Internal and External Implementation Strategy of Collaboration Management Model in Hasanuddin University Educational Forest

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Abstract. The management of educational forest with multiple stakeholder approaches is expected to contribute to the success of educational forest management. The results of previous studies recommended the need to strengthen multiple parties to build a collaborative management model by considering aspects of needs and clarifying the role of stakeholders, so that common perceptions were developed in managing the area and anticipating overlapping in carrying out their respective roles. This study aims to analyze the internal and external strategies for implementing the collaboration management model in the Hasanuddin University Educational Forest area. The methodological approach using descriptive policy analysis, internal and external strategy analysis (review of IFAS-EFAS) were chosen to achieve the expected goals. The results of IFAS-EFAS strategy analysis proposed four main strategies. The first one is a strategy which maximizes the power to seize opportunities (SO), namely a plan for empowering the surrounding forest community through the Social Forestry scheme in a strategic plan and utilizing the human resources to promote and jointly developing eco-tourism potential. The second one is a strategy that utilizes maximum use of power to anticipate or deal with threats and try to make threats as opportunities (ST), namely to make experts and other human resources as mediators or facilitators to relevant parties so that mutual understanding can be developed regarding management objectives. The third one is a strategy that minimizes weaknesses to seize opportunities (WO), namely improvements in the funding area through fundraising to improve the quality of educational forest management, including the improvement of supporting facilities and infrastructure through the concept of partnership with the community, and massive promotion of eco-tourism potential. The fourth one is a strategy that minimizes weaknesses to avoid threats well (WT), namely managing budget that is right on target, accountable, and transparent, to avoid negative stigma from the community.

1. Introduction
Educational Forest management involves several parties, and they have their interests, for example, government agencies, educational institutions, community institutions, communities, and individuals. Educational Forest, as it is known, is a vehicle for the community, especially students, university students, and researchers to study the forest and reciprocal relationships between the components of their ecosystem. The management of Educational Forest with a collaborative model through several stakeholders approach is considered to contribute to the success of Educational Forest management. In
A previous study, [1] recommended the need to strengthen multiple parties to build a collaborative management model by considering aspects of needs and clarifying the role of stakeholders, so that common perceptions were developed in managing the area and anticipating overlapping in carrying out their respective roles.

Attempts to resolve forest resource management conflicts have not been successful so far in resolving conflicts within a comprehensive manner, as well as in the context of Educational Forest management. This happens because the concepts of resolving conflicts over natural resource management have many weaknesses both at the conceptual level, in the form of weak planning, and practical levels, namely the unpreparedness of field practitioners. Natural resource management conflicts as a fruit of mismanagement in forest management thus require alternative forest management.

Collaborative management is a participatory process that involves all stakeholders actively in various management activities, including developing a shared vision, learning together and adjusting their management practices. Collaborative management as a form of management that accommodates the interests of all stakeholders fairly and views the value of each stakeholder as an equal entity by the prevailing values, to achieve common goals [2].

The designed collaboration model issued a series of action plans that could be implemented to support the improvement of management in Educational Forests. The KHDTK management action plan obtained by considering aspects of this need includes infrastructure, facilities, regulations, forums, funding, promotion, counseling, and guidance, as well as human resources. [1], concluded that collaborative management of forest management innovation could work if supported by improving infrastructure and facilities, encouraging collaborative management policies, joining monitoring systems, and strengthening human resource capacity.

The Educational Forest of Hasanuddin University is in Maros Regency, in South Sulawesi Province. The Educational Forest of Hasanuddin University is managed by the campus, in this case by the Faculty of Forestry, Hasanuddin University. The diversity of understanding and functioning of each party involved in the management of Hasanuddin University's Educational Forest may result in overlapping interests. This causes the policies that are in place needs good coordination. Also, the role of the community around the Hasanuddin University Educational Forest area should be gauged in terms of its utilization activities.

Yusran [1] has identified and grouped stakeholders in the management of Hasanuddin University Educational Forest (HPUUH), which involves 10 stakeholders grouped into five government agencies, community groups, educational institutions, individuals and communities. Stakeholders involved in the management of Hasanuddin University's Educational Forest based on interests and influence consist of: a) Key Player, namely the Faculty of Forestry, University of Hasanuddin, the community, and lecturers; have a high interest and influence on the policy of developing forestry human resources. b) Subject namely student; which has high importance but low in influence and even though it supports activities but its capacity for impact is small. c) Context setter namely the Ministry of Environment and Forestry (BPKH, PSKL, and BPTH) and visitors; has a high influence but low importance so that it can be a significant risk to be monitored, mainly related to planning, procuring, organizing, directing and controlling HR and d) Crowd namely Forest Service, Local Government (District, Village Head and Hamlet Head), community leaders and NGOs; has little interest and little influence on the desired results and becomes a consideration to be included in decision making.

Yusran [1] has explained and described the collaborative model of forest management, including the role of the parties in the management of Hasanuddin University's Educational Forest. Therefore, this study aims more to formulate a collaborative management model that is appropriate to be carried out in the Educational Forest Area of Hasanuddin University and analyze internal and external strategies for implementing collaboration management models in the Hasanuddin University Educational Forest area.
2. Research Methodology
This research was carried out in the Educational Forest of Hasanuddin University, which is administratively located in Cenrana District, Maros Regency, South Sulawesi Province. This research was conducted for 6 months. The types of data used are divided into two types, which are:

2.1. Primary Data
The primary data is the main data which is used in the material of this study. The data included in the primary data are data about the identity of the stakeholders involved (including government agencies, tertiary institutions (educational forest managers) or the community) as well as the roles, interests, and influence of stakeholders involved in the management of Hasanuddin University's Educational Forest. The other primary data are the main documents which include laws, government regulations, the decree of Minister of Forestry, regulations owned by community groups, management plans for each stakeholder.

2.2. Secondary Data
Secondary data for this study was taken from supporting data which is a part of the management. Supporting data in this study include documents about work programs/activities, the amount of the budget, the number of human resources (HR), networking, and other documents needed to support this research. Retrieval of supporting data is done by library search and field observation.

The research method used in the first primary data collection is the determination of the interviewees. The informants who become the main source of information in this study will be determined according to the purpose of the research, which is gathering information about the stakeholders involved in the management of Hasanuddin University's Educational Forest. Informants are selected stakeholders with certain requirements, namely social status or work related to the management of Educational forest, are committed to educational forest management, open in accepting other sources' opinions, willing to seek consensus and can agree to consensus [3]. The Informants are key informants. Stakeholders and institutions are classified according to the government hierarchy, namely the village/sub-district, district and provincial levels which are deliberately chosen (purposive sampling) [3]. The intended informant is the key person from each stakeholder, namely the head of the department, director of the education forest, and community groups to represent the relevant stakeholders in providing accurate information about these stakeholders about the management of Hasanuddin University's Educational Forest.

Then the second is gathering information from the informants. The main data is collected by semi-structured interviews, snowball methods and library searches. Interviews will be conducted by direct discussion with the speakers by the interview guide. The interview guide used is an interview guide for government and non-government agencies. The interview was continued to find out if there were other stakeholders involved but had not been identified. Data and information originating from the second source and then used to supplement the data and information from the initial informants. The method for determining the source above is usually called snowball sampling.

The research method used in secondary data collection documents search. Secondary data in this study includes data on the general condition of the Educational Forest of Hasanuddin University, documents about work programs/activities, the amount of budget, the number of human resources (HR), networking, and other documents needed to support research. Retrieval of supporting data is done by literature and field observations. Document searches are carried out on government policy documents regarding the management of KHDTK on a national scale as well as the main tasks and functions (TUPOKSI) of managers, regulations of non-governmental institutions, work programs / activities, total budgets, number of human resources, networks, rules and regulations owned by institutions and community groups and other documents needed to support research. A document search is done as an initial step in research and is needed to assist with data analysis, while field observations are direct observations and careful records of the studies incorporated. Field observations were carried out to find
out locations in the Educational Forest area that were still widely used/accessed by the community, knowing the implementation of the policies and information obtained from the interviews.

2.3. Data Analysis
The collaboration model of Educational Forest management is analyzed descriptively and qualitatively using the results of stakeholder analysis, descriptive analysis of needs, and policy analysis that has been analyzed previously [4]. The analysis of IFAS-EFAS was used to analyze internal and external strategies for implementing collaboration management models in the Hasanuddin University Educational Forest area. A SWOT analysis is used in interpreting the planning area, especially in very complex conditions; external and internal factors play an equally important role. The SWOT analysis is used to determine the inventory of potential (strength), problems (weaknesses), opportunities and threats of populist economic development that will be carried out or to determine the direction of the development of the populist economy. SWOT is literally an acronym consisting of concepts/words, which are:
- S (strength): a condition or state that is owned and considered to be a good thing
- W (weakness): a condition or state that is considered to have weaknesses or problems
- O (opportunity): a condition or state that exists or that will occur in and around the area that is considered to have the opportunity to be used in developing potential
- T (threat): a condition or condition that exists or that will occur in or around the area that is considered to hinder or threaten the development of potential.

Strengths and weaknesses are internal factors, while opportunities and threats are external factors. SWOT is used to be able to set goals more realistically and effectively, as well as formulate strategies effectively too. In utilizing SWOT, there are also alternative uses based on a combination of each factor:
- SO: utilize strength (S) maximally to gain opportunities (O);
- ST: utilize strength (S) maximally to anticipate or deal with threats (T) and try to convert threats to opportunities;
- WO: minimize weaknesses (W) to gain opportunities (O);
- WT: minimize weaknesses (W) to avoid threats well (T).

The four factors of SWOT were analyzed based on the components of each factor and then given an assessment to determine the position of the research object in the SWOT quadrant. The scoring system was carried out to provide an assessment in the form of a matrix to two large groups, namely internal factors (IFAS / Internal Strategic Analysis Summary) which consist of strengths and weaknesses as well as external factors (EFAS / External Strategic Analysis Summary) which consists of opportunities and threats.

The ways to determine the External Factor Strategy (EFAS) are:
1. Column 1 presents opportunities and threats.
2. Each factor in column 2 is given a weight.
3. Rating is calculated for each factor by providing a scale ranging from 3 (outstanding) to 1 (poor) based on the influence of these factors on the concerned economic conditions.
4. Giving a rating value for opportunity factors is positive (greater opportunities are given a rating of 3 but if the opportunity is small, given a rating of 1.
5. Weight multiplied by the rating to obtain the weighting factor. The result is a weighting score for each factor whose value varies.
6. The weighting score is summed to obtain the total score for the populist economy concerned. This total value shows how a particular populist economy reacts to its external strategic factors.

The ways to determine the Internal Factor Strategy (IFAS) are:
1. Column 1 is composed of factors of strength and weakness of people’s economy.
2. Each factor in column 2 is given a weight.
3. Rating is calculated for each factor by providing a scale ranging from 3 outstanding) to 1 (poor) based on the influence of these factors on the people's economic conditions;
4. The weighting score is summed to obtain the total weighting score for the concerned people's economy. This total value shows how a particular populist economy reacts to its internal strategic factors.
3. Results and discussion

3.1. Collaboration Management Model (Action Plan)

Collaboration management model in Hasanuddin University Educational Forest is outlined in the action plan of Hasanuddin University Education Forest management, in which activities can be carried out in real terms on the use of educational forest areas. The activities carried out are activities that are efficient and effective and can be accepted by all parties. This activity is a series of activities which are expected to be able to achieve the objectives of the management of the Hasanuddin University Forestry KHDTK without ignoring the welfare of the people who are in the area.

The KHDTK management action plan is obtained by considering aspects of needs and clarifying the role of stakeholders, so that common perceptions can be developed in managing the area and anticipating overlapping in carrying out their respective roles. The action plans for the management of Hasanuddin University’s Forest Management are presented in Table 1 below:

Table 1. Action Plan of Educational Forest Management at Hasanuddin University

| Aspect of need | Clear Action | Challenges | Stakeholder in charge |
|----------------|--------------|------------|-----------------------|
| Infrastructure | 1. Access road improvements | Lack of funding | Hasanuddin University Faculty of Forestry |
| Facilities     | 1. Outbound ground repair/maintenance | Lack of funding | Hasanuddin University Faculty of Forestry |
|                | 2. Procurement of supporting facilities/inventory tools (GPS, compass, maps, etc.) | Lack of funding | KLHK |
|                | 1. Promoting policies related to the technical rules for the management of Hasanuddin University's Educational | Overlapping / claiming roles in regional management | Department of Forestry South Sulawesi province |
| Regulation     | 1. Multi-stakeholder meetings to equalize perceptions about the roles and rights of each stakeholder in the management of the Education forest | Meeting schedules | All stakeholders |
|                | 2. Regular Focus Group Discussion (FGD) | |
|                | 3. Joint Monitoring System | Overlapping / claiming roles in regional management | Hasanuddin University Faculty of Forestry |
|                |                           |                         | KLHK |
|                |                           |                         | Department of Forestry South Sulawesi province |
|                |                           |                         | Provincial Government |
Table 1 shows a strategy for realizing collaborative management by considering aspects of the roles, interests, and needs of each stakeholder. The collaborative forest management plan of Hasanuddin University needs to be supported by adequate infrastructure and facilities. This is needed so that the parties can carry out their roles and functions to the fullest.

Furthermore, promoting policies in collaborative management is an important component of the strategy to be implemented. In this case, it is necessary to design an adaptive and detailed Hasanuddin University Educational Forest management policy regarding the role of each key stakeholder. However, the potential for conflict between parties who will claim each other's roles in management needs to be considered. Therefore there needs to be a participatory study and dialogue with key stakeholders as material for formulating policies that will be established, including terms of allocating funds for Educational Forest management Hasanuddin University.

Besides, what also needs to be considered is the strengthening of human resources (HR) to be able to further optimize the performance of the parties in the management of Hasanuddin University's Educational Forest. The community in particular needs to be provided with intensive counseling and technical guidance, to be able to become supporting staff in the management and development of the Hasanuddin University Educational Forest. Training and technical assistance in the management and sustainable utilization of non-timber forest products also need to be given to local communities to encourage economic improvement in the communities around the forest.

3.2. Internal and External Strategy (IFAS-EFAS)
Based on the results of direct observations in the field, the results of expert analysis and literature studies of education forest management planning documents, policy effectiveness was obtained as a reference in formulating internal and external strategies for implementing collaboration management models in the Hasanuddin University Educational Forest area through the IFAS-EFAS approach. The results of policy effectiveness analysis can be seen in Table 2 below:
Table 2. The results of policy effectiveness analysis

| No | Effectiveness Criteria                                                                 | Explanation                                                                                                                                                                                                 | Class                                | Score |
|----|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------|
| 1  | The objectives are in line with the government’s targets                               | - The document does not clearly state that the management objectives are by the achievement targets of the central government and the provincial government in the forestry sector.  
   - The management objectives statement document has not fully integrated the roles of each key actor in collaborative management | Not too clear but measurable         | 2     |
| 2  | A non-ambiguous instrument of the implementation method                               | - The operational implementation document shows the performance achievements are related to the development of facilities and infrastructure.  
   - There is no innovative activity involving all parties/key stakeholders in collaborative management | There has been an early implementation of relatively good performance, but the method of implementation is not measurable | 2     |
| 3  | Management staff have managerial abilities and political will to implement policies    | - The leader and key staff of KHDTK have already applied it  
   - Leaders and key staff of KHDTK have collaborated with several parties, such as the National Narcotics Agency, and the hall at the Ministry of Environment and Forestry (BPTH, BPSKL, and BPKH) levels. | Have a pretty good Political and Management Ability | 2     |
| 4  | Supported by key actors such as parliament, leaders, and the community                 | - The central government has never provided sufficient management incentives (staff assistance, etc.)  
   - The Provincial Government and the district government have not established KHDTK as a strategic program  
   - the community still has a negative stigma towards the existence of educational forests | Lack of attention and support from the local government | 1     |
| 5  | Substantial plans that are durable and not affected by socio-economic changes and policies | There needs to be a slight block revision so that it can represent the plans for social forestry programs in the KHDTK area | The block plan is perceived to be quite durable and permanent for a certain period | 2     |

Class Effectiveness and Total Score

According to dictators, policies can be classified as "quite effective" after the scores obtained from the five tables of effectiveness criteria are added up. This means that the current management policy still needs improvement to make it more effective in future implementation. Especially on how the management can attract support from key actors who also have an important role in collaborative management, starting from the level of the government both at the provincial and regional levels, as
well as support from the site level, namely those who also directly feel the impact of the presence of educational forests.

After that, it is necessary to analyze the internal environment (IFAS) to identify various strengths and weaknesses in policy implementation. Strategic issues must be determined because these problems can affect the implementation of collaborative management models in the future. The IFAS matrix can be seen in Table 3 below:

| No | Factors                                                                 | Weight | Rating | Weight x Rating |
|----|-------------------------------------------------------------------------|--------|--------|-----------------|
| 1  | The presence of a strategic plan for educational forest management      | 0.4    | 2      | 0.8             |
| 2  | Competent experts in management                                         | 0.3    | 3      | 0.9             |
| 3  | HR participation that can encourage management improvements (students, lecturers, and staff of the Faculty of Forestry Unhas) | 0.3    | 2      | 0.6             |
| **Total** | **Strength**                                                                 | **1.0** | **2.3** |                 |
| 1  | Lack of funding                                                         | 0.5    | 3      | 1.5             |
| 2  | Lack of supporting facilities                                           | 0.5    | 3      | 1.5             |
| **Total** | **Weakness**                                                              | **1.0** | **3**   |                 |

The total value in Table 3 shows how the forces mentioned will influence the implementation of the collaborative model of educational forest management policies, and how this will also affect the external strategic factors of management policies. For strength, the number of weights x rating is 2.3 or classified as moderate, so it is considered not fully able to become a force in encouraging management strategies. While for negative factors, namely weakness, the number of weights x rating is 3 or outstanding, meaning that this weakness becomes an important thing to note, because it will be a major problem in implementing collaborative model management policies.

In addition, it is also necessary to analyze the external environment (EFAS) in order to identify various opportunities and threats from external parties to policy implementation. Strategic issues must also be determined because external factors can affect the implementation of collaborative management models in the future. The EFAS matrix can be seen in Table 4:

| No | Factors                                                                 | Weight | Rating | Weight x Rating |
|----|-------------------------------------------------------------------------|--------|--------|-----------------|
| 1  | The presence of a government program related to Social Forestry in the KHDTK area that enables facilities to be provided and capacity building for communities around the forest. | 0.5    | 3      | 1.5             |
| 2  | There is a potential to become an eco-tourism that enables educational forests to be promoted as eco- | 0.3    | 3      | 0.9             |
tourism destinations and other events.

3 Potential for HBBK management as well as HR potential (farmers) for HBBK managers. 0,2  2  0,4

| Total | 1,0  | 2,8 |
|-------|------|------|

### Threat

1 Potensi konflik antara masyarakat dan pihak pengelola (jika tidak terbuka dalam pendistribusian manfaat hutan pendidikan) 0,7  3  2,1
2 Tumpang tindih kebijakan, dalam hal ini klaim peran dalam pengelolaan dan penguasaan KHDTK 0,3  1  0,3

| Total | 1,0  | 2,4 |

The total value above shows how the above forces will influence the implementation of the collaborative model of educational forest management policies, and how this will also affect the internal strategic factors of management policies. For opportunities, the number of weights x rating is 2.8 or classified as outstanding, so it is considered to have considerable opportunities in encouraging management strategies. While for negative factors, namely threats, the number of weights x rating is 2.4 or moderate, meaning that threats cannot be excluded because they have the potential to become obstacles to implementing collaborative model management policies.

Based on the results of the IFAS-EFAS approach, a strategy alternative is produced to become a reference for consideration in implementing collaborative management of educational forests. The resulting strategy is outlined in the SWOT analysis matrix that generates SO, WO, ST, WT strategies. The SWOT matrix can be seen in Table 5:

**Table 5. SWOT matrix analysis as an alternative collaborative management strategy**

| IFAS | Strength (S) | Weakness (W) |
|------|--------------|--------------|
| **EFAS** | | |

#### Opportunity (O)

1. The strategic plan of Hasanuddin University's educational forest management also includes plans for empowering communities around the forest through the Social Forestry scheme
2. Utilizing the available human resources to promote, and jointly develop the potential of ecotourism

#### Threat (T)

1. Other experts and human resources can become mediators or facilitators to relevant parties so that mutual understanding can be built regarding management objectives
1. Budgeting in management must be on target, accountable, and transparent, to avoid negative stigma from the community.
4. Conclusion
1. Implementation of the collaboration management model can be outlined in the form of an action plan for the management of Hasanuddin University’s Educational Forest Management by considering the level of importance and influence of stakeholders, policies, and stakeholder needs. This action plan also considers certain aspects including infrastructure, facilities, rules or regulations, discussion forums, funding, promotion, counseling, and guidance as well as strengthening human resources (HR).
2. Strategies that utilize maximum use of power to seize opportunities (SO), namely plans for empowering communities around the forest through Social Forestry schemes in strategic plans and utilizing the human resources they have to promote, and jointly developing eco-tourism potential.
3. Strategies that utilize maximum power to anticipate or face threats and try to make threats as opportunities (ST), namely to make experts and other human resources as mediators or facilitators to relevant parties so that mutual understanding can be built about management objectives.
4. Strategies that minimize weaknesses to seize opportunities (WO), namely improvements in the funding area through fundraising to improve the quality of educational forest management, including the improvement of supporting facilities and infrastructure through the concept of partnership with the community, and massive promotion of eco-tourism potential.
5. Strategies that minimize weaknesses to avoid threats well (WT), namely managing budget that is right on target, accountable, and transparent, to avoid negative stigma from the community.

Reference

[1] Yusran 2017 Analisis Stakeholder Dalam Pengelolaan Hutan Pendidikan Universitas Hasanuddin (Makassar : Universitas Hasanuddin) p 89
[2] Tadjudin, D 2000 Manajemen Kolaborasi (Bogor : Pustaka Latin) p 34
[3] Abbas, R 2005 Mekanisme Perencanaan Partisipasi Stakeholder Taman Nasional Gunung Rinjani (Bogor : Sekolah Pasca Sarjana Institut Pertanian Bogor) p 60
[4] Yusran 2017 Model Manajemen Kolaborasi Dalam Pengelolaan Hutan Pendidikan Universitas Hasanuddin (Universitas Hasanuddin: Makassar) p 16