Analysis of programs of activities development of forest areas with specific objectives (KHDTK) tabo-tabo south sulawesi

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Abstract. The status of a Special Allotment Forest Area (KHDTK) was obtained by the Forestry Education and Training Center of the Makassar Environmental and Forestry Education and Training Center in accordance with the Decree of the Minister of Forestry No. 041/Kpts/DI/I/1980 on February 28, 1980 and the zoning by the Minister of Forestry No. SK.13 / Menhut-II / 2010 on January 14, 2010. The main function is to support the educational activities. Several forms of activities and utilization have been carried out in this area, including Research and Development, Nature Tourism, Environmental Services and non-timber forest products (NTFPs). Related to its main function as a means of supporting education, all the training activities, especially aspects of skills, are directed at KHDTK. Since established, KHDTK has numerous conflicts with the community. However, all existing conflicts have been acted on and a number of solutions have been made to resolve the existing problems. Regional stakeholders have managed the risks with a variety of activities, such as community empowerment, fostering the farmer groups, provision of assistance and facilitation as well as pre-emptive, preventive and repressive activities that are carried out routinely in the hope of aware the people, so that the KHDTK will receive recognition from the surrounding community.

1. Introduction
The education and training forest of the Makassar Environmental and Forestry Education and Training Center is located in the area of government of Tabo-Tabo Village, Bungoro District, Pangkep Regency which covering an area of 601.26 Ha with the status of the area as a Special Allotment Forest Area (KHDTK). Its main function is as an Education and Training forest. But, it is also used for research and development activities and Nature tourism. KHDTK status was obtained according to Minister of Forestry Decree No. 041/Kpts/DI/I/1980 on February 28, 1980. Zoning by the Minister of Forestry No. SK.13/Menhut-II/2010 on January 14, 2010 [1].

In addition to its main function as a training forest facility, the KHDTK is also used for research and development by a number of stakeholders such as the Forestry Research and Development Center, the Sulawesi Forest Plant Seedling and several Institutions of high education in Indonesia. Other uses are for nature tourism activities, include: recreation, camping, mountain biking, out bound, tracking
(forest exploration), observation of flora and fauna, environmental education tours and many other activities. In the KHDTK area there are also protected wildlife populations such as Macaca maura and Tarsius spectrum which need special attention in their conservation. In general, the KHDTK area in Indonesia has underwent a lot of damage. However, the community has realized the benefits, so that they are willing to participate in rebuilding when involved [2]. KHDTK Tabo-Tabo suffered a lot of pressure from the surrounding community considering the condition of the forest area in KHDTK which is still relatively good compared to the other state forest area around it. Given the many threats and disturbances to the existence of KHDTK, several strategies are needed in their management. Some forms of conflict in the KHDTK Tabo-tabo include claims of land ownership in several locations in the area, claims for ownership of mature Teak trees, removal of boundaries of the forest, the destruction of some plants in the area and several other conflicts. This research will explore the problem of disruption in KHDTK Tabo-tabo, brings up forms of utilization of KHDTK, analyze the types of conflict in KHDTK and solutions that are offered to resolve the problem.

2. Research Methods
This research was conducted in July and August 2019 at the Makassar Environmental and Forestry Education and Training Center (BDLHK), Makassar as the manager of the Special Allotment Forest Area (KHDTK). Data collection was carried out by interviewing the community members around the KHDTK Tabo-Tabo and KHDTK officers as well as tracking reports on the implementation of regional activities.

3. Results And Discussion

3.1. Forms Of Utilization Of KHDTK
According to the regulation of Minister of Environment and Forestry No. P.15 of 2018, the utilization of KHDTK Tabo-Tabo can be done in the form of Environmental Services and Nature Tourisms and collection of non-timber forest products (NTFPs). After exploring the KHDTK management plan that was prepared by the BDLHK Makassar.

| Utilization For Education And Training (Training Type) | Utilization For Research And Development (Research Theme) | Utilization Of Tourism Activities (Type Of Activity) | Utilization Of Environmental Services And Ntfp’s By The Community (Type Of Activity) |
|--------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------|
| Forest Inventory                                       | Composition and structure of stands                       | Outdoor recreation                                   | River for Microhydro                                                              |
| Mapping &Measurement GIS Operators &GIS Analysts       | Land Evaluation                                           | Camping                                              | Utilization of irrigation                                                         |
| The Use of GPS & Its Applications                      | Natural Tourism                                           | Mountain bike                                        | Production of brown sugar and palm sugar                                           |
| Cultivation of Honey Bees                              | Environmental Services                                     | Out bound                                            | Harvesting of Honey                                                               |
| Counseling                                             | Utilization of Firewood                                   | Tracking                                             | Collecting of firewood                                                           |
| PRA (Participatory Rural Appraisal)                   | Identification of Medicinal Plants                        | Attraction of Waterfall                              | Archery Sports                                                                    |

Table 1. the forms of utilization of KHDTK can be presented as shown in the following table:
### Table 2. Several conflicts among the community in KHDTK are external conflicts.

| Types of conflict                                      | Volume   | Legal status                        | Description                                      |
|--------------------------------------------------------|----------|-------------------------------------|--------------------------------------------------|
| Ricefields in the KHDTK area are cultivated by 20 families | 23 Ha    | The Partnership licensing in process|                                                  |
| Wild cattle grazing                                    | 159 ekor | Not acted on                         |                                                  |
| Claims of Ownership of Teak Trees by 76 households     | 6,710 pohon | It has been on trial and won by BDLHK Makassar |                                                  |
Cultivate land and build fences and huts inside the KHDTK area, committed by Iskandar Pagga, Thamrin Pagga and Ismail Pagga

| Activity                                                                 | Area | Both suspects, Iskandar Pagga and Thamrin Pagga, have been convicted for 8 months, whilst Ismail Pagga is still a fugitive for escaping. |
|--------------------------------------------------------------------------|------|--------------------------------------------------------------------------------------------------------------------------------|
| Mass claim of land ownership in KHDTK                                    | ± 400 Ha | Police reports have been made Information and warnings have been given |
| Trees felling in the area that will be used as rice fields, committed by Obba | ± 0,1 Ha | Police reports have been made Information and warnings have been given |
| Penebangan pohon diganti tanaman semusim a.n. Gaco                       | ± 0,2 Ha | Police reports have been made Information and warnings have been given |
| Tree felling is replaced by annual crops a.n. Gaco                       | ± 0,1 Ha | Police reports have been made Information and warnings have been given |
| Trees felling and replaced with bananas, committed by Runtu              | ± 0,1 Ha | Police reports have been made Information and warnings have been given |
| Cutting down reforestation trees, committed by Salama                    | ± 0,1 Ha | Police reports have been made Information and warnings have been given |
| Building fences in KHDTK, committed by Giling                           | ± 0,1 Ha | Police reports have been made Information and warnings have been given |

3.3. Program Solutions Offered

3.3.1. Managing Risks. Claims of ownership of land in KHDTK and claims of ownership of commercial trees in KHDTK are some of numerous conflicts with the community around KHDTK that can cause negative deviations or threats about the existence of KHDTK. If they are allowed to drag on, they are going to pose negative risks to the success of the KHDTK missions, so that several policies are designed to solve the problems. Some policies that lead to resolving KHDTK conflicts with communities around KHDTK are:

1. Empowering the surrounding community:
   a. Conducting community training on Porang (Amorphophalus onchopyllus) cultivation, elephant grass cultivation, cultivation of undertrees vegetation, Guide of nature tourisms and honey bees’ cultivation.
   b. Involve the community in forestry training activities and joint patrols.
   c. Involve the community in intercropping activities in the KHDTK
      Empowering communities in planting 20 hectares of Mahogany using intercropping patterns. The area is divided into 20 plots and each manager agrees to an agreement, where the obligation is to plant trees with Mahogany as the main plant and they have a right to plant crops between the trees for 3 years and on each side of the border planted with MPTS plants which yields can be harvested throughout the year.
   d. Involving the community in the attraction of palm sugar production.
      The management has fostered the maker of brown sugar by increasing their business to palm...
sugar. The manager has also set up a palm sugar processing machine that can be utilized by the community and they play a full role in the activity of attracting visitors and guests.

e. Involving community members in comparative study activities on KHDTK, cultivation of under trees vegetation and Guides of nature tourisms to the more developed areas, even to the Java Island.

2. Development of 2 groups of forest farmer
There are 2 farmer groups under the management of the KHDTK, the "Mattiro Deceng Farmers Group" and the "Mappaenre Dalle Farmers Group" who live around the KHDTK. Both of these farmer groups have been facilitated for various activities such as being included in the Palm Sugar Internship in Bulukumba District, the formation of a group's regulation, group registration and inauguration, provision of plant seeds and various other activities.

3. Providing assistance and facilitation
KHDTK stakeholders often provide assistance with tree seedlings, fruits such as cloves, pepper, mango, durian, petai, breadfruit, cashew nuts, mahogany, teak, red Jabon (Adina fagifolia) and others. For natural honey harvesting to be more effective, the community is given assistance with anti-sting clothing to be used when harvesting honey. It also has been facilitated in marketing the production of forest products such as honey, brown sugar, palm sugar, Porang tubers.

4. Pre-emptive, preventive and repressive activities:
To reduce forest crimes that often occur in KHDTK, pre-emptive, preventive and repressive activities have been and are being carried out as early as possible, so that the events are not widespread, repetitive and protracted. Social data collection has been carried out in the form of names of community leaders, names of those who reject innovation, names of groups who are quick to accept innovation, names of creative citizens. KHDTK socialization activities have been intensively carried out, KHDTK Zone Boundaries and regular counseling is conducted by the Councillor officers of KHDTK.

To highlight the existence of KHDTK officers, joint patrols are routinely carried out in cooperation with the Forest Rangers, District Police and Pangkep Army in order to anticipate the occurrence of security disturbances in the KHDTK area.

3.3.2. Risk Analysis
The existence of KHDTK in the middle of other state forest areas which are invaded by the community, requires deepthoughtful. Aside from intensive supervision, an adequate budget is also needed in the effort to raise public awareness. Community awareness should be focused as much as community involvement in KHDTK management activities, because the community is the main actor in disturbing the forest area and the community is at the forefront of efforts to overcome the disturbance. In each event of disturbance of the forest area, the community is expected to overcome the disturbance early, so that the disturbance does not result in greater losses.

In economic principles, we have to maximize profits using the smallest expenditure of costs to get the maximum results. KHDTK's program activity policy is to budget a number of activities that involve the community in the hope of resolving various existing conflicts. Community involvement is applied to give responsibility to the community. They are involved in every activity with adequate incentives so that they feel they are part of KHDTK.

Include the part of the community in the formation of civil servants and/or contract workers in the hope that the community feels they are in the system of KHDTK management. Providing assistance with plant seeds, power generation facilities, intercropping land to involve them in the KHDTK activity program. Utilizing the government's capital expenditure budget for community involvement in forest management is considered to be very effective, because by providing incentives to civil servants or contract workers are expected to reduce the pressure on forest areas from various disturbances.
4. Conclusion
KHDTK Tabo-tabo is a learning facility that should be sterile from disturbances, so that the main purpose of KHDTK to support education can run smoothly. Aside from being a supporter of education, the KHDTK Tabo-tabo can also functioned as a Research and Development site in the field of Forestry and able to support the economy of the surrounding community. Broadly speaking, there are 4 forms of utilization of the KHDTK Tabo-tabo. They are the utilization of education and training, the use of research and development, utilization of Nature Tourisms and the use of Environmental Services and Non-Timber Forest Products (NTFPs).

In the midst of the main function of KHDTK Tabo-tabo, which is the implementation of training, there are several conflicts take place within the KHDTK, but all of them have been followed up with various actions. In an effort to resolve conflicts and foster community recognition of the existence of KHDTK, regional stakeholders have managed risks with various activities such as community empowerment, farmer group development, assistance and facilitation, as well as pre-emptive, preventive and repressive activities that are carried out routinely.

References
[1] Anonim 2018 Kawasan Hutan Dengan Tujuan Khusus. Keputusan Menteri Lingkungan Hidup dan Kehutanan No. P.15/MENLHK/SETJEN/KUM.1/5/2018. 2018 Peratur. Perundangan 1689–99
[2] Jaenal E, Mulyadi A T and Supriono B 2018 Pengelolaan Kolaborasi Hutan Pendidikan dan Pelatihan Jampang Tengah–Sukabumi J. Nusa Sylva 12 9–24
[3] B U 2012 Strategi Mengembangkan Hutan Diklat Dinamika Penyelenggaraan Diklat Kehutanan Nusa Sylva 12 9–24