

# Forestry Policy Evaluation in Preserving and Maintaining the Existence of Forests Post Eruption of Mount Sinabung in Karo District, North Sumatera Province

Simson Ginting\*, Februat Trimurni

Department of Public Administration, Universitas Sumatera Utara

Email: [simson.ginting@usu.ac.id](mailto:simson.ginting@usu.ac.id)

## ABSTRACT

In the 1945 Constitution of the Republic of Indonesia; that the utilization and use of forest areas must be carried out appropriately and sustainably by taking into account the ecological, social and economic functions as well as to maintain sustainability for the lives of present and future generations. Therefore, the Government through the Ministry of Environment and Forestry of the Republic of Indonesia has issued a decree of the Minister of Environment and Forestry of the Republic of Indonesia Number: SK.107/MenLHK-II/2015 concerning the permit to borrow and use forest areas for agricultural land for victims of the eruption of Mount Sinabung in the area permanent production forest and Decree of the Minister of Environment and Forestry of the Republic of Indonesia Number: SK.547/MenLHK/Setjen/PLA.2/10/2017 concerning the Release of Permanent Production Forest Areas in the context of exchanging forest areas for the relocation of refugees from the eruption of Mount Sinabung. This study is intended to describe the evaluation of forestry policies in relocating refugees from the eruption of Mount Sinabung in the Siosar forest area, Brand District and to see if there is an impact of the eruption of Mount Sinabung on the existence of forests in Karo Regency, North Sumatra Province. This research uses descriptive analysis method by combining qualitative approach, secondary data analysis and in-depth interviews to explore primary data. Data analysis using triangulation method of data collection techniques and data sources. Data validation is carried out following credibility standards and confirmation standards. The results showed that the evaluation of forestry policies in relocating refugees from the Mount Sinabung eruption in the Siosar forest area, Mark District, Karo Regency, North Sumatra Province, was seen through six aspects, namely 1. It was effective in accommodating victims of the Mount Sinabung eruption, but still less effective in maintaining the existence of the forest. 2. It is efficient even though it has sacrificed the siosar forest area, and so far there has been no replacement land for the forest area that has been used as a relocation area. 3. The adequacy of the Siosar forest area is not sufficient to accommodate all victims of the eruption of Mount Sinabung, 4. Leveling: the distribution of land is not evenly distributed to all victims of the eruption of Mount Sinabung, 5. The responsiveness of the community of victims of the eruption of Mount Sinabung is high enough to the government's offer in providing relocation areas, although there are still a small number of people affected by the eruption who did not respond or did not respond to the relocation offer. 6. Accuracy: The use of the Siosar production forest area is considered appropriate because it is not a protected forest, but a replacement land is still needed for forest areas to maintain the existence of the forest in Karo Regency, North Sumatra Province.

**Keywords:** *Policy Evaluation, Forest Preservation and Maintainance, Post Eruption.*

## 1. RESEARCH BACKGROUND

In the Law of the Republic of Indonesia Number 18 of 2013 concerning Prevention and Eradication of Forest Destruction, it is explained that forests, as gifts and gifts from God Almighty which are mandated to the Indonesian people, are assets controlled by the state and provide benefits for mankind that must be gratefully managed, managed, and utilized optimally and preserved for the greatest prosperity of the people as

stated in the 1945 Constitution of the Republic of Indonesia; that the utilization and use of forest areas must be implemented appropriately and sustainably by taking into account the ecological, social and economic functions as well as to maintain

sustainability for the life of present and future generations. Based on this description, the utilization of natural resources, especially in this case forest resources, cannot be done partially, but must be implemented in an integral and integrated manner in line with efforts to utilize other resources in carrying out national development. This integration of integrity is defined as the existence of interrelationships, dependencies, and supports that cannot be separated in one system.

Indonesia's forest resources must also be able to play a role in the development of the world's environmental management system and other interests related to forest resources. Therefore, natural resources (forests) in Indonesia will greatly affect economic conditions, trade, industry and especially the balance of the environment. Thus, it is very reasonable if forest resources in Indonesia are preserved from destruction. Destruction can occur due to lack of attention to ecosystems, the causes of which are: illegal logging, theft of forest products, shifting cultivation, forest burning, illegal mining of mining materials, natural disasters and or hunting. Pamulardi, (1996).

Land area of North Sumatra Province: 7,162,763.56 ha., wherein Forest Area: 3,742,120 ha., Percentage of Forest Area to Land: 52.24%. In fact, the area of  $\pm$  3,122,810.74 Ha (43.60%) of the forest area to be maintained is not entirely forested and free from problems (clear and clean), for example in Karo Regency, which is Forest Area: 128,820.51 ha where at the location Brand District based on the Map Designation of forest area of North Sumatra Province which is a Protected Forest (HL) has been built a tourist attraction by PT. The Indah Lestari brand is guided by the Karo Regency RTRW (not forest area). (Source: Presentation of Proposed Forest Area Revision, North Sumatra Provincial Government January 2010)

The government, despite giving recognition to the existence of the community and their land tenure system (regulated in Law No. 5/60 on Agrarian Principles and Law on Basic Forestry No. 5/67 Forestry Law No. 41/99, which then updated with the Law of the Republic of Indonesia No. 18 of 2013 concerning Prevention and Eradication of Forest Destruction). However, it is also explicitly stated that the opportunity to claim the right to use forest products and customary rights to land is not allowed to exceed the national interest.

After the eruption of Mount Sinabung, the Karo Regency Government followed up on President Joko Widodo's (Jokowi) instruction to issue a borrow-to-use permit for the Siosar forest area, Merek District, Karo Regency, in order to speed up the relocation of the Sinabung refugee victims, which was then followed up by the Minister of Forestry and the Environment of the Republic of Indonesia. , Siti Nurbaya Bakar, MSc by issuing a borrow-to-use permit for the Siosar forest area, for agricultural land for victims of the eruption of Mount Sinabung. In accordance with the copy of Fax Number: S.482/Menhut-II/2014, regarding the application for borrowing and using the Siosar forest for

agricultural land for victims of the Mount Sinabung eruption, in principle the Minister of Environment and Forestry does not object. Land use and road access in Siosar's permanent production forest (HP) and protected forest (HL) are around 458.8 hectares. The area includes details of the use of agricultural land for residents of three villages that were relocated in the early stages, namely, residents of Simace, Bekerah and Suka Meriah villages, covering an area of 447.86 hectares and for road access to the location of Agropolitan Siosar covering an area of 11.02 hectares through a borrow-to-use forest area permit.

"This approval was given in consideration of the need to guarantee the continuation of the life of the Sinabung refugee community which is a constitutional right of the community according to the 1945 Constitution, and remains guided by the Minister of Forestry Regulation NO: P.16/Menhut II/2014," said Head of BPBD Karo, Ir. Subur Tarigan Tambun was accompanied by Secretary Drs Jhonson Tarigan to MedanBisnis, Friday (31/10) in his office. (<https://www.medanbisnisdaily.com/news/read/2014/11/01/126947/pemkab-Karo->)

This research is intended to find out why forestry policies have not been able to maintain forest sustainability in Karo Regency, North Sumatra Province after the eruption of Mount Sinabung, whether the policy of relocating victims of the eruption of Mount Sinabung causes an increase in forest damage and disruption of forest sustainability in Karo Regency, North Sumatra Province, which can also cause disturbances. the need for water, this is very reasonable because the existence of Forests in Karo Regency is one of the buffers for water needs in Medan City as the Capital of North Sumatra Province and Lake Toba as one of the Tourism Destinations in Indonesia, as well as environmental conservation efforts in North Sumatra Province which is a part of the Unitary State of the Republic of Indonesia.

The results of this study are expected to provide scientific and practical contributions, especially in obtaining new concepts in the field of Public Policy in the field of Public Administration Science, especially Policies in the Forestry Sector so that the existence of forests, especially in Karo Regency, North Sumatra Province can be maintained and sustainable.

## 2. LITERATURE REVIEW

Evaluation is one level in the public policy process, evaluation is a way to assess whether a policy or program is going well or not. Evaluation has various definitions, William N. Dunn, gives meaning to the term evaluation that:

"where evaluation refers to the production of information about the value or worth of policy outcomes. When policy outcomes do in fact have value, it is because they contribute to goals and objectives. In this case we say that a policy or

program has attained some significant level of performance.” (Dunn, 2003:356).

The above understanding explains that policy evaluation produces information about the value or feasibility of policy results, where policy results in fact have value, therefore policy evaluation contributes to achieving policy goals or objectives. The final part of a policy or program process must achieve a meaningful level of performance. According to Thomas Dye in Parsons (2005:547) policy evaluation is "learning about the consequences of public policy":

Policy evaluation is an objective, systematic, and empirical examination of the effects of public policies and programs on their targets in terms of the objectives to be achieved.

Meanwhile, Carol Weiss in Parson (2005:547) says that evaluation can be distinguished from other forms of analysis based on six things:

- 1) Evaluation is intended for decision making, and for analyzing problems as defined by decision makers, not by researchers.
- 2) Evaluation is an assessment of character. Research aims to evaluate program objectives.
- 3) Evaluation is research conducted in policy settings, not in academic settings.
- 4) Evaluation often involves conflict between researchers and practitioners.
- 5) The cost evaluation is not published.
- 6) Evaluation may involve researchers in matters of loyalty to funding agencies and promoting social change.

Meanwhile, the Regulation of the Minister of Forestry of the Republic of Indonesia Number: P.2/Menhut-II/2011 (Article I:8) reads: "Evaluation of policy performance is an activity or process that includes the assessment of a public policy that has been running for a certain period of time, which includes an evaluation of the performance of policy formulations, performance results or benefits felt by the public, taking into account the environmental factors of the policy."

The conclusion is that public policy evaluation is a design activity, research or activity to assess the level of performance of a public policy that has been running or implemented within a certain period of time whether it is useful and has an impact in accordance with the objectives set in the public policy, which includes an evaluation of performance. policy formulation, performance results or benefits that can be felt by the community by paying attention to the environment in which the policy is implemented. There is no time limit in policy evaluation, where the more strategic a policy is, the longer time is needed to evaluate it, on the contrary the more technical the nature of a policy or program, the evaluation can be carried out in a shorter

period of time since the implementation of the policy in question ( Subarsono, 2013:119) .

The first and most important function, policy evaluation can provide valid and reliable information about policy performance, namely how far needs, values and opportunities have been achieved through public action. The second function is that evaluation can contribute to the clarification and criticism of the values that underlie the selection of goals and targets regarding the appropriateness of goals and targets in relation to the problem at hand. The third function, evaluation can contribute to the application of other policy analysis methods including problem formulation and recommendations. According to Muchsin, the evaluation of government policies is as a judge who determines that existing policies have succeeded or failed to achieve their goals and impacts (Muchsin and Fadillah, 2002:110). Evaluation of government policies can be said as the basis for whether existing policies are feasible to be continued, revised or even discontinued altogether, in order to be replaced with new policy alternatives.

The evaluator can use the control group in addition to using the experimental group that received the program or was subject to a policy, while the control group is the group that did not receive the program but had the same or nearly the same characteristics as the experimental group before receiving or being subjected to a program or policy in order to detect changes in both the group within a certain period of time, but in reality it is not easy to get the control group, because each community group has different characteristics from one community group to another. Evaluators can also compare the conditions before and after the implementation of a program, which in this case is the Republic of Indonesia Law number 18 of 2013 concerning Prevention and Eradication of Forest Destruction and Minister of Forestry Regulation No. P.16/Menhut II/2014 concerning Guidelines for Borrow-Use Areas Forests, or just looking at the condition after the program or policy is implemented, where each type of evaluation will produce different types of information and data.

In order to assess the success of a public policy, it is necessary to develop several criteria or indicators, because the use of a single criterion/indicator will cause the results of the assessment to be biased from what is actually expected from the policy evaluation process. In this case Dunn (2003:358) has developed criteria or indicators for evaluating public policies to measure the success of programs or public policies through six criteria, namely effectiveness, efficiency, adequacy, equity, responsiveness, and appropriateness as described in the following figure:

**Table 2.1** Criteria Kebijakan Publik

Type of Criterion	Question	Illustrative Criteria
effectiveness	Has a valued outcome been achieved ?	Unit of service
efficiency	How much effort was required to achieve a valued outcome ?	Unit cost Net benefits Cost-benefit ratio
Adequacy	To what extent does the achievement of a valued outcome resolve the problem ?	Fixed cost (type I problem) Fixed effectiveness (type II problem)
Equity	Are cost and benefits distributed equitably among different groups ?	Pareto criterion Kaldor-Hicks criterion Rawls criterion
Responsiveness	Do policy outcomes satisfy the needs, preferences or values of particular groups ?	Consistency with citizen surveys.
Appropriateness	Are desired outcomes (objectives) actually worthy or valuable ?	Public programs should be equitable as well as efficient.

(Sumber: Dunn, 2003:358)

The criteria above are benchmarks or indicators of public policy evaluation. Because this study uses qualitative methods, the discussion in this study relates to the questions formulated by William N. Dunn for each criterion. For more details, each of these indicators will be explained as follows:

#### a. Effectiveness

Effectiveness comes from the word effective which implies the achievement of success in achieving the goals that have been set. Effectiveness is also called usability. Effectiveness is always related to the relationship between the expected results and the results actually achieved. As stated by Arthur G. Gedeian et al. In his book *Organization Theory and Design* which defines effectiveness as "That is, the greater the extent to which an organization's goals are met or surpassed, the greater its effectiveness (The greater the achievement of organizational goals, the greater the effectiveness)" (Gedeian, 1991: 61).

Furthermore, William N. Dunn in his book entitled *Introduction to Public Policy Analysis: Second Edition*, states that: "Effectiveness is concerned with whether an alternative achieves the expected result (effect), or achieves the goal of taking the action. Closely related to technical rationality, it is always measured by the unit of product or service or its monetary value" (Dunn, 2003:429).

If after the implementation of public policy activities it turns out that the impact is not able to solve the problems that are being faced by the community, then it can be said that a policy activity has failed, but sometimes a public policy results are not immediately effective in the short term, but after going through a certain process. In terms of understanding business effectiveness, it can be interpreted that effectiveness is the extent to which it can achieve goals at the right time in carrying out main tasks, product quality and development. That the greater the achievement of the goals of the organization, the greater its effectiveness.

This understanding can be concluded that the greater the achievement of organizational goals, the greater the results to be achieved from these goals.

Based on the description above, it can be concluded that the measure of effectiveness requires a comparison between inputs and outputs. The measure of effectiveness must be the level of satisfaction and the creation of a conducive working relationship and high intensity. This means that the measure of effectiveness is the presence of a high level of mutual ownership.

#### b. Efficiency

Effectiveness and efficiency are closely related, efficiency will occur if the use of resources is empowered optimally so that a goal will be achieved. As for William N. Dunn: "Efficiency relates to the amount of effort required to produce a certain level of effectiveness. Efficiency, which is a synonym for economic rationality, is the relationship between effectiveness and effort, the latter generally being measured by monetary costs. Efficiency is usually determined by calculating the cost per unit of a product or service. Policies that achieve the highest effectiveness at the lowest cost are called efficient" (Dunn, 2003:430).

If the target to be achieved by a public policy turns out to be very simple while the costs incurred through the policy process are too large compared to the results achieved. This means that policy activities have been wasteful and are not feasible to implement.

#### c. Adequacy

Sufficiency in public policy can be said that the goals that have been achieved have been felt to be sufficient in various ways. William N. Dunn suggests that adequacy (adequacy) is concerned with how far a level of effectiveness satisfies the needs, values, or opportunities that cause problems (Dunn, 2003: 430). From the above understanding it can be concluded that adequacy is still related to effectiveness by measuring or predicting how far the existing alternatives can satisfy

needs, values or opportunities in solving problems that occur.

#### **d. Alignment**

Equilibrium in public policy has a meaning with justice given and obtained by public policy targets. William N. Dunn stated that the criterion of equity is closely related to legal and social rationality and refers to the distribution of consequences and efforts between different groups in society (Dunn, 2003:434). An equalization-oriented policy is a policy that results or effort is equitably distributed. A particular program may be effective, efficient, and sufficient if the costs and benefits are evenly distributed. The key to the alignment is justice or fairness.

The implementation of the policy must be fair in the sense that all sectors and from the perspective of society must be able to enjoy the results of the policy. Because public services are services from the bureaucracy for the community in fulfilling community activities, either directly or indirectly. Public services themselves produce public services.

#### **e. Responsiveness**

Responsiveness in public policy can be interpreted as a response to an activity. Which means the response of the target of public policy on the implementation of a policy. According to William N. Dunn that responsiveness (responsiveness) relates to how far a policy can satisfy the needs, preferences, or values of certain community groups (Dunn, 2003:437). A policy success can be seen through the response of the public who respond to the implementation after first predicting the effect that will occur if a policy will be implemented, also the response of the community after the impact of the policy has begun to be felt in a positive form in the form of support or a negative form in the form of rejection.

Dunn also stated that: "The responsiveness criterion is important because an analysis that can satisfy all other criteria (effectiveness, efficiency, adequacy, equality) still fails if it does not respond to the actual needs of the group that should benefit from the existence of a policy" (Dunn, 2003:437).

Therefore, the responsiveness criteria are a real reflection of the needs, preferences, and values of certain groups against the criteria of effectiveness, efficiency, adequacy, and similarity.

#### **f. Accuracy**

Accuracy refers to the value or value of program objectives and to the strength of the assumptions underlying these goals. William N. Dunn states that Appropriateness is: "The criteria used to select a number of alternatives to be used as recommendations by assessing whether the results of the recommended alternatives are a feasible goal choice. Eligibility criteria are related to substantive rationality, because this criterion concerns the substance of the goal, not the method or instrument to realize that goal" (Dunn, 2003: 499).

This means that the accuracy can be filled by other policy success indicators (if any). For example, other

impacts that cannot be predicted in advance, both positive and negative unexpected impacts, or it is possible that other alternatives are felt to be better than the implementation of a policy so that policies can move more dynamically.

### **3. RESEARCH METHOD**

In scientific research, research methods are needed as a frame in conducting research, analyzing data, and presenting data so that they are integrated in one line of thought and are not biased. There are several types of research in scientific treasures, including research survei, experiments, grounded research, a combination of qualitative and quantitative approaches, and secondary data analysis. To explore the information needed in an effort to answer the research questions as formulated above, the author uses a descriptive method, by combining a qualitative approach, secondary data analysis and in-depth interviews to explore primary data.

According to John W. Creswell (2013: 44-45) in his book: *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, penelitian qualitative dimulai dengan :

*"Assumptions and the use of interpretative/theoretical frameworks that inform the study of research problems addressing the meaning individuals or groups ascribe to a social or human problem. To study this problem, qualitative researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under study, and data analysis that is both inductive and deductive and establishes patterns or themes. The final written report or presentation includes the voices of participants, the reflexivity of the researcher, a complex description and interpretation of the problem, and its contribution to the literature or a call for change."*

A qualitative approach is a research and understanding process based on a methodology that investigates a social phenomenon and human problem. In this approach, the researcher creates a complex picture, examines words, reports detailed views of the respondents, and conducts studies in natural situations (Creswell, 2013:45). Qualitative methodology is a research procedure that produces descriptive data in the form of written and spoken words from people and observed behavior.

The next process in using a descriptive-qualitative approach, the data is explained and presented with quotations of words. The test can be carried out non-statistically, namely with an argumentative explanation that includes a logical process of reasoning and interpretation. Descriptive-Qualitative research method actually aims to understand and interpret the meaning of a situation/event accurately and objectively. Qualitative research is carried out under natural conditions and is inventive in nature. In qualitative research, the researcher is the key instrument. Therefore, researchers

must have extensive theory and insight so they can ask questions, analyze, and construct objects under study to be clearer. This research emphasizes more on meaning and value bound. Qualitative research is used if the problem is not clear, to find out hidden meanings, to understand social interactions, to develop theories, to ensure the validity of data, and to examine the history of development.

#### **4. RESULT AND DISCUSSION**

Mount Sinabung is a volcano in the Karo Highlands, Karo Regency, this mountain has never been recorded as active since 1600 but suddenly reactivated and erupted in 2010. The first eruption occurred on 27 August 2010, this mountain emitted smoke and volcanic ash. On August 29, 2010 at around 00.15 WIB (August 28, 2010) Mount Sinabung released lava. The status of this mountain was raised to SIAGA (level 3) and twelve thousand people in the vicinity were evacuated and accommodated in 8 locations in refugee posts in Karo Regency. On September 7, Mount Sinabung erupted again, this is the largest eruption since this mountain became active on August 29, 2010. The sound of this eruption was heard up to a distance of 8 kilometers, this volcanic ash was blown up to 5000 meters in the air. Mount Sinabung erupted again in September 2013.

The first eruption occurred on September 15, 2013 in the early hours of the morning and then occurred again in the afternoon on September 17, 2013. This eruption released hot clouds and volcanic ash. Previously there were no signs of increasing Sinabung activity so there was no early warning to residents. In this eruption, no casualties were reported, but thousands of residents of the settlements around Mount Sinabung were forced to evacuate to safe areas. As a result of this incident the status of Mount Sinabung was raised to level 3 (Standby). After that, there was no increase in activity for several days, so on September 29, 2013 the status was lowered to level 2 alert. Entering the month of November happened increased activity so that on November 3, 2013 at 03.00 the status was raised to standby again, the displacement of residents again occurred in villages within 5 km of the peak of Mount Sinabung, especially the villages of Bekerah, Simacem and Suka Meriah which were only 3 km from the top of the mountain. Eruptions occurred repeatedly after that accompanied by hot clouds sliding up to 4.5 kilometers, until on November 24, 2013 at 10.00 WIB the status of Mount Sinabung was raised to the highest level of level 4 (AWAS). Based on volcanology recommendations, residents of 21 villages and 2 hamlets around Mount Sinabung evacuated to 24 evacuation posts in Karo Regency.

Status level 4 (alert) continued to persist until well into 2014, incandescent lava avalanches and hot cloud bursts continued to occur until January 3, 2014. Starting on January 4, 2014 there was a series of earthquakes, explosions, and hot clouds sliding continuously until the next day. This forced additional residents who fled due to fear, so that the refugees exceeded 20 thousand

people. In the last week of January 2014 the condition of Mount Sinabung began to stabilize and it was planned that refugees from outside the danger radius (5 km) could be sent home. Mountain status lowered to Standby. However, the activity of Mount Sinabung did not stop and continued to increase until the last recorded increase in status from Alert (level 3) to Caution (level 4) since Tuesday 2 June 2015 at 23.00 WIB. This alert status persists to this day. This Caution status is predicted to take a long time and can reach 5 years until the activity of Mount Sinabung returns to normal. Until now, the exact impact of the eruption is also difficult to calculate because the eruption is still ongoing. The eruption of Mount Sinabung had a major impact on several aspects of people's lives, especially those around the mountain.

The people living around Mount Sinabung lost their homes, the livelihoods of the residents who are farmers experienced crop failures, the soil was contaminated with sulfur, the amount of which could not be estimated until now. Many communities failed to harvest because their crops were damaged by being covered in volcanic ash, not to mention the cold lava which also damaged crops and water sources, and cut village roads and bridges. The destruction of the settlements and residences of the people living in the Mount Sinabung area made residents have to move to new settlements and residences that have been provided by the government by clearing forest land in the Siosar Area, Mark District, Karo Regency. In terms of the policies taken by the Central and Regional Governments, the impact is that they are able to solve the problems that are being faced by the victims of the eruption of Mount Sinabung, where from the results of the study it was found that the Minister of Forestry Regulation NO: P.16/Menhut II/2014 regarding the application for borrowing and using the Siosar forest for agricultural land victims of the Mount Sinabung eruption, the informant said that "The community is satisfied with the relocation, only the problem of compensation is not in accordance with the wishes of some of the people affected by the eruption of Mount Sinabung", it can be said that a policy activity has been in accordance with the objectives taken policy, but sometimes a public policy results are not immediately effective in the short term, but after going through a certain process.

In terms of the measure of the effectiveness of the comparison between replacement land and land abandoned due to the eruption of Mount Sinabung, not all community members have replacement land according to the land they previously managed for agriculture, because some get more land than before and some get less, so that some members of the community who were victims of the eruption did not yet have a high level of mutual belonging.

In terms of the targets to be achieved by the relocation policy for the victims of the Mount Sinabung eruption, it turned out to be in line with the expectations of the community, which stated that the relocation land

provided was in accordance with its designation and could be used by all members of the community affected by the eruption of Mount Sinabung as agricultural land, while forest benefits existing on the relocation land will be lost as a result of the policy process, so that the benefits of the forest as a buffer for water availability become reduced compared to the results achieved. This means that policy activities require evaluation so that it can be seen whether the policy can be continued or there is a need for a new policy that can support forest sustainability in Karo Regency to be able to support the availability of water for community needs.

The policy that has been taken by the government in terms of borrowing and using the Siosar forest area can be said that the objectives that have been achieved have been felt to be sufficient in various ways, but all the alternatives that have been provided by the government in meeting and fulfilling the needs of the victims of the eruption of Mount Sinabung have not been able to satisfy the needs of the community. , the value or opportunity in solving the problems that occur, this can be seen from the statement of the community which states: "The benefits of relocation in terms of livelihood are in accordance with the initial village that we have left, but the drawback is that the water source is still not sufficient to meet the needs of the relocating population. , another drawback is the strong wind that causes damage to the roof of the house."

The alignment in the policy for the relocation of refugees from the eruption of Mount Sinabung is considered not effective, efficient, and sufficient because some of the displaced people feel that the costs incurred by the government for relocating land for them are not in accordance with the cost losses they have experienced as a result of the eruption of Mount Sinabung. with a statement from the community stating: "The residential house that we received from the government was in accordance with the government's promise, but the certificate of ownership that was promised to be given to us has not yet been received, while for agricultural land it is given as a borrow-to-use right". So that the smoothing function in this policy activity has not fulfilled the function of justice and fairness. The implementation of the policy must be fair in the sense that all sectors and from the point of view of the social strata must equally be able to enjoy the results of the policy. Because public services are services from the bureaucracy for the community in fulfilling community activities, either directly or indirectly. The public service itself produces public services such as the management of property rights certificates and clarity of borrow-to-use rights that have been promised by the government.

The responsiveness in the policy of relocating refugees from the eruption of Mount Sinabung felt by the community affected by the eruption of Mount Sinabung is that the government has been quite responsive in paying attention to the fate of the refugees by issuing a policy of relocation and providing land for

residential houses and agricultural land, this can be seen from the statement people who say: "The relocation land and houses have been in accordance with their designation.". A policy success can be seen through the response of the public who respond to the implementation after first predicting the effect that will occur if a policy will be implemented, also the response of the community after the impact of the policy has begun to be felt in a positive form in the form of support or a negative form in the form of rejection.

Accuracy can be filled by other policy success indicators, which in this case is the policy on monitoring forest logging, where due to the policy of relocating the land or forest area of Siosar, the function of the monitoring policy will not work as it should, so that not only the Siosar forest area is reduced but also the forest area. Others, such as protected forests or state forests along the road between Karo and Langkat districts, also experienced damage and decreased forest function.

## 5. CONCLUSION

The results showed that the evaluation of forestry policies in relocating refugees from the eruption of Mount Sinabung in the Siosar forest area, Mark District, Karo Regency, North Sumatra Province, was seen through six aspects, namely: . 2. It is efficient even though it sacrifices the Siosar forest area, and until now there has been no replacement land for forest areas that are used as relocation areas. 3. The adequacy of the Siosar forest area is not sufficient to accommodate all victims of the eruption of Mount Sinabung, 4. Leveling: uneven distribution of land to all victims of the eruption of Mount Sinabung, 5. The responsiveness of the community of victims of the eruption of Mount Sinabung is high enough to the government's offer in providing relocation areas, although there are still a small number of people who are victims of the eruption, they do not respond to the offer of relocation. 6. Accuracy: The use of the Siosar production forest area is considered appropriate because it is not a protected forest, but a replacement land is still needed for forest areas to maintain the existence of the forest in Karo Regency, North Sumatra Province.

## 6. SUGGESTIONS

The suggestions that can be given to the results of the evaluation of forestry policies in relocating IDPs from the eruption of Mount Sinabung in the Siosar forest area, Mark District, Karo Regency, North Sumatra Province are seen through six aspects, namely:

1. The need for more effective policies to maintain the existence of forests as a substitute for production forests that have been used as relocation areas.
2. The efficiency of the use of the siosar forest area still needs to be improved so that the siosar forest area that has been used as a relocation area has replacement land to maintain the forest area that is used as a relocation area.
3. It is necessary to follow up so that the adequacy of the Siosar forest area can accommodate all victims of

the eruption of Mount Sinabung, and the lost forest area is replaced according to its initial function.

4. Better policies and supervision are needed so that the even distribution of land to all victims of the eruption of Mount Sinabung can be carried out properly and the function of the lost area can be replaced with replacement land in accordance with the area of the hugtan area that has been used as a relocation area, 5. so that community responsiveness For victims of the Mount Sinabung eruption, the solution provided by the government in providing relocation areas can be accepted by all victims of the eruption of Mount Sinabung, it is necessary to mediate between the government and all victims of the eruption of Mount Sinabung, both compensation and conversion of the area affected by the eruption into a forest area again to replace forest area that has been used as a relocation area. 6. Accuracy: it is necessary to make a policy by the government so that the use of the Siosar production forest area which has been used as a residential and farming area for residents of the victims of the eruption of Mount Sinabung can be replaced with land that has been abandoned by the population to be used as forest so that the existence of forests in Karo Regency, North Sumatra Province can be used. stay awake.

#### ACKNOWLEDGMENT

The author would like to thank the Chancellor of the University of North Sumatra through the Chair of the USU Research Institute who has funded this research through the 2020 NON PNPB scheme with contract number: 4142/UN5.1.R/PPM/2020. Appreciation is also given to all parties who participated in this research.

#### REFERENCES

- [1] Cresswell, John W. 2013. *Qualitative Inquiry and Research Design: Choosing among Five Approaches*. Los Angeles: SAGE Publications, Inc.
- [2] Danim, Sudarwan. 2004. *Motivasi Kepemimpinan dan Efektivitas Kelompok*. Jakarta: PT Rineka Cipta.
- [3] Dephut. 1994. *Proyek Konservasi dan Pembangunan Wilayah Terpadu TKKS*. Jakarta: Dirjen Perlindungan Hutan dan Konservasi Alam.
- [4] Dunn, William N. 2000. *Pengantar Analisis Kebijakan Publik (Public Policy Analysis : An Introduction)*. Alih Bahasa Tim Fisipol UGM. Yogyakarta: Penerbit Gajah Mada University Press.-----, 2003. *Public Policy Analysis: An Introduction*. New Jersey: Pearson Prentice Hall.\_\_\_\_\_. 2003. *Pengantar Analisis Kebijakan Publik : Edisi Kedua*. Yogyakarta: Gajah Mada University Press.
- [5] Dwiyanto, Agus. 2002. *Reformasi Birokrasi Politik di Indonesia*. Yogyakarta: Penerbit Pusat Studi Kependudukan dan Kebijakan UGM.
- [6] Gedeian, Arthur G. (1991). *Organization Theory and Design*. University of Colorado at Denver.
- [7] Jones, Charles O. 1984. *Pengantar Kebijakan Publik (Public Policy)*. Alih Bahasa Nasir Budiman. Jakarta: Penerbit Rajawali.
- [8] Kartodihardjo, Haryadi. 1998. *Pembaruan Kebijakan Kehutanan dan Pendidikan Tinggi Kehutanan, Pencarian Intelektual di Antara Belenggu Kekuasaan*. Bogor: IPB.
- [9] Keraf, Sony, A. 2006. *Etika Lingkungan*. Jakarta: Penerbit Buku Kompas.
- [10] Moleong, Lexy. 2000. *Metodologi Penelitian Kualitatif*. Bandung: Penerbit PT. Remaja Rosda Karya.
- [11] Pamulardi, Bambang. 1996. *Hukum Kehutanan dan Pembangunan Bidang Kehutanan*. Jakarta: PT. Raja Grafindo Persada.
- [12] Parsons, Wayne. 2006. *Public Policy: Pengantar Teori dan Praktik Analisis Kebijakan*. Dialihbahasakan oleh Tri Wibowo Budi Santoso. Jakarta: Kencana Prenada Media Group.
- [13] Purwanto, Edi. 1996. *Dehutanisasi dan Peningkatan Debit Sungai di Musim Kemarau*. Duta Rimba.
- [14] Sagala, Porkas. 1994. *Mengelola Lahan Kehutanan Indonesia*. Jakarta: Yayasan Obor Indonesia.
- [15] Siahaan, N.H.T. 2007. *Hutan, Lingkungan dan Paradigma Pembangunan*. Jakarta: Penerbit Pancuran Alam.
- [16] Sintaningrum. 2012. *Kesejahteraan Petani, Siapa Peduli?, Implementasi Kebijakan Pertanian*. Bandung: Penerbit AIPI Bandung.
- [17] Steers, Richard M. (1985). *Efektivitas Organisasi*. Jakarta: Erlangga.
- [18] Soehino. 2005. *Ilmu Negara*. Yogyakarta: Liberty
- [19] Soemarwoti. 1987. *Ekologi Lingkungan Hidup dan Pembangunan*. Bandung: Penerbit Djambatan.
- [20] Soemarwoto, dan Brotoisworo. 1992. *Pembangunan Terlanjutan Kehutanan, Menjawab Tantangan Gerakan Anti-Kayu Tropik*. Kerjasama antara: Departemen Kehutanan dan PSDAL-Universitas PADJADJARAN.
- [21] Subarsono, AG. 2013. *Analisis Kebijakan Publik: Konsep, Teori dan Aplikasi*. Yogyakarta: Pustaka Pelajar.
- [22] Sugandhy, Aca dan Hakim, Rustam. 2007. *Prinsip Dasar Kebijakan Pembangunan Berkelanjutan Berwawasan Lingkungan*. Jakarta: Bumi Aksara.
- [23] Tim Penyusun Kamus Pusat Bahasa (TPKPB). 2005. *Kamus Besar Bahasa Indonesia, Edisi Ketiga*. Jakarta: Balai Pustaka.
- [24] Peraturan Menteri Kehutanan Republik Indonesia Nomor: P.2/Menhut-II/2011 Tentang Pedoman Formulasi, Implementasi, Evaluasi Kinerja Dan Revisi Kebijakan Publik Di Lingkungan Kementerian Kehutanan
- [25] <http://www.wisataparlemen.com/front> Powered by Joomla! Generated: 5 May, 2008, 22:5
- [26] <http://www.compas.com>
- [27] <http://www.tanahkaro.org>

- [28] <https://www.google.com/url?sa=i&url=https%3A%2F%2Fpetatematikindo.wordpress.com%2F2014%2F02%2F05%2Fpeta-administrasi-kabupaten-karo%2F&psig=AOvVaw0aXQ6oe2GZU1UmoDkzIed2&ust=1606773370971000&source=images&cd=vfe&ved=0CAMQjB1qFwoTCOiehrPfqO0CFQAAAAAdAAAAABAD>