensation was given to continue the management of the land with the requirement to plant a yearly plant with a minimum age of 4 years in the area.

- Institution period before the village of Labbo was formed. Before the existence of village forests, local community institutions did not yet have legal rules for land ownership, ownership of forest products and profit sharing for landowners and farm laborers. Communities work individually on state land and are not controlled in carrying out activities in forest areas such as collecting forest products from commodity commodities that can be traded. The potential of non-timber forest product commodities such as coffee, cloves, passion fruit, cocoa, honey and rattan is used by the community to supplement their income. However, the community has not developed the commodity as a potential business unit. This is partly due to the relatively low understanding of the community regarding the use of certain commodities and the unavailability of forest management institutions at the village level.

- Institution period after the formation of Labbo village forest. Institutions in this period began to be strengthened during the initiation and formation of the Labbo village forest. The stages of building development began with the development of the Bantaeng Regent's regulatory policy regarding village forest management and village regulations. According to Supratman and Sahide (2010), when the Village forest development program was inaugurated, the establishment of BUMDES was in the process in Labbo Village. BUMDES Ganting manage the punishment and reward to farmers and administrators of public enterprises for the management of village forest. These BUMDES coordinate farmer groups. Membership of farmer groups consists of 5-20 people for one farmer group, led by one group leader. Farmers who were previously not in groups are now members of farmer groups and are part of the management of BUMDES. Thus the transformation of the benefits of the absence of economic use of forest products to environmental services becomes the optimization of the management of non-timber forest products and environmental services. Farmers conducted a meeting 12 times a year. The meeting discussed efforts to improve crop yields such as socialization / counseling on fertilizers, counseling on the maintenance and maintenance of coffee and how to harvest.

3.3. Dynamics of Landscape-Lifescape

Basically, the dynamics of Lifescape - Landscape include changes in landscape composition (i.e., the composition of various landscape components in the form of forest areas, non-forest areas, or housing) and changes in the conditions of community patterns (such as changes in livelihoods, natural resource use).

Changes in landscape and lifescape influence each other. The existence of village forests affects the lifescape of the community that utilizes managing forest resources.

3.3.1. Geographical area and place. The Labbo Village Forest area did not change in area by 342 Ha in accordance with the South Sulawesi Governor's Decree Number 3805 / XI / 2010 concerning Giving Village Forest Management Rights in ± 342 Hectares to Village-Owned Enterprises (BUMDES) Ganting Desa Labb Tompobulu District, Bantaeng Regency, South Sulawesi Province. However, those who experience changes are increasing vegetation cover.

Increasing vegetation cover has an impact on increasing the potential of natural resources in this village forest. Thus, this potential is utilized by the community to fulfill their daily needs and to increase
their income. Communities also maintain village forest resources (ecological systems) for their sustainable use. The vegetation cover of Labbo village in 2004, 2010 and 2017 is presented in figure 3.

Figure 3. Map illustration on forest cover captured in 2004, 2010 and 2017 in Labbo village forest

In the figure 3 shows that in 2004, the type of land cover in the village of Labbo before the formation of village forests are secondary dryland forest, mixed dryland agriculture, and rice fields. In 2010, the cover captured consist of dryland forest, dry mixed farming of bushes and rice fields. Furthermore, in 2017, the cover land was changed into secondary dryland forest and shrubs.

3.3.2. Collaboration. Sustainable development (SD) is a collaborative learning process that is social learning with the aim of building social capital and the capacity to address sustainability issues. The collaboration of stakeholders both at the time of initiation and formation and in the management of the village forest has resulted in an understanding and agreement in its management. Trust and networking is very important in building collaboration and partnerships. On this basis it is also used as a reference for farmers in their groups as well as for management of BUMDES, Village Heads, related Offices (especially the Forestry Service) and academics in conducting their respective roles.

3.3.3. Knowledge production. The results of collaboration between stakeholders gave birth to the production of knowledge, especially for people who are members of farmer groups. The new knowledge and experience gained came from the results of capacity building in the form of counseling and training.
obtained from, universities (UNHAS), training institutions (RECOFTC), and local NGO (Balang Institut) which had been active in developing their capacities. Sharing is about two things, sharing new experiences and knowledge with others in improving the knowledge production process. This was felt by the BUMDES group and the management and other stakeholders involved in training and mentoring.

3.3.4. Commitment to and understanding of sustainability. Commitment and understanding of the management of this village forest need to be maintained. The BUMDES Ganting regulation is one form of commitment made by the farmer managers and management of BUMDes for the sustainability of the management and development of the Labbo village Forest.

4. Conclusion

Landscape forest dynamics in Labbo village forest from 2003 (before being designated as village forest) to 2017 (after being designated as village forest) has not changed. Interestingly, the density and vegetation cover in the work area experienced a slight increase. The livelihood aspect of lifescape is also tend to on the better performance. This change affected the community lifescape and managing farmers in Labbo village. These changes have an effect on livelihood strategies, forest resources and land use, owned land, status of rights and institutional. It is identified that the good trend of Labbo village forest landscape and lifescape is multiple actors that involved in the village forest implementation making good collaboration, have good commitment on the sustainability and making better knowledge management

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