

The Implementation of the Policy On the Protected Area Conservation in Dieng Plateau

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Dieng Plateau is a leading tourist spot in Central Java, only the second place to Borobudur Temple. It is situated between two regencies, Banjarnegara and Wonosobo. Municipal governments of these regencies have already issued a policy on area spatial management plan, which governs a conservation of protected area functions. The legal statement of this plan is written down on the Municipal Government Act No. 11/2011-2031.

This research applied a qualitative method in order to answer questions of the implementation of the policy on protected forest conservation in Dieng Plateau. Informants used for this research were collected by a purposive sampling technique. The research found phenomena dealing with the implementation and factors that inhibited the policy of the protected area conservation in Dieng Plateau.

The policy has a purpose of restoring protective functions as nature should play its role. The policy involves concerned actors, such as *Bappeda, Dinas Kehutanan dan Perkebunan, Dinas Pertanian, Badan Lingkungan Hidup*, community leaders, and local farmers in Dieng area. The implementation communicated by each of these institutions has not been optimal because of sectoral egoism, lacking participation of local people, and lacking regulations that govern the protected area conservation. Parts of the area are still possessed by individuals and some local people are reluctant to a change in attitude towards excessive potato plantation, despite the plantation belongs to themselves.

The research recommends legal assurance, which governs protected area conservation in individually-owned areas and an appropriate program that relocates the potato plantation without diminishing economic income of the farmers.

Keywords : protected forest, law/regulation, government, potato farmers.



BACKGROUND

Dieng Plateau is situated between two regencies, Wonosobo and Banjarnegara. Wonosobo is a regency that has vary potentials including natural tourism. This regency is located 2,093 meters above the sea surface. It has beautiful sceneries and has been an center for cultural development in Indonesia for generations. In addition to mountaneous landscape, Dieng is rich of natural beauties and cultures (L. Agus Tjugianto, 2006).

However, such exciting panorama is recently distracted by the change in land functions, for example, the removal of pine trees by the opening of the land for potato plantation and loss of *magical impression* the people in the past times used to enjoy at *Telaga Warna*.

Interviews with informants from *Dinas Kehutanan dan Perkebunan* of Wonosobo Regency, which took place before the research observation in February 2013, reported that the depth of *Telaga Warna* decreased from 13 meters to 3 meters deep. The similar sedimentation also occurred at *Telaga Cebong* in Sembungan Village, Kejajar District, Wonosobo Regency. Landslides were believed to have caused this sedimentation. Accordingly, *Telaga Cebong* lost its width from 18 m² to 8 m².

It was potato plantation to be deem responsible for the loss of fertile soils in Dieng Plateau. Potato farmers cut pine trees excessively to open new plantation lands. The expansion of the potato plantation had been so excessive that it did not only involve the farmers-owned area, but also protected forest area. Accordingly, Dieng Plateau continued to lose its *green area*.

The diminishing *green area* in Dieng Plateau had caused floods and landslides during rainy season. These disasters occurred due to no absorption in the soils.

In addition, the interviews also found that decreasing potato harvest volumes from early second millennium to the present days did not prevent the farmers in Kejajar District from keeping themselves on planting this commodity. Instead, more people were enthusiastic to plant potatoes as seen in Table 1.

Table 1.1
Number of Potato Farmers in Kejajar, Dieng Plateau, Wonosobo Regency

| No. | Year | Number of farmers |
|-----|-------|-------------------|
| 1. | 2007 | 8.535 |
| 2. | 2008 | 10.851 |
| 3. | 2009 | 10.865 |
| 4. | 2010 | 10.125 |
| 5. | 2011 | 12.321 |
| 6. | 2012 | 14.674 |
| | Total | 67.371 |

Source: Municipal Office of Agriculture of Wonosobo 2013

The above table shows that Dieng Plateau had an annual increase of the number of potato farmers. Only in 2010 did the number decrease (740), slightly fewer (1.10%) than the number in 2009. Simultaneous potato plantation without substitution commodities (*tumpang sari*) caused severe environmental degradation in Dieng Plateau, both in the part of Banjarnegara or Wonosobo.

Having had seen such phenomenon, municipal governments of Banjarnegara and Wonosobo drafted policies dealing with surviving the balance-of-nature of the Dieng Plateau area. In particular Wonosobo, the policy was stipulated in the Act of the Municipal Government of Wonosobo Regency No. 2/2011 on Area Spatial Management Plan. This act explains an improvement of conserving protected area functions. The policy was particularly implemented at the pine-tree area in Dieng, Patakbanteng, and Sikunang Villages, all situated in Kejajar District. The improvement of the protected area functions was pursuant to Article 3 point (2) sub-point *f*, which requires as follows: (a) maintaining protected area as predetermined; (b) gradually restoring protected area that has suffered from degrading function.

Another regulation issued by the Municipal Government of Wonosobo is the Policy on Land Management and Environmental Funding. The policy is drafted in External Policy of *Badan Lingkungan Hidup* of Wonosobo Regency 2011-2015 that recommends the followings: (a) improvement of environmental quality by improving water, air, and land qualities; (b) controlling environment monitoring and law enforcement; (c) strengthening leverage of local communities and management of natural and environmental resources.

Similarly, Banjarnegara formulated a policy dealing with protected forest area in Local Act of Banjarnegara Regency No. 11/2011 on Area Spatial Management Plan of Banjarnegara Regency 2011-2031. This act regulates projection of protected forest area conservation by implementing the following programs; (a) monitoring and inspection for “pelestarian kawasan lindung”; (b) prohibition for activities other than “pelestarian kawasan lindung”; (c) biodiversity and ecosystem conservation; (d) accelarting reboisation in protected area plants appropriate to the protective functions; and (e) education and guidance to local people and farmers in the area conservation.

Research Objective

This research was performed to answer questions of how the policy on *the* protected area conservation in Dieng Plateau was implemented and to find out factors that inhibited the implementation.

REVIEW OF LITERATURE

1. Public Policy

James E. Anderson (in Islamy, 2007:19) defines *public policy* as policies developed by governmental bodies and officials. Anderson writes that implications of this definition will mean that (1) public policy always has particular objective or be objective-oriented acts, (2) policy contains acts or patterns of what the governmental officials act, (3) policy is what is truly performed by the government, (4) public policy is at least, in a positive meaning, based on or always based on mandatory regulations.

2. Public Policy Implementation

Van Meter and Van Horn (1975) in Agustino, 2012:139) defines implementation of public policy as follow:

Acts of individuals or officials or groups belong to government or private sector that are projected to achieving predetermined objectives”.

3. Factors Affecting Public Policy

Donald Van Metter and Carl Van Horn model of public policy implementation applies a *top down* approach as they formulates in *A Model of the Policy Implementation*. The process of the implementation is an abstract or performance of a policy implementation, which basically is intentionally done for obtaining high public policy implementation in a space of variables interrelationship. The model introduces six variables that affect the policy implementation as follows: 1) size and objective of policy, 2) resources, 3) interorganisation communication and implementor activities, 4) attitude/tendency of implementors, 5) characteristics of implementors, and 6) economic, social, and political environment (Agustino, 2012:141-144).

4. Policy on Spatial Management Plan

Spatial management is a manifestation of a structure and exploitation pattern of space, either planned or unplanned (natural or artificial). It is a process of planning space management, exploitation, and controlling. There are three emphasises in the definition of spatial management: (1) based on area major functions, including area that plays protective and cultivative functions; (2) based on administrative aspects, including national, provincial, municipal, and district area space management; (3) based on activity aspects, such as urban, rural, and special purpose areas (tourist spots and the likes).

The above description makes clear that the main purpose of spatial management is determining protective and cultivative functioning areas in particular administrative area (regency/municipality or province), and then is followed by determining functions of ongoing or expected activity aspects (Khadiyanto, 2005).

Protected forest is a forest area that has the main function of protecting life system, which regulates water management, prevents flood, erosion, sea water intrusion, and preserves land fertility (Law of Republic of Indonesia No. 41/1999).

RESEARCH METHODOLOGY

Research Design

This research used a qualitative-descriptive method. A descriptive method aims to describe and illustrate situation of the research subject and object (institutions, community, area) at current time based on tangible factors as they are. Hence, this research expects to describe the implementation of the policy on protected forest in Dieng Plateau by examining how far the implementation of the policy and its inhibiting factors.

Research Locus

This research took place in Dieng Plateau area, which is one of the most interesting tourist spots in Central Java with plenty of potential resources. Dieng Plateau is now experiencing degradation due to change in land function and damages of nature. Such condition has contributed to the beauty of Dieng and threaten the existence of this Central Java's leading tourism industry.

Research Phenomena

Theoretical background in the previous part implies phenomena to be found in the research area as follows:

- a. Implementation of policy on protected area conservation in Deing Plateau, which dealt with: (a) objective and target of policy; (b) activities of obtaining policy objectives; (c) actors involved in policy implementation; (d) results of policy.

Factors that inhibit implementation of protected area conservation in Dieng Plateau, which consisted:

Economic, Social and Political Conditions

- (a) Economic condition of communities; (b) Socio-cultural condition of communities in opening potato plantation; (c) Political factors that related to

leaderships, which affected implementation of policy on protected forest preservation in Dieng Plateau tourist spot.

Informant Selection

Informants for this research were selected by a purposive sampling method, which was intentionally taken in order to gather key informants. The key informants were those knowledgeable and trusted. To get qualitative data, the research applied a technique in which a person was pointed as the informant, and then he/se would point another to become the next informant.

The informants selected were individuals from several municipal offices in Wonosobo and Banjarnegara Regencies, such as Municipal Office of Forestry and Plantation, Municipal Office of Agriculture, Municipal Office of Tourism, Environmental Board, Department of Forestry, community leaders, and local farmers.

Technique of Data Collection

Data were collected by (1) in-depth interview; (2) documentation; and (3) observation.

Technique of Data Analysis

Data were analysed by a qualitative analysis technique.

DISCUSSION

Implementation of Policy on Protected Area Conservation in Dieng Plateau

- **Basis, Objective and Target of Policy**

The implementation of the policy on protected area conservation was done pursuant to the Act of the Minister of Forestry P.50/Menhut-II/2009, which emphasises status and function of the forest. According to this regulation, provincial government appoints municipal governments to select protected forest area based on the following criteria: (1) all landscape has $> 45\%$ slope, (2) soils are prone to erosion (regosol, organosol, and renzina) with slope $> 15\%$, (3) the area is function as protecting river stream, pond reservoir, water source, and the likes, at least 200 m from the surface of tide water.

Based on the above-mentioned criteria Dieng Plateau is considered as a protected forest area. The Act becomes the basis on which Dieng Plateau as the protected forest area is subject to restoration. The following law, which eventually regulates the policy is Municipal Government Act of Spatial Management Plan of Wonosobo Regency No. 2/2011 and of Banjarnegara Regency No. 11/2011.

The Act of the Minister of Forestry requires the Municipal Government of Wonosobo and Banjarnegara to follow it up by forming Municipal Act on Spatial Management Plan on Preservation of Protected Area Function as required by Article 3 point (2) sub-point *f*: (a) maintaining the pre-determined protected area; (b) gradually restoring protected areas that already changed in function. The policy is expected to restore the protective function, in particular protected forests, which in early 2000s were used illegally by local farmers as potato plantation areas. The policy is hoped to control damage and is targeted to local people of Dieng Plateau who mostly become potato farmers. Concerned bodies are involved to help control and monitor the policy implementation.

Activities To Obtain Policy Objective

The implementation of the policy on the protected area conservation in Dieng Plateau had begun since 2009 based on the Act of the Minister of Forestry No. P.50/Menhut-II/2009 on Emphasis of Status and Function of Forest Area, by considering the ongoing condition in Dieng Plateau, which had changed its land function from the protected forest to the potato plantation area. The presence of the protected forest was important to prevent erosion, to manage water flow and stream, to prevent flood and sea water intrusion, and to sustain soil fertility. By 2009, Dieng Plateau had been dominated by seasoned crops such as potato and cauliflower planted by the local farmers.

The process of restoring the protected forest in Dieng Plateau was done by sterilising soils from seasoned potato crops, replacing them by pine trees, bamboo, and other plants that had ability to absorb and to restore water storage, as well as to prevent erosion. The farmers decided to plant potatoes in the protected forest area

because of ecological and biophysical reasons. Their original plantation area suffered from fertility degradation. It was seen from decreasing harvest volumes. The potato plantation at the protected forest was expected to give much better production.

Sterilisation directly dealt with potato farmers. Farmers with strong financial resources protested the sterilisation plan, whereas those with lacking money eventually understood the danger that might come due to excessive potato plantation in the forms of erosion, landslides, and floods. The rich farmers finally gave up their resistance and followed the regulation. They decided not to continue cropping the potatoes at the Protected Forest Area in Dieng Plateau. Since then, reboisement had been taking place gradually.

The policy on the Protected Area Conservation, which in Wonosobo was legalized in the Act No.2/2011, and in Banjarnegara in the Act No.11/2011, could be considered appropriate from the view of the current Protected Forest albeit illegal logging cases by the local people. However, the implementation had not gone effectively because some areas were still possessed by the farmers. Most of the Protected Area of Dieng Plateau at the time of observation were still left unused.

Disaster-protecting and water-absorbing functions had not been implemented effectively because farmers still continued cropping the potatoes at the area. In this case, the municipal government could only take measure by giving advices without following it up by issuing direct regulations or minimising the risks of cropping seasoned plants. Advices and Education from the Municipal Government through concerned parties (*Perhutani, BLH, and Dinas Kehutanan dan Perkebunan*) were presented in the forms of socialisation and religious activities. Actually, the farmers had been aware of negative impact of the potato plantation. However, as they also

needed to improve their economic status, those farmers with strong financial support often decided to pay high cost as long as they could still produce the potatoes. Only a few of them who had an initiative to rotate the crop types to preserve the soil fertility.

The farmers believed that potatoes would still be the leading commodity as they used to experience in the 1980s, where the harvest rate was 30 times than the seeds they plant. This harvest was equal to 30 tones production.

Actors Who Were Involved In Policy Implementation

The followings are institutions that get involved in the implementation of the protected area conservation in Dieng Plateau:

1. *Bappeda* (Municipal Office for Development Planning Budget)

The office has a function of formulating policies. It stipulated the Municipal Act of Spatial Management Plan in both regencies. *Bappeda* also acted as coordinating concerned institutions in distributing funds and socialisation with the farmers in Dieng Plateau.

2. Municipal Office of Agriculture

The office provided socialisation to the farmers concerning techniques of cropping potatoes without damaging natural resources, such as water storage, terracing and fertilizers. It also helped the Provincial Government in monitoring fund distribution to farmer unions and providing non-seasoned crop seeds such as *terong belanda*, *minyak kayu putih*, etc., which were introduced to the farmers as substitutes for potatoes.

3. Municipal Office of Forestry and Plantation

The office monitored and controlled protected forest in order to preserve its original function. It also exploited forestry commodities and provide education of techniques of exploiting forest in collaboration with Mutual Management of Community-based Forest (PHBM).

4. Environmental Board (BLH)

The board coordinated with concerned institutions and local people to regulate and prevent damages of Dieng Plateau by developing method of environmental quality restoration.

5. *Perhutani*

Perhutani had the main function of taking measures in forestry that produces goods and services to fulfill community needs. Forestry products obtained from the protected forest were then used by the local people to fulfill their needs according to the ongoing regulations.

6. Community leaders

Community leaders were village-based legislative body that determine regulation on environment in order to create balance-of-nature. Those who violate the regulation would be sanctioned. Community leaders, among other ways, but not restricted to, implemented their efforts by giving information and knowledge in community-based activities, such as *pengajian*.

Of the institutions mentioned above, coordination had not been optimally performed because of sectoral egoism. Negative assumptions sometimes were still found, such as that Protective Function Conservation was not responsibility of particular institutions. In 2008, according to the Mutual Letter of Notification of the Regents of Wonosobo and Banjarnegara, Dieng Restoration Working Team (TKPD) was founded. The team consisted of collective personnel from both regencies. However, TKPD had not produced any significant result because several parties were still untouchable, for example, private sectors as fertilizer producers, which always tried to persuade the farmers to buy their products because Dieng was the biggest consumer of the pesticide fertilizers in Central Java.

Policy Outcomes

Outcomes of the policy on the protected area conservation in Dieng Plateau had just been evidenced after the reboisation had started. In general, the protected

area of Dieng Plateau had not fulfilled the condition the policy expected, which required gradual restoration.

Eventhough protected forest area was restricted from illegal visitors and was under the reboisation process, the number of potato farmers in Kejajar District, Wonosobo Regency increased. This was due to the fact that farmers still possessed the larger part of plantation area.

Factors That Inhibited the Implementation of the Policy on Protected Area in Dieng Plateau Tourist Spot

Implementating the policy on the protected area conservation in Dieng Plateau was a very difficult and complicated job. The research found some factors that inhibited it, for examples, people's attitudes towares the risk of the land damage and degradation, but they were away but uncarea. The farmers still continued planting the potatoes because of economic needs. They believed that by doing so they could harvest twice to thrice annually eventhough the outputs were less than ever before. They preferred potatoes to other commodities because of time efficiency.

Another inhibiting factor faced by the implementing agents of the protected area conservation was difficulty in promoting alternatives to potato plants. The program had been implemented but could only last a single month and the farmers continued to crop potatoes.

Battle-of-interest between public and private sectors contributed to the difficulty of implementing the policy. Chemical fertilizers were the leading products in Dieng Plateau and the producers took any effort to maintain the condition by offering them to the potato farmers.

Lacking regulations from the local government on the management and the minimalisation of the land use in protected area where the potato crops were planted caused the implementation to be hard to follow up. Farmers still believed that cropping potatoes gave them higher status than that of other plants. Dieng potatoes had already been a long-standing primadona and this status was also verified by the Minister of Agriculture.

CONCLUSION AND RECOMMENDATION

Conclusion

The research concluded some aspects and inhibiting factors found during the implementation of the policy on the protected area in Dieng Plateau, as follows:

Implementation of Policy on Protected Area in Dieng Plateau:

1. Pursuant to the Letter of Notification of the Minister of Forestry No. P.50/Menhut-II/2009 on Emphasis of Status and Function of Forestry Area, Wonosobo and Banjarnegara Regencies, where the Dieng Plateau is situated, issued a mutual policy on the spatial management plan, which was written down in the Act No. 2/2011 and Act. No 11/2011 on restoring the function of the protected area in Dieng Plateau due to damage caused by potato plantation.
2. The implementation of the policy on the protected area conservation in Dieng Plateau was not yet effective because the restoration had just been performed at the protected forest, which only covered 20% of the total area in Dieng Plateau.
3. The coordination between concerned institutions such as *Bappeda*, *Dinas Pertanian*, *Dinas Kehutanan dan Perkebunan*, *Badan Lingkungan Hidup*, and *Perhutani* was still unsuccessful, whereas *TKPD* had not worked well because it had not touched every affected party.

Inhibiting factors of the implementation of the policy on the protected area in Dieng Plateau included as follows:

1. Dieng farmers knew damages that were caused by the opening of the potato plantation, including the excessive and simultaneous used of fertilizers and chemical substances, but they did not seem aware of it. They could be said “away but uncare”.

2. Potato harvest occurred 2-3 times annually so that the farmers were reluctant to substitute the commodity with other plants. This decision was taken based on economic reason.
3. The farmers believed that their status was higher as a potato producer than as producer of other plants or crops. Potato crops had been sound legacy from their ancestors.
4. Battle-of-interest between public and private sectors. Private companies as the producers of chemical substances and fertilizers kept persuading the farmers to multiply their efforts in planting the potato in larger scales.
5. Programs introduced by the government in finding alternatives for the potato plants were negatively responded by the local people. The farmers believed that potato development was hampered by the presence of new commodities on the fields.
6. No regulations have been made by the local government for restricting the potato crops, even at the protected area, in order to prevent land damage in Dieng Plateau.

Recommendation

The implementation of the policy on the protected area conservation in Dieng Plateau had not been optimal because most of the areas were possessed by the local people for potato plantation. The condition of Dieng Plateau during the research were dry and unbalanced. It caused higher risk of erosion, landslide, drought, etc. Therefore, a policy is necessary for regulating the attitudes and behaviors of the local people living nearby the protected area of Dieng Plateau to minimize excessive land use. The policy must contain problem solving methods in order to maintain balance between natural resource sustainability and economic life of the local people.

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