

FOREST AREA MANAGEMENT WITH SPECIAL PURPOSE (KHDTK) UNIVERSITY OF BRAWIJAYA FOREST

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ABSTRACT

The objective of this study is to identify and analyze the management of Forest Area with Special Purpose (KHDTK) University of Brawijaya Forest and to identify and analyze the role of Triple Helix in the management of Forest Area with Special Purpose (KHDTK) University of Brawijaya Forest. The method used in this research is qualitative research and the type of study used in this research is phenomenology. In relation to this research, the main correspondent on this research is the stakeholder or officials related to the management of University of Brawijaya Forest through informant from the management of University of Brawijaya Forest, University of Brawijaya academics, forest farmers, regional government and village management. The result of this research is Forest Area with Special Purpose (KHDTK) University of Brawijaya Forest consisting of the planning of KHDTK, implementation of KHDTK, partnership management of KHDTK, forest utilization in the KHDTK area, development of supporting facilities and infrastructure for KHDTK, reporting on the management of KHDTK University of Brawijaya Forest. The role of stakeholder in supporting the management of Production Forest and Protected Forest in the area of Forest Area with Special Purpose (KHDTK) University of Brawijaya Forest.

Keywords: University of Brawijaya Forest, Forest Area with Special Purpose (KHDTK), Role of Triple Helix

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1. INTRODUCTION

Development that relies on natural resources and environment should be carried out in accordance with the principles of good management and considering the environmental carrying capacity. A development must also consider the impact of development for the environment and social for the benefit of society in the future. World Commission on Environment and Development (WCED) defines "development that meets the need of the present without compromising the ability of future generations to meet their own needs" (in Brundtland (1987)). The definition of WCED shows that sustainable development is the fulfillment of the necessity of life and the improvement of the quality of life in the present time must consider about the capacity and sustainability of natural resources for the future. Alshuwaikhat & Abubakar (2008), Moldan et al. (2012), Fritz & Koch (2014), Sukoharsono (2018), Ali et al. (2020), Chowdhury & Quaddus, (2020) Taherkhani et al. (2020), defines that sustainability is the capacity to survive, so human sustainability is a long-term maintenance effort in order to achieve prosperity in the social, economic and environmental dimensions. The challenge for sustainable development at this time is meeting the human needs for economic development growth which is expected to improve the welfare of the community (Ndubisi et al., 2020; Redek et al., 2020;

Coscieme et al., 2020; Skene, 2020; Sajeve et al., 2020; Pasaribu et al., 2020; Moallemi et al., 2020). In addition, the problem of inequality and equitable development is a challenge that must be overcome as well. With the regional autonomy policy, it is hoped that the authority to manage and utilize natural resources in the region will narrow the level of disparity. For this reason, a proper understanding of the authority of the supervisory system and the regulation of roles and responsibilities of each party, both central and regional governments in the management of natural resources and the environment, must be enforced so that it is in line with the national goal, namely improving the welfare of the community.

Realizing the important roles of forests, the form of University of Brawijaya Forest management in Karangploso sub regency of Malang regency needs to prioritize the principles of sustainable land management and ensure the welfare of the people in the University of Brawijaya Forest area. Referring to the Decree of the Minister of Environment and Forestry of the Republic of Indonesia Number: 676/MenLHK-Setjen/2015 University of Brawijaya Forest has a function as a Forest Area with Special Purpose (KHDTK) which is managed by University of Brawijaya with a forest area of 544.74 hectares. KHDTK-University of Brawijaya or better known as UB Forest is an example of a forest ecosystem in Malang Regency.

The existence of UB Forest is a form of community service for the academic community of University of Brawijaya. One of the reasons for the transfer of ownership rights of Perhutani forest management to University of Brawijaya is the existence of organizational energy from University of Brawijaya itself to meet the needs of field laboratories, a form of implementation of the Tri Dharma Perguruan Tinggi, and as an educational forest. The actors who play a direct role in the application for Forest Area with Special Purpose (KHDTK) UB Forest are: representatives of University of Brawijaya, Minister of Environment and Forestry, Governor of East Java, BPKH, KPH Malang, and Forestry Service. With the existence of UB Forest, it is hoped that it can become a research field (field laboratory) that produces competitive products at the international level. In addition, UB Forest area is expected to increase the productivity and income of the local community. The existence of University of Brawijaya Forest will also support the development of University of Brawijaya to become a Green University and role model for local culture-based forest management.

No less important, the existence of KHDTK UB Forest is expected to be able to improve the quality of the environment in Malang regency, especially in Karangploso sub regency. This is because Karangploso is prioritized to be a fast-growing area. Karangploso sub regency, which is located in the north of Malang Regency, has a strategic position in the sustainable development. As a supporting area for metropolitan urban development, Karangploso, which has an area of 58.47 km², is a Golden Triangle area, namely Malang Regency, Malang City and Batu City. This strategic location makes Karangploso, traversed by the main route connecting the cities of Surabaya and Batu, prioritized to be a fast-growing area.

The existing reality of University of Brawijaya Forest management is by preserving the conservation of protected forest and utilizing space for non-forest needs by planting coffee plants in production forest area. However, the existing condition is that coffee production in UB Forest has not been able to improve community's welfare in the economic sector. Most of the community in the UB Forest area prefer to work as agricultural laborers on forest area managed by Perhutani. It means that the natural resources in UB Forest have not been able to provide maximum livelihood within the forest. For this reason, it is necessary to develop the management of UB Forest in a sustainable manner so that the implementation of green economy in the forestry sector of UB Forest which has multi-function forests in maintaining the diversity of life and livelihood aspects within the forest can be manifested. Thus, investments made in natural capital in the form of protection and good management can be made by establishing a protected area as well as an area for good productive management in concession areas, along with the recognition of the rights of traditional communities in managing their environment and natural resources. For that, building a green economy model in the management of UB Forest with the perspective of SDGs is an alternative in overcoming the challenges of sustainable development which must include three aspects, namely economic, social and environmental.

2. LITERATURE REVIEW

a) Natural Resources in Forestry Sector

The current concept of forest sustainability generally has a broader scope than just yield sustainability, which is based on social, economic and ecological aspects. In line with this definition, Lewoema (2008) further states that

sustainable forest management, which was initially focused on producing wood and other forest products, is now also actually aimed at encouraging community's welfare, improving environmental quality, preventing environmental damage and rehabilitating the damaged environment due to internal and external factors.

b) Sustainable Development in the Management of Natural Resources

Sustainable development is officially used in MPR Decree No. IV / MPR / 1999 on the guidelines of state policy (GBHN), while the term Sustainable Development with an Environmental Perspective is used in Act No. 23 of 1997 concerning Environmental Management. Until now, the regulation of natural resource management in Indonesia has been implemented since the establishment of the Republic of Indonesia, stated in article 33 paragraph 3 of the UUD 1945, which reads: "The land and water and natural resources contained therein are controlled by the state and used for the prosperity of the people as much as possible" (Maryunani, 2018).

According to the Brundtland Commission (WCED 1987), sustainable development is development that covers the needs of the present generation without compromising (reducing) the ability of future generations to meet their needs. In relation with this concept, development in Indonesia cannot not said to be sustainable, because development in Indonesia turns out to have both positive and negative sides. The positive side is the increase of economic growth. Meanwhile, the negative side is the damage to the environment. If the negative impacts of development are not taken into accounts, then economic policies will only benefit in the short term and inflict environmental degradation, as a result of these issues the capacity of natural resources can no longer support society life in the future (Maryunani, 2018).

In an effort to overcome this problem, it is necessary to have an integration process between economic development and the environment in further development policies. The integration process is now known as the concept of environmentally sound development. In principle, there are three main dimensions of sustainable development, namely environment, social and economy. Various problems that arise in the environmental and social dimensions, basically cannot be separated from the activities carried out by humans in meeting their needs through their economic system in producing goods and services.

c) Determinants of the Implementation of Sustainable Development

Whether or not the environmentally sound development program is successful in creating sustainable economic development requires the support from several related parties. This is due to the complex economic development problems associated with the environment. The complexity of these problems requires the involvement of all parties, both government, private sector and the whole community. In addition, environmental studies need to involve various (multidisciplinary) experts in social, economic, environmental, legal and political terms.

d) The 15th Goals of Sustainable Development

The 15th Goals of Sustainable Development is to protect, restore, and support sustainable use of land ecosystems, managing forests in a sustainable manner, against the desertification, and stop and reversal soil degradation and stop biodiversity loss. This goal is related to protecting the natural resources and wildlife. The importance of

development to achieve 15th Goal of the SDGs is due to the contribution of forest products to the welfare of local communities and the role of forest services in meeting global goals. Forests have an important role in accelerating the achievement of the SDGs.

The role of local government as a service provider (especially for water, sanitation and solid waste management), coupled with the ability to promote behavior change in society, places local government in a unique position to protect natural resources and habitats. Local governments can coordinate the cooperation with the private sector and communities that needed at the regional level to integrate water resources management as a complex issue. Regional governments must ensure that biodiversity conservation is part of urban development and planning strategies. Regional governments should also use local culture to help apply the 'polluter pays' principle. Conservation of biodiversity often requires cooperation between regions, such as in the formation of transboundary biodiversity and wildlife corridors. Through government facilitation, management and community participation are powerful ways to stop the loss of biodiversity and preventing extinction.

Sustainable management of natural resources (SDA) is a must. The main key to sustainable management of natural resource is the sustainability of the commitments made by the Government of Indonesia. First, the commitment to reduce carbon emissions by 29% by 2030 which is stated in the National Determined Contribution (NDC). Second, the commitment to increase the use of new and renewable energy (EBT) by 23% by 2025 for the transportation and electricity sectors, as stated in the National Energy General Plan (RUEN). The Indonesian government has also committed in the NDC that 50% of climate change mitigation will come from the energy sector. Third, continuing the commitment to the moratorium on primary forest, peat land restoration and rehabilitation of critical land. Fourth, continuously trying to stop illegal fishing or illegal capture of marine resources.

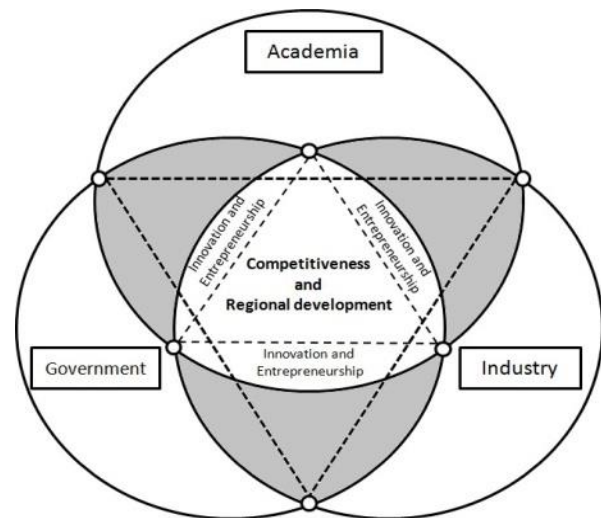
e) Triple Helix Theory

Research developed by Etzkowitz *et al.* (2000) and Leydesdorff *et al.* (2006) found that to the extent of factors influencing entrepreneurship since the evolution of economists who introduced the concept of a knowledge-based society, a Triple Helix model of the university-industry-government relationship has been developed to study knowledge infrastructure in the bonding network between the institutional constituents of regional innovation systems. According to Etzkowitz (2003) and Etzkowitz and Leydesdorff (1998), this model provides important insights in understanding innovation in the context of the supportive relationship between university-industry-government actors. Yet despite its valuable contributions for understanding regional innovation and economic growth, comprehensive empirical exploration of the role of the Triple Helix model and the interrelationships between university-industry-government constituents in regional entrepreneurial activity is rarely happening.

Etzkowitz and Leydesdorff (1995) also studied the Triple Helix relationship: university, industry, and government, analyzing that universities and industry, until today as relatively separate and distinct institutional fields, took on tasks that previously were mainly other obligations. The role of government in relation to these two areas is changing in seemingly contradictory directions. Governments offer incentives, on the one hand, and

pressing academic institutions, on the other, to go beyond the traditional functions of cultural memory, education and research, and make a more direct contribution to "wealth creation".

Figure 1. Proposed New Conceptual Model: Triple Helix Triangulation



In order to achieve the objectives of sustainable forest resource management, various studies are needed both in terms of the function of the forest resources themselves as well as studies on the readiness of the government in determining the priority direction of KHDTK forest resource management policies. These policies priority need to consider multi-sectoral and multi-dimensional studies. There are three main dimensions that need to be considered in applying the problem of forest resources sustainability, namely the economic, ecological and socio-cultural dimensions. The readiness of facilities such as laws and regulations is also very important in the successful implementation of institutional arrangements and law enforcement consistently in the implementation of sustainable forest resource management. For this reason, it is necessary to conduct a study of the existing laws and regulations. This study will be used to assess the synergy between several parties in carrying out the functions of UB Forest as KHDTK which has a function as education and research forest.

3. METHODOLOGY

The method used in this research is qualitative research. And the type of study used in this research is phenomenology. In relation to research related to forming a green economy system in University of Brawijaya Forest Management in the Perspective of Sustainable Development Goals (SDGs), the focus of this research is as follows:

- 1) The management of Forest Area with Special Purpose (KHDTK) UB Forest, namely:
 - a) The planning of KHDTK
 - b) The implementation of KHDTK activities
 - c) The partnership of KHDTK management
 - d) Forest utilization in the KHDTK area
 - e) Development of supporting facilities and infrastructure for KHDTK
 - f) Reporting on the management of KHDTK UB Forest
- 2) The role of Triple Helix in the management of Forest Area with Special Purpose (KHDTK) UB Forest, are:
 - a) Academic role (Academia)

- b) Government role (Government)
- c) Industry role (Industry/private)

In relation with this research, the type of data used is in the form of words / descriptions and actions, written data sources, and photos. The instrument used as a source of information is a person or that can be used as a data source, because it is considered to have mastered the aspect of problem closely related to the implementation of an activity. In relation to this research, the main sources of information in this research are stakeholders or officials related to UB Forest management through informants ranging from UB Forest management, UB academics, forest farmers, local government and village management. In this research, researchers used a sampling technique based on the Snowball Sampling theory. To obtain data objectively and independently in this research, the observation method was used. According to HB Sutopo (2002) this observation in qualitative research is often referred to as "Participatory Observation". This direct observation will be carried out with an aboveboard observation approach to observe various activities and events that occur in UB Forest management activities, along with social conditions and the surrounding environment. This research carried out in Karangploso sub regency, Malang regency. This is because the location is a Golden Triangle area, consisting of Malang Regency, Malang City and Batu City. This research uses three methods of analysis, namely Phenomenological Data Analysis, SWOT Analysis and Analytical Hierarchy Process (AHP).

4. RESULTS AND DISCUSSION

The Management KHDTK UB Forest

1) The Planning of KHDTK UB Forest

The forest management plan in the UB Forest area which is made will be used as a legal umbrella in future management plans towards everlasting sustainable forest management. Thus, the preparation of the KHDTK UB Forest management plan needs to be done as an implementation guide that will be used as a guideline and reference for forest planning activities and the implementation of the development of forest management plans in the field which aims to bring the institution to its final goals in accordance with the objectives implied in the Vision and Mission of University of Brawijaya (UB Forest, 2020). Referring to Rector Regulation No. 2/2020 of University of Brawijaya concerning UB Educational & Training Forest Management, the planning must regard the principles of integration, harmony, benefits of forest preservation and sustainability. Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.15 / MENLHK / SETJEN / KUM.1 / 5/2018 Concerning Forest Areas with Special Purposes in article 14 paragraph (1) states that KHDTK planning is carried out through the activity of forest inventorization, area arrangement and the preparation of management plan.

a. Forest Inventorization

Forest inventorization in the planning of KHDTK aims to see the condition of the forest and its environment in the KHDTK area. In its implementation, UB Forest has carried out a forest inventorization. Forest inventorying activities in the UB Forest area are carried out by collecting data on the conditions of the biophysical potential contained in it, both biotic components and abiotic components. Biotic components consist of animals, plants and humans.

b. Area Arrangement

The second activity that must be carried out in the planning of KHDTK UB Forest is area arrangement. The arrangement of KHDTK UB Forest area is carried out according to the results of forest inventorization. The arrangement of KHDTK UB Forest area which is 541 Ha also considers the slope class and forest function division of management space.

c. Arrangement of Management Plan

The arrangement of KHDTK UB Forest management plan is carried out according to the results of the inventorization and area arrangement. Fundamentally, UB Forest management already has a policy which is stated in the long term, medium term and short-term management plan. So that the commitment and political will of UB Forest managers in the arrangement of Forest Area Management Plan Documents (RPKH) must be improved. Especially in this case in the improvement and legalization of the Draft of Management Plan for KHDTK UB Forest into a Documents of Management Plan for KHDTK UB Forest, it must be implemented immediately. Because if the management planning document is not arranged immediately there will be administrative and legal sanctions that will be imposed on the forest manager.

2) The Implementation of KHDTK UB Forest Activities

KHDTK UB Forest is a forest with the educational & training purpose so that in the implementation of KHDTK UB Forest activities, it must be based on KHDTK activities for forestry research & development, KHDTK for forestry education & training as well as religious and cultural activities. KHDTK UB Forest as an educational forest is research & development, training and religious and cultural activities carried out in the production forest area in UB Forest become a means of direct learning (field laboratory) for related study programs to conduct research and learning activities supported by adequate laboratory space. The development of educational facilities and infrastructure, both in quantity and quality, is absolutely necessary in order to provide quality education services to produce graduates who have competence and are able to compete in the labour market. Especially in order to improve the accreditation status and attract more student candidates, the adequacy of educational facilities and infrastructure needs to be considered and prioritized for its development (Draft of Management Plan for UB Forest, 2020).

a. Implementation of KHDTK Activities in the Forestry Research and Development

In the implementation of KHDTK of Research and Development activities which have been carried out based on the 2017 KHDTK UB Forest Annual Report, the research topics carried out by University of Brawijaya students at UB Forest include: 1) coffee root studies, 2) soil fertility inventory, 3) ecology (epiphytic plant diversity and invasive alien species plants), and 4) studies on the feasibility and the active role of UB Forest community in ecotourism. Whereas the research topic carried out by the lecturer is more focused on the inventory of the biophysical, social and economic conditions of the community in UB Forest. Some special research is carried out in the UB Forest protected area in an effort to identify the damage to ecological functions in the protected forest area which is then used as a basis in determining the appropriate management action for the UB Forest protected area.

b. Implementation of KHDTK Activities in the Forestry Education & Training

In the implementation of KHDTK activities in the Forestry Education & Training carried out by the academic community of University of Brawijaya (Students and Lecturers), based on the 2017 KHDTK UB Forest Annual Report, students who do practicum activities at UB Forest which are carried out by undergraduate students (Agroecotechnology, Agribusiness study program).

The implementation of KHDTK activities in the Forestry Education & Training is also by practicum activities carried out by students at UB Forest, namely field work practices, work internships, and on the job training (KKN). Field work practice activities and student work internships in actual agricultural activities at UB Forest such as Balsa tree nurseries, coffee plant conservancy, and post harvest coffee. UB Forest is also used for non-academic activities of UB students. Non-academic activities carried out at UB Forest including: 1) a series of orientation for the VII Field Agroecotechnology study program (Chain); 2) 2017th Soil Science Olympiad; 3) organization training and upgrading carried out by the Student Executive Board (BEM) of the Faculty of Animal Husbandry; and 4) Research camp carried out by students from the Faculty of Administrative Sciences (2017 KHDTK UB Forest Annual Report).

3) Partnership of KHDTK UB Forest Manager

The form of partnership that has been carried out by UB Forest managers so far is still limited to research, education and training. Referring to Rector Regulation No. 2/2020 of University of Brawijaya, in managing UB Forest, UB Forest can collaborate with other parties by considering the factors of ability and benefit for the parties as well as the supporting capacity and sustainability of UB education & training forests. This form of cooperation is then compiled in a draft of partnership agreement approved by the Director General of Forestry Planning and Environmental Management. This cooperation can be carried out in the fields of:

- a) Partnership in education, training and community service.
- b) Partnership in the utilization of forest products.
- c) Partnership in the utilization of forest area.
- d) Other partnership that is not against the laws and regulations.

4) Forest Utilization in the KHDTK UB Forest Area

The legal umbrella used as a basis for forest utilization in the KHDTK UB Forest area refers to the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.15 / MENLHK / SETJEN / KUM.1 / 5/2018. The ministerial regulation states that forest utilization in the KHDTK area divided into two, namely utilization of production forests and utilization of protected forests.

a. Utilization of Production Forest

The utilization of the production forest area of UB Forest is directed to encourage the University of Brawijaya to create a Go Green Campus, without having to change the main function of the production forest. Thus, the use of available land as a means of supporting education for related scientific fields. So that the development of land functions carried out in the management of UB Forest is adjusted to the existing conditions and requirements. Currently, the development of the land of KHDTK UB

Forest is carried out in all area functions except in nature conservation area and the core zone of national parks.

b. Utilization of Protected Forest

Utilization of protected forest area of KHDTK UB Forest will be left as before. Non-timber forest products that can be developed in protected forest areas are by utilizing the vegetation products (trees, shrubs and / or thicket) and the existence of forest ecosystems, for example: leaves, bark, wild life in the form of lianas (forest orchids), wildlife conservation, honey beekeeping, potential for natural medicines, food sources, genetic resources/germ plasm, and natural beauty (ecotourism). Potential vegetation in the protected forest of KHDTK UB in the form of trees, shrubs, and thicket include: gintongan (*Bischofia javanica*), dadap (*Erythirna lithosperma*), anggrung (*Trema orientalis*), ringin (*Ficus benjamina*), kesek (*Muntingia calabura*), gondang (*Ficus variegata*), bamboo (*Bambusa spp.*), tepus (*Etlingera solaris*), ferns (*Cycas spp.*), puspa (*Schimawallicii*), eucalyptus (*Eucalyptusspp*), calliandra (*Calliandracallothyrus*), and others.

5) Development of Supporting Facilities and Infrastructure for KHDTK UB Forest

The development of supporting facilities and infrastructure for KHDTK UB Forest is one of the most important needs to support all forest management activities in it. The development of supporting facilities and infrastructure for KHDTK UB Forest was carried out in three sub villages, namely Sumberwangi sub-village of Donowarih village, Sumbersari sub-village of Tawangargo village, and Buntoro sub-village of Ngenep village. The development of supporting facilities and infrastructure for KHDTK UB Forest is a very important thing to do. This is because the development of these facilities is an effort to facilitate the access for UB Forest management. The basic facilities that must be fulfilled are road access, water and electricity. The three facilities have to be properly built in all areas of UB Forest. However, these three things are still an obstacle in the treatment of UB Forest.

6) Reporting on the Management of KHDTK UB Forest

According to the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.15 / MENLHK / SETJEN / KUM.1 / 5/2018 in article 26 related to reporting on the management of KHDTK must be carried out by KHDTK managers by compiling reports on KHDTK management periodically every 1 (one) year and submitted to the Minister. The reporting on the management of KHDTK UB Forest has been carried out by the manager by making a document for the 2017 KHDTK UB Forest Annual Report. The document reports the results of the achievements in the forest management master plan.

According on that statement, it appears that the weakness of UB Forest management is related to the drafting of planning and reporting documents. In addition, when referring to Rector Regulation No. 2/2020 of the University of Brawijaya, it is stated that the monitoring and evaluation of the management of KHDTK UB Forest is carried out by Academic Entities of University of Brawijaya and / or institutions or special organizations appointed to conduct monitoring and evaluation, which includes evaluation of planning, management, and evaluation of the implementation of UB Education & Training Forest management. Thus, political will and employee commitment need to be improved. Because the

two documents are official documents that must be fulfilled as guidelines and accountability for the management of KHDTK UB Forest.

The Role of Triple Helix in the Management of KHDTK UB Forest

1) The Role of Government

In the management of KHDTK UB Forest, in this case, it is under the authority of the Ministry of Environment and Forestry. Meanwhile, the forestry supervision function is the function of the central government, namely the Ministry of Environment and Forestry and the regional government, namely the East Java Regional Forestry Service. Structurally, the supervisory function of the East Java Regional Forestry Service is coordinated with the Malang Regency Forestry Service Branch. Malang Regency Forestry Service Branch has a duty to supervise the management of KHDTK UB Forest. The results of the supervision are then reported to the East Java Regional Forestry Service which will become recommendations and policy proposals to the Central Government.

Forest managers coordinated relationship with CDK UB Malang regency needs to be improved. This is because the Malang regency CDK is a delegation of tasks from the Regional Forestry Service. Because under Law No. 41/1999, regional governments are obliged to carry out forestry supervision. For that, in the management of KHDTK UB Forest needs to involve the regional government in coordinating the forest management plan.

2) The Role of Academics

The role of academics is an important factor in managing UB Forest. The role of academics in this case is the academic community of University of Brawijaya in particular and the academic community of other educational institutions or institutions in general. Because the main purpose of KHDTK UB Forest is as a laboratory for biological and wildlife research to carry out the principle of Tri Dharma Perguruan Tinggi. Thus research, education and training activities as well as environmentally friendly community service must be the main activities in the management of UB Forest.

University of Brawijaya as a leading educational institution and has a very comprehensive division of scientific disciplines provides an opportunity for better forest management. The Secretary General of the Ministry of Environment and Forestry hopes that UB Forest can be used as a satellite of the Ministry of Environment and Forestry in piloting the national KHDTK management, starting from the forest monitoring laboratory system, implementing agroforestry, preserving floras and faunas, implementative research results for pushing large-scale forest productivity and environmental preservation. So that the plan to manage UB Forest is used as an off-campus educational laboratory which is expected to be a means of supporting education for students, research for lecturers, and empowerment for the surrounding community as an effort to optimize and utilize forests in a sustainable manner to increase partnerships with other communities and agencies and improve the quality of the campus. This means that UB Forest as a research center and learning resource aimed at improving human resources through interdisciplinary programs comprised of soil science, wildlife biology, geography and botany, economics, business, sociology, administrative science, veterinary medicine, information technology, planology, irrigation engineering and others.

3) The Role of Industry

The role of industry has a role as an investor and as a mentor in managing UB Forest. This is because the role of industry can be developed as a provider of financial assistance in managing UB Forest. Because the obstacles in managing UB Forest today are related to funds. So that the role of business involved in managing UB Forest will be one of the efforts to solve these problems. The role of industry has an important impact in the development of educational ecotourism in UB Forest.

The role of industry in the planning of UB Forest ecotourism development in accordance with the Ecotourism Master Plan is needed. Apart from functioning as an investor, the industry role also has a role in developing business networks. So that it becomes a challenge for UB Forest managers to make an ecotourism policy that not only benefits economically, but must maintain the environment and continue to promote the function of forest preservation.

5. CONCLUSION

Based on the analysis that has been conducted it can be concluded as follows:

- 1) The management of Forest Area with Special Purpose (KHDTK) UB Forest consists of the planning of KHDTK, the implementation of KHDTK activities, the partnership of KHDTK management, forest utilization in the KHDTK area, development of supporting facilities and infrastructure for KHDTK, reporting on the management of KHDTK UB Forest
 - a) The planning of KHDTK comprised of (a) forest inventorization; (b) area arrangement; and (c) arrangement of management plan.
 - b) The implementation of KHDTK according to the decree of Head of Forestry Education and Training Center No. 199/KPTS/DIK-1/XII/2002, hence the implementation of training, and research & development of KHDTK UB Forest for the purposes of multidisciplinary research & development in UB.
 - c) Most of the objects and forms of cooperation in the management of KHDTK carried out by UB Forest are in the field of research and community service as the implementation of the Tridharma of University of Brawijaya.
 - d) The utilization in the KHDTK forest area is divided into two, namely utilization in the production forest and utilization in the protected forest.
 - e) The manager of KHDTK UB Forest is allowed to build facilities and infrastructure with the provision that the area built on UB Forest is 10% of the KHDTK area. The construction of facilities and infrastructure for KHDTK UB Forest that has been built in Sumberwangi sub village of Donowarih village, Summersari sub village of Tawangargo village and Buntoro sub village of Ngenep village include: road network, electrical installation, water network, buildings to support KHDTK activities, as well as other facilities and infrastructure used for the protection activities, development and utilization of KHDTK in the field of education & training, research & development.
 - f) The reporting on the management of KHDTK UB Forest has been carried out by the manager by making the 2017 KHDTK UB Forest Annual Report document.
- 2) The role of stakeholder in supporting the management of Production Forest and Protected Forest in the Forest Area with Special Purpose (KHDTK) UB Forest area
 - a) In managing KHDTK UB Forest the government has a role as a regulator. The management of KHDTK falls

under the authority of the Central Government, in this case the Ministry of Environment and Forestry.

- b) The role of academics plays a role as key actors in the management of KHDTK UB Forest. The academic actor aforementioned is the UB academic community which is given the authority by the Ministry of Environment and Forestry to manage KHDTK UB Forest as an educational forest.
- c) The role of industry in managing KHDTK UB Forest has a role as a mentor and investor. The role of investors in managing UB Forest plays a very important role in supporting the funding in managing UB Forest so that forest management activities can function optimally and can achieve the goals that have been planned.

6. LIMITATIONS OF THE STUDY AND FUTURE RESEARCH

The main obstacle in managing KHDTK UB Forest is the problem of funding and the capability of the Human Resources Management. So, the researcher's suggestion is to establish a network of partnership with the private sector as a model for sustainable funding. Meanwhile, to increase the capability and capacity of human resources, KHDTK managers need to collaborate with forestry experts, both from the government sector, NGOs, and the private sector. So, the reinforcement of institutional partnerships is indispensable.

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