

THE IMPACT OF CHANGING NATURE MANAGEMENT UPON
THE PEOPLE IN THREE VILLAGES AT THE CIREMAI MOUNTAIN
IN JAVA, INDONESIA

TEMI INDRIATI MIRANDA

NORWEGIAN UNIVERSITY OF LIFE SCIENCES
DEPARTMENT OF INTERNATIONAL ENVIRONMENT AND DEVELOPMENT STUDIES - NORAGRIC
MASTER THESIS 30 CREDITS 2007



**The impacts of changing nature management upon the
people in three villages at the Ciremai Mountain, in Java,
Indonesia**



**By
Temi Indriati Miranda**

**Norwegian University of Life Sciences
Department of International environment and development Studies**

**THESIS SUBMITTED TO NORAGRIC IN PARTIAL FULFILLMENT OF MASTER OF
SCIENCE DEGREE IN NATURAL RESOURCES MANAGEMENT AND
SUSTAINABLE AGRICULTURE**

JUNE 2007

Declaration

I, **Temi Indriati Miranda**, declare that this is a product of my own research work, and all other sources of materials are duly acknowledged. This work has not previously been submitted to any institution for an award of any academic degree.

.....
Temi Indriati Miranda

As, June 2007

Dedication

To:

Wisnu Eko Pratomo
Daris Agnar
Salam Sumangat
Ida Hidayati
Krissubanu Sosrokusumo
Tatiek Kadarwati

My sisters and Brothers:

Nina & Edi
Sandra & John
Rike & Ian

PPK-LIPI
UNSOED

Acknowledgement

Firstly I would like to thank my main supervisor Dr. Thor.S.Larsen, my local supervisor Hendrie Restuadhie Msc.sos in Indonesia for their guidance, useful criticism and suggestion especially in my English.

Also I would like to thank the locals in Trijaya, Linggasana, Pajambon for their information. Of course I have to thank to Nana from Kanopi, Arif from Latin, Usep from LPI, Muthadin and Ridwan from BKSDA and personal from Kuningan Forestry department.

I would not have succeeded without wisnu Eko Pratomo, who help me a lot during the research, and my Indonesia friends I Dewa W, Alief Aulia Reza, Maria Nur Dyah Meynita, and My International friends: Karol, Trine, Kalpana, Safoe, Hafiz, Raza, Teddy, Laura, Lise, Tawina, Bridgette, and others, who have seen me at my worst during the process writing and been there to share a joke and learn from the MNRSA class of 2005.

TABLE OF CONTENT

Title	i
Declaration	ii
Dedication	iii
Acknowledgement	iv
Table of content	v
List of figure	vi
List of table	vi
Abstract	vii
1. Introduction	1
1.1. Problem Statement	4
1.2. Rationale of the Research.....	4
1.3. Objectives of the study.....	5
2. Description of the study area and characteristic of the locals	7
2.1 Characteristic of the locals in the sample villages	8
2.2. The Limitation Production Forest	11
2.3. Community Forest Management (PHBM) in Kuningan	11
2.3.1. The Policy of Community Forestry Management (PHBM).....	14
2.4. Ciremai Mountain National Park	15
2.4.1. Problems within the management.....	18
3. Data Collection and Methodology	21
3.1 Primary Data Collection.....	21
3.2. Methodology	23
4. Result	25
4.1. Deforestation	25
4.2. The Locals	26
4.2.1. Demography and income	26
4.2.2 Community Forestry Management (PHBM).....	30
4.2.3. Institution for management and use	33
4.2.4. The Ciremai Mountain National Park	34
4.3 The case of the Pajambon.....	36
5. Discussion	39
5.1. Demographic characteristics and differences between Trijaya and Linggasana	39
5.2. The Locals' level of trust	41
5.3. The case of Pajambon village.....	44
5.4. Ciremai Mountain National Park	45
5.5. Political intervention	47
5.6. Environmental degradation	48
6. Conclusion and recommendations	51
Reference	53
Appendix 1: Research Questionnaire Local people's perceptions of Forest management in the Kuningan Regency	56
Appendix 2: Interview Guides for the Locals in Pajambon village	61

List of figure

Figure 1: The location of Ciremai Mountain	1
Figure 2: Study location	8
Figure 3: Forest fire in Ciremai Mountain	25
Figure 4: How long had the respondent lived in the village	26

List of Table

Table 1: Forest management in Ceremai Mountain since 1960'	2
Table 2: Total population and sample size	19
Table 3: Respondent's education level	27
Table 4: Respondent's main occupation	27
Table 5: Forest farmers' time spent in the forest	28
Table 6: Respondent's income from the forest	28
Table 7: Importance of forest for the respondents'	29
Table 8: Respondents' opinion on forests' management decision	29
Table 9: Respondents' perception of their access to the forest	29
Table 10: Most importance forest resources for the respondent	30
Table 11: PHBM's objectives	30
Table 12: Level of respondents' trust in their leaders of PHBM	31
Table 13: Participation in discussion	31
Table 14: Opinions on the effectiveness's PHBM to prevent forest damage	31
Table 15: Respondent opinion about PHBM being good for the future	32
Table 16: PHBM causes problem for the respondent	32
Table 17: Respondents' perception of forest ownership	33
Table 18: Conflict among the forest farmer	33
Table 19: Decision on the forest area to become a national park	34
Table 20: Respondents' opinions on the legitimacy of the national park	35
Table 21: Advantages of the national park for the respondent	35
Table 22: Disadvantages of the national park	35
Table 23: Respondents' opinions about differences between PHBM and The national park	36

Abstract

The Indonesian government commissioned nine national parks to be established in 2004. One of them was Ciremai Mountain (15.500 Ha), which is located in West Java Province. The management practice for the Ciremai Mountain has changed at least three times: a limitation production forest management project, community forest management (In Indonesian: *Pengelolaan Hutan Bersama Masyarakat (PHBM)*), and the last one is a national park.

This research was conducted in three villages: Trijaya, Linggasana and Pajambon. They were chosen because those villages are located at the foot of the Ciremai Mountain. The locals in three villages are dependent upon the forest, and accesses to forest resources are important for their incomes and livelihood.

Also, this research indicates the different opinion from the locals. The locals in Trijaya at the beginning was disillusionment, however, the locals in Linggasana and pajambon have different perception. It is because the locals in Trijaya are not trust their leader, it has impact of the information they got.

In conclusion, the roles of the leaders are very important in any organization, whether in high levels such as a regent or in lowest level such as a village. Good leadership and appropriate communication is a pre requisite for building of trust between leaders and their constituency and is a requirement for local people to understand, accept and adapt to changing management. Also, Leadership on higher levels, i.e. in this case at the level of the Kuningan regent, is also important. The replacement of Kuningan's Regent in 2003 had consequences for the status of the Ciremai Mountain.

1. Introduction

The Indonesian government commissioned nine national parks to be established in 2004. One of them was Ciremai Mountain (15.500 Ha) (WWF 2004), which is located in West Java Province. The main rationale for establishing the national park in the Ciremai Mountain was to protect the area from illegal logging, hunting and fishing (ibid). The presence of two Indonesian endangered species, Java Eagle (*Spizeatus bartels*) and Leopard (*Pantera pardus*), also necessitate the creation of the national park. Another legitimate reason was the fact that the Ciremai Mountain also serves as water catchments for three regencies in West Java: Cirebon, Kuningan and Majalengka (Isnaini 2006).

Figure 1 the location of the Ciremai Mountain



From Google-map data 2007(<http://maps.google.com/>)

The management practice for the Ciremai Mountain has changed at least three times. From 1960' until 1999 the forest in the Ciremai Mountain was exclusively managed by Perhutani, which is a state logging company, and with permits to manage forest in the Java Island. Perhutani started its cooperation with the locals with a limitation production forest management project. In 1999 an economic crisis occurred in Indonesia and the forest management in that area was changed into community forest management (In Indonesian: *Pengelolaan Hutan Bersama Masyarakat*

(*PHBM*) (Isnaini 2006). The third change occurred in 2004 when the government decided to change it into a national park. .

Table 1: forest Management in the Ciremai Mountain after 1960.

Type of Forest Management	Limitation Production Forest	Community Forest Management	National Park
Time of Operating	1960'-1999	1999-2004	2004- Now
Organization are in charge	Perhutani	Perhutani and Locals	BKSDA**
Motive orientation	Economic	Economic, environment and social	Environment conservation

Note:

** Balai Konservasi Sumber Daya Alam (BKSDA) is a Department under the Ministry of Forestry, which is responsible for management of national parks in Indonesia.

Since 1960' Perhutani had managed almost of forests in Java Island, including the forest area in the Ciremai Mountain. There were logging restrictions for some particular areas which have environmental functions, such as high risk of erosion, or which were catchments areas, such as the forest in the Ciremai Mountain. Under this kind of management, the locals had only limited access to the forest. Not only in the Ciremai Mountain, but in almost all forest in the Java Island, this kind of management create conflicts between locals and Perhutani, even if they may only be small (Miranda 2002)

In 1999, an economic crisis occurred in Indonesia, and many people lost their jobs in the city and returned to their villages, and so did the locals in Kuningan. They started to exploit the teaks belonging to Perhutani, because they were jobless. There were big conflicts between the locals and Perhutani in the southern part of the Kuningan regency. In an effort to prevent such mis-use; there was an incidence when a forest guard shot one of the loggers. After that, Perhutani and the locals decided to negotiate, which resulted in agreements that the forest should be managed in partnership. This was the beginning of community forest management. Good joint management was, however, a long process, which required agreements on possible “win and win” solutions for Perhutani and the locals. The negotiations were facilitated by local NGOs; Latin and Kanopi, by the Forestry Department, by the local parliament and by others. It took more than three years for this management scheme to become a reality (Usep from environment department in Kuningan personal communication)

The agreement which Perhutani made with the locals' representatives, i.e. the heads of the villages, was crafted in 1999 in the form of a Memorandum of Understanding. The process was facilitated by local NGOs (Latin, LPI- PHBM and Kanopi) after a conflict between the locals and Perhutani. "LATIN is a community forestry advocacy and training center that promotes indigenous models of sustainable natural resource management. Its programs focus on forest policy reform, local community empowerment, and developing a new economic valuation system for tropical resources." (RECOFTC 2007). LPI-PHBM is a collaborative implementation service institution for joint forest management, with representatives from government institutions as well as NGOs for avocation and monitoring the community forest management in Kuningan (Multi stakeholder's seminar 2006). Kanopi is a local NGO, which focuses on the locals and forest management. It is affiliated with LATIN in Kuningan (Nana from Kanopi- personal communication).

In 2004, the newly-elected government decided that a national park would work better for Ciremai Mountain (Usep from environment department in Kuningan -personal communication). It was a hasty decision made without consultations with either the locals or Perhutani, and also without prior thorough surveys and investigations of the area. Perhutani had to hand over the license to manage the forest back to the central government. Perhutani's objection was that they and their stakeholders had invested large amounts of money in the area, but had not yet profited. The locals also objected since they had planted fruits and vegetables without any opportunity to harvest their crops.

This thesis comprises of six chapters. Chapter 1 gives an introduction (background information, problem statement, rationale and objectives). Chapter 2 presents the description of the study area. Chapter 3 presents information material and methods, including location, and research subject and analysis. Chapter 4 presents the findings. Chapter 5 presents the discussion, and the final chapter presents conclusions.

1.1. Problem Statement

Farming is the main occupation in Kuningan; however, with insufficient farmland to provide for their livelihood, most of the Kuningans were left unemployed and forced to find other means of income to support their everyday lives. And as forest timber always has guaranteed value and is naturally available, their solution to their immediate problem was illegal logging.

Illegal logging was, however, not popular with the Kuningan residents themselves, especially the locals who lived at the foot of the Ciremai Mountain. Having lived at the foot of the mountain their whole lives, they understood the danger of excessive cutting of trees. They understood that the forest was there for many reasons; it retained the rains and prevented floods; it was a natural source of water; and it was a place where animals resided. On the other hand, Perhutani had acknowledged the needs of the Kuningan people to have access to some areas of the forest in order to farm, and has therefore granted them limited access. Community forest management (PHBM) had been executed properly and in that process illegal logging has also decreased.

Establishing a national park out of the Ciremai Mountain, although ambitious, was not quite realistic. It was lacking, among other things, human resources; only two persons were in charge of the national park. It should have been thoroughly planned, but the urgency to save the Java Eagle (*Spizeatus bartelsi*) and Leopard (*Pantera Pardus*) become an important, and time-sensitive, environmental concern. Unfortunately, the legislator's top-down style in making the Ciremai Mountain a national park did not fit well with the locals, NGOs, and other institutions at the beginning. They were not consulted in the first place, but were told to go along with the program. Despite the government's enthusiasm with the idea, the locals found the previous program of community forest management to be more favorable.

1.2. Rationale of the Research

The decision to make Ciremai Mountain into a national park was poorly planned and executed, with little preparation in every aspect, (i.e. number of personnel in charge as explained above) and lack of consultation with locals and other stakeholders. Balai Konservasi Sumber Daya Alam (BKSD), which is the department that now is responsible for management of Ciremai Mountain national park, has difficult tasks to deal with. They need to have more personnel; they must get

the locals' interest and support back; and they must formulate a solid program that satisfy everybody. In order to achieve all these tasks, they have invited all parties involved (local parliament, NGOs, the Forestry Department, Perhutani, local leaders, and multi-stakeholders) to seminars and meetings to work their problems out. However, the outcome is not yet apparent.

According to the Latin report (Aliadi, 2006), the locals felt comfortable with community forest management (PHBM) because it allowed them to benefit from the forest legally. They could pick the wild fruits and honey, in addition to moderately using the forest to plant their own fruits and vegetables. These actions provided them with better income and less desire to do illegal logging. Under the PHBM, Perhutani valued their partners (the locals and the stakeholders). The partners were included in the decision making, and therefore their interests were being acknowledged and accommodated. Perhutani's tolerance and knowledge minimized conflicts with the locals, and at the same time educated them about the importance of maintaining the forest. Their successful program was also studied by other institutions and stakeholders from all over Indonesia. In November 23-30, 2006, persons from the Forestry Department's Banten Province came to Kuningan to study the PHBM (Multi stakeholder's seminar 2006).

1.3. Objectives of the study

This research was conducted to learn about the locals' perceptions and attitudes towards the national park, how it affects their lives, and how they eventually adapted their livelihoods to coexist within the new situation. The Ciremai Mountain National Park may not be popular, and may not even stay, because the government has changed management programs three times already, and may do it again.

The overall objectives of this study were to find out how the repeated changing of the Ciremai Mountain status has impacted the locals, and their attitudes towards the PHBM and the national park. It also intended to help identify which program is better suited for the locals' livelihoods and needs.

Research questions of this study were:

1. Describe Community Forest Management's (PHBM) ability to give the locals advantages:

- What were the direct and indirect benefits the locals gained from PHBM?
- What was the most important factor to the locals, a) their involvement in the decision making or b) their sense of ownership?
- Did the program actually support their livelihood by moderately opening the forest for more farmland?

2. Describe the effectiveness of PHBM to decrease deforestation:

- Was deforestation actually decreasing under PHBM?
- What sort of methodology was used to implement their program?
- Did the locals use their own knowledge and wisdom or did they receive guidance from the government and some NGOs?

3. Describe the connection, if any, between the decision makers and the local leaders in when the status was changed from PHBM to a national park:

- Was at least one local leader consulted in making the decision? Who was that person? Was the person elected by the locals?
- Was the person trustworthy?
- Which program is more effective for the sake of both conservation of the Ciremai Mountain whilst also recognizing the needs of the locals?

4. Describe the transition time from PHBM to National Park:

- Were the locals involved in the changing of Ciremai Mountain status?
- Did the locals agree with the changing of Ciremai Mountain status?
- Have the locals felt the impact yet?
- Are the locals now comfortable with the new status of Ciremai Mountain?

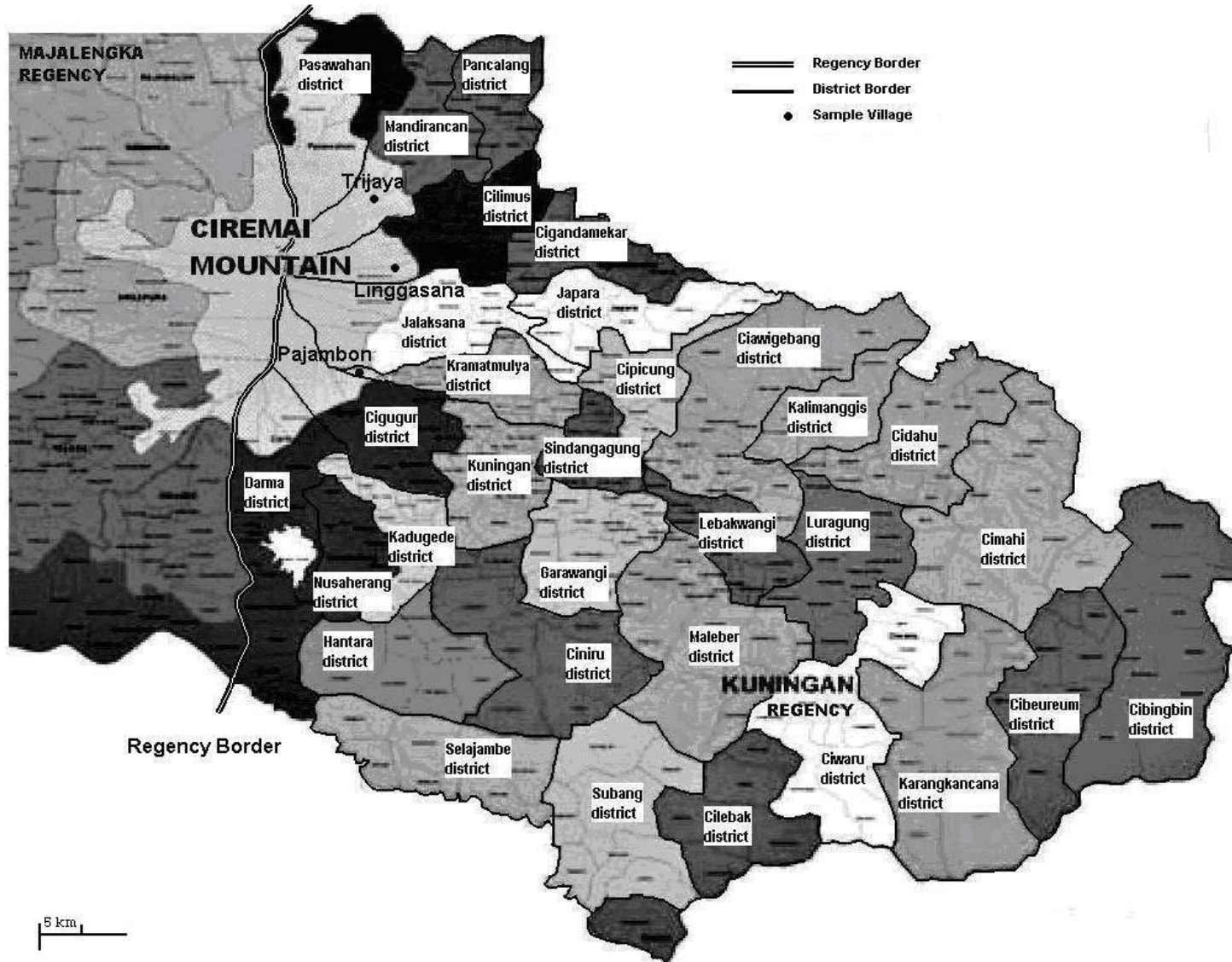
2. Description of the study area and characteristic of the locals

Ciremai Mountain, the highest mountain in West Java, Indonesia, is 3.078 m in height and 15.500 ha in width (WWF 2006). It is located in two regencies: Majalengka and Kuningan, and the latter are where the research took place. Kuningan is about 11.170 Km² in width and has 32 districts. It is directly under Cermat Mountain, with temperatures ranging between 18°C and 32°C. There are 25 villages in Kuningan that are located on the foot of the mountain; therefore, the locals' lives are very much dependent on the existence of the forest.

According to a census in 2000, the population of Kuningan Regency was 985707, with 37074 families living below the poverty line. The poverty line is based on an income of less than \$1 per day per family. There were 411822 people considered as potential labors, of whom only 383 732 worked. The other 28090 were unemployed. Most Kuningan residents were farmers, merchants, and employees. There are no exact percentages of which professions were more favorable (www.kuningan.go.id).

Sundanese are the most dominant tribes in that area. However, Javanese, Minang, and Chinese can also be found and live in harmony with each other. The Kuningan residents are considered to be hard workers; and they are not afraid to travel in search of better income. They also have better standards of living than other nearby regencies; they earn approximately IDR 60 000 000/year per family (equal to US\$ 6600 per year). The Kuningan residents are also big believers in good education, working hard to provide higher education opportunities for their children. (Aliadi 2006). Lastly, they understand the importance of sustaining the good conditions of Ciremai Mountain, which support their livelihood. The locals protect their water sources and the catchments areas, because water is very important for their livelihood. They also welcome new knowledge on how to protect their forest, and have adapted their agricultural practices and food habits by less growing of vegetables, but picking fruit from trees in the forest instead.

Figure 2 Study locations, i.e. in the Pajambon, Linggasana and Trijaya villages



Source Isnaini 2006

2.1 Characteristic of the locals in the sample villages

This research was conducted in three villages.

1. Trijaya Village

The location of Trijaya village is about 10 Km from the main road. This village is truly at the foot of the Ciremai Mountain. Compared with villagers in other villages, the Trijaya villagers prefer to live in their villages because the access to the main road, by any means, is quite far. The villagers of the Trijaya village therefore concentrate their work in improving the village conditions without disruption or outside interference. Potentials of the village are utilized maximally, and most activities are accomplished at the village level. There is not much influence from the regency, the province, or at the national level.

The total number of Trijaya Village's resident is 985 people, which consists of 487 men and 498 women, comprising 257 families. One characteristic of Kuningan's residents in general is that they often to go abroad on short notice; therefore, it is difficult to have everyone present and available at any given time. At the time when this research was conducted, the total number of forest farmers was 70 people, of whom those who became respondents were 50 people. Respondents are defined as being people whom an interview was conducted with (forest farmers at the location of the research).

Sheep farming is a main source of farming in this area's and most of the forest farmers keep sheep as an agricultural investment. In addition to farming in the forests, these farmers depend on forests to supply them with fodder for their sheep. Farmers sell their sheep for an average price of IDR 1000 000 – IDR 1250 000, or \$110 - \$130 each. They sell their sheep at Idul Adha (an Islamic Celebration Day) or when they need money, such as when the school year begins.

2. Liggasana Village

This village is also at the foot of the Ciremai Mountain, but it is adjacent to a main road. There are two characteristics of the villagers. Those who live near the main road are no longer farming; but work in the service sector such as motorcycle rent, servants of restaurants, laborers of manufacturer, or go to the big cities nearby for a short time. The

villagers who live close to the forest work as farming laborers, farmers, or forest farmers. According to the village headman, there is only a few of the villagers who have lands to farm, and in such cases the land is not large. The villagers here prefer to work in service sectors randomly such as building workers, carpenters, etc.

The total number of residents of this village is 1643 people, which is comprised of 775 men and 808 women. The total number of families is 502. The total number of forestry farmers in this area is 60 people. Although the Sundanese dominate, there is variety of ethnicity in this village; for instance, 1 person is Chinese, 2 people from West Sumatera, and 15 people from Java.

In 2000 – 2003, Nilam (*Pogostemon patchouli*, it is a plant that can be used as for perfume and other cosmetics) was the favorite commodity of this village. The forestry farmers profited greatly by planting Nilam in their forest. The Nilam was exported to Malaysia and the farmers could obtain a profit of IDR 2000 000 – IDR 3000 000 or \$220 - \$330 from each harvest. Unfortunately, the main import company of Nilam got into bankruptcy problems, and as the price of Nilam in the market went down, the forestry farmers lost an important additional income. At present, the Nilam plants are left behind in the forest.

3. Pajambon Village

The distance between this village and the main road is around 5 km. The total number of resident of this village is 2507 people, which is divided into 1298 men and 1249 women; and with 585 families. This area is very fertile land, which is fit for vegetable growing, and many people in this village work as vegetable farmers. This area is the major vegetable supplier for the West Java Province. Before the year 2000, villagers cleared away the forest and made it suitable for planting, and thereby altering the landscape. This is a common practice in surrounding villages as well, where clearing the forest for vegetable planting is still conducted.

This village is the pioneer in Community Forestry Management, because of the presence of natural tourism in this area. The NGO and the Kuningan local government tried to reduce the villagers' forest clearance, which they feared could damage the local tourism and natural beauty of the area.

2.2. The Limitation Production Forest

In some areas, specifically in mountain areas, Perhutani manages the forest with some use limitations. Logs can only be harvested from areas capable of natural re-growth which allow for forest sustainability. That is why this management is called limitation production forest. Even though this area of the forest is technically in the production category, there are some areas they can not harvest for sustainability reasons.

The limitation forest production is a scheme whereby the locals traditionally do "*Tumpang Sari*" where they plant some crops around the trees available to Perhutani. Usually the locals prefer fast growing crops such as vegetables, cassava or rice. They do not have to pay any rent for the land, but they have to take care of the trees. When nutrients and minerals become depleted, then the locals cannot use the land for their agricultural production anymore. This means that farmers have to move and practicing shifting cultivation.

2.3. Community Forest Management (PHBM) in Kuningan

Although the twenty five villages at the foot of the Ciremai Mountain are no longer under the control of the Community Forestry Management (PHBM) of Perhutani, there are still 134 forestry villages that joined the PHBM in Kuningan Regency. PHBM is considered able to solve many problems between the locals and Perhutani, and has proven effective in reducing deforestation levels. Furthermore, the success of the Community Forestry Management (PHBM) in Kuningan has become a national blueprint for ideal forestry management.

Leaders strongly supported the PHBM initiative. Arifin Setiamiharja, who was the Regent of Kuningan Regency at the time when the idea to build PHBM was

implemented, agreed to sign the memorandum of understanding between Kuningan's Regent and the Head Director of Perhutani in 2001. Moreover, the presence of APBD (regional budgeting) and their contribution of IDR 500 million for the implementation of PHBM were very instrumental in making this project happen. Perhutani also allocated funds totaling IDR 1.2 billion for PHBM.

The Implementation Servicing Foundation (LPI) (is a collaborative implementation service institution for joint forest management, with representatives from government institutions as well as NGOs for avocation and monitoring the community forest management in Kuningan) and PHBM played important roles in the process of establishing and implementing changes, along with two NGOs (Latin and Kanopi), which also played significant roles. This organization contained 45 persons who came from various institutions, along with individuals who had vested interests in the presence of forests in Kuningan Regency. The three issues that were discussed in studying the system of PHBM were:

- Rehabilitation, protection, and security of the forests.
- People's access to the forests.
- Regional autonomy in managing the forests' natural resources.

In addition, PHBM forums were established at the levels of regency, district, and village for the implementation of the program.

Briefly, the chronology of PHBM's establishment process is as follows:

- September 1999, the issuance of decision letter of Perhutani's Director on PHBM as a response to Perhutani's changing way of thinking.
- July 2000, a seminar on the PHBM. This meeting delivered "the framework of Community Forestry Management (PHBM) in Kuningan Regency" document.
- July 2000, some NGOs that were assisted by some field forestry informers (PKL) from the forestry and farming service and some of Perhutani's staffs started field activities of PHBM in some forestry villages.

- September 21, 2000, negotiation between Kuningan and Perhutani commenced. This meeting was attended by Perhutani's board of directors who came from Jakarta and Bandung. Kuningan's Regent, Mr. Arifin Setiamiharja, lead the Kuningan delegation. The negotiations were successful, and led to an acceptance of Community Forestry Management (PHBM) by Perhutani's board of directors. This process was witnessed by the staff of IDR (International Development and Research Center) and SFF (Sylvia Forestry Foundation), both from Canada.
- October 2000, training that involved village leaders, NGO's activists, field forestry informers, Perhutani's field staffs, and management of forestry village's economical organizations. This meeting succeeded in bringing the idea of PHBM to forestry villages and gaining support for the concept. It became a hot issue for the entire region.
- February 2, 2001, a Memorandum was signed between Kuningan's Regent and Perhutani's Head Director. This agreement between the two parties involved managing the forests' resources of Kuningan Regency, and the implementation of PHBM. It was agreed that all activities under PHBM should be implemented in form of equality, togetherness, and justice.
- April 2001, *renstra* (yearly planning program) meeting on PHBM. This meeting resulted in the document of "*Ngamumule Leuweung*" (Sundanese language), meaning "to maintain the forest". It contained eight strategic programs for realizing the concepts of community forestry management.
- November 2001, the 2002 Annual Developing Plan of Kuningan Regency inserted PHBM as an integral part of regional development. PHBM was also incorporated in the programs of regional development from 2001-2005.
- December 2001, agreement between villages and Perhutani. Three villages: Cileuya, Sukasari, and Pajambon, were ready to implement the programs of PHBM. The three villages signed an agreement with Perhutani, to collectively manage the state's forests in the village areas. This was a historical event that was important not only for Kuningan, but also for the entire island of Java. For the first time, an agreement of wood and non-wood production sharing was signed. This process inspired Perhutani to issue SK (decision letter) No.001/2002

on production sharing of forest wood, which was applicable for all Perhutani's areas.

- February 2002, replication of villages' extension. The experience of the three villages was applied to six other villages in Kuningan. The six villages became centers which involved other villages nearby. At the end of 2002 there were 39 villages that joined the PHBM.
- May 2002, Indonesia's Forestry Minister, Mr. Moh Prakoso, came to Kuningan to see for himself the implementation of PHMB in forestry villages. At that time, the Minister was looking for a model for good social forests, which would be the umbrella of approach for his five priority programs, which are: stop illegal logging all over Indonesia, to enhance the forest industry, conservation for forest resources, enhance the locals economics, stipulation of the size of forest area (Forestry Department 2004)
- July 2002, the international community was informed about the PHBM. The LPI's leader, Mr. Sanusi Wijaya K., as the representative of the PHBM in Kuningan, was invited to attend and present the Kuningan's experience at the Prepcom IV, meeting for the World Summit for Sustainable Development (WSSD), in Bali. In this meeting, and for the first time, the PHBM was introduced and presented for a wide international network.
- September 2002, at WSSD in Johannesburg, South Africa, the Kuningan's Regent, Mr. Arifin Setiamiharja, was invited to present his views on PHBM. PHBM in Kuningan was recognized as a practice for good forestry governance.
- January 2003, Kuningan's local government, Perhutani, NGOs, and other parties agreed to include another 60 villages in the PHBM program in addition to the 39 villages that already were engaged.
- August 2003, the presentation of the Kuningan's Regent in Forestry Department. In front of all the Forestry Department's officials, the Kuningan's Regent gave a presentation on August 5, 2003. PHBM was recognized to be the Forestry Department's correct approach for social forestry (Djarmiko 2004)

2.3.1. The Policy of Community Forestry Management (PHBM)

The Memorandum of Understanding from December 2001 between Perhutani and the locals was considered the legal document for PHBM. It described both the rights and the obligations for Perhutani and the local farmers. However, every village that joined the program had their own agreement with Perhutani depending on their specific needs. For example, there was a clause in the agreement which Perhutani made with Trijaya, saying that the farmers had the right to bring their sheep to the forest. At Pajambon, Perhutani and the locals focused more on ecotourism.

In addition to Memorandum of Understanding between Perhutani and the locals, there were other legal documents supporting the PHBM:

- Memorandum of Understanding between Perhutani and the head of Kuningan Regency
- SK 001/2002 (Legal document made by Perhutani concerning Community Forestry Management (PHBM) specifically in Kuningan Regency).

2.4. Ciremai Mountain National Park

In the 2003, all forests in Kuningan Regency were part of the limitation production forests, with all management handled by Perhutani. In September 2003, the local government performed a pre-scoring test in order to decide the status of all forests at the foot of Ciremai Mountain. After the pre-scoring, the forests fell into the category of protected forests. Between the end of 2003 and early 2004, it was recommended that Ciremai Mountain should become a national park.

On November 16th, 2006, a multi-stakeholders meeting was held in Kuningan. The meeting was about preparation for managing the Ciremai Mountain in the transition period from a production forest to a conservation forest (national park). The Ciremai Mountain National Park would put more emphasis on ecology aspects than on social and economic aspects. The goal was to maintain the critical conditions of the forest, lands and the quality of Ciremai Mountain.

The establishment of the Ciremai Mountain National Park was successful in the sense that it was supported by the people in the Kuningan Regency. The local government hoped that the collaboration they had with the multi-stakeholders could help their economic condition for the locals.

The Ciremai Mountain National Park's visions are:

1. Protection of life supporting system.
2. Conservation of ecosystems and the flora and fauna's varieties.
3. Usage of the existing flora and its ecosystem.

The national parks' activities are based on regulations made by the Ministry of Forestry, which are:

- P29/Menhut-II/2006 about the organization and the duties of the national park bureau.
- P29/Menhut-II/2004 about the collaboration between parties involved to conserve and protect.
- SK 424/Menhut-II/2004 about the changing of the status from the Limitation Production Forest to the national park.

Ciremai Mountain National Park's programs for 2005-2010 are: The completion of the mechanism and the format of Ciremai Mountain National Park as an institution, the arrangement of Ciremai Mountain National Park's borders, the zone-mapping, the effort to continue the collaboration between the multi-stakeholders and the people in the Kuningan Regency, and the support of natural tourism and environmental services. The management of Ciremai Mountain National Park was designed to be different from management of other national parks in Indonesia. Ciremai Mountain National Parks recognized the need for collaboraton with many stakeholders, which was introduced for the first time in the PHBM program.

It was proposed to establish a supporting area as a buffer zone between the national park and the villages nearby, which would prevent the locals' use of the park in the form of farming. The argument was that farming in the protected area may decrease the habitat's

quality, reduce wild animals' populations, and have negative consequences for ground and water because of soil erosion or fire.

The establishment of supporting areas was conducted whilst empowering the locals. The objective was increase the potentials and productivities of the areas, the water sources and farming lands for the villages located up to 5 km from the national park's borders. The management of the supporting areas is based on three aspects: ecology, economy, and the locals' social cultures. The design should also address economic issues, in that it hopefully would raise the people's standard of living whilst also obtaining their support for the conservation.

The supporting area's project defines three different zones or lines: The Green Line, the Interaction Line, and the Cultivation Area. The Green Line supports the area's ecological aspects such as the variety of exotic flora and the fauna's home range requirements. The Interaction Line supports the conservation area and the green line from drastic changes of the ecosystem and from interference of wild animals, but shall also support the locals' social systems and their economy. The Cultivation area is the supporting area for the locals, which shall assist the locals' livelihood needs, and the development of tourism areas.

Although still under consideration, the Ciremai Mountain National Park also recognizes the presence of zone systems:

- Core Zone (zona inti), is the most protected area in Ciremai Mountain. Only research is allowed in this area.
- Jungle Zone (zona rimba), is the tourism area. Although it is devoted for tourism purposes, permits are also given by the central government for research.
- Utilization Zone (zona pemanfaatan), although the government has designed the zone for eventually becoming a tourism area, forest farming is still allowed. In the long run, the government expects them to change their main occupation from farming to tourism activities, such as guiding and ticketing. (Muthadin 2006).

Ciremai Mountain National Park encourages collaboration with the people in order to repair the production forest's ecosystems which previously experienced fire, and for development of tourism facilities such as climbing lines, camping lands, water (lake) tourism, and water falls, and to collaborate for cultivation of honey development or other prime products. Ciremai Mountain National Park's management tries to change the locals' planting of one-season plants to planting of other plants that are more suitable with the function of hydrology and ground conservation.

The Ciremai Mountain National Park tries to identify and address problems before they occur, from the locals, the management itself, or from other aspects such as natural disasters or law enforcement. The problems that may come from the locals are as follow:

- Illegal logging; which still exists in Ciremai Mountain, although not as bad as in Kalimantan. The economical and livelihood needs and low education are the reasons why this is still happening.
- Land working; there still a mixture of ways the farmers uses the land around the tree (*tumpang sari*) in national park.
- Wild animal hunting is still done in both traditional and modern way. The animals hunted are boars, deer, and birds.
- Mining; the locals mine sand and rocks illegally in the Ciremai Mountain National Park.
- Vandalism; along the climbing line, there are many plastic wastes and writings on trees or rocks.
- Understanding and appreciation of conservation. The people who live close to the national park do not benefit directly, and therefore their understanding and roles for conservation is often overlooked.

2.4.1. Problems within the management

- It is not easy for the management to to inform and educate the locals about the importance of conservation for the Ceremai Mountain.

- The management has not yet made concrete working plans on how to manage the Ceremai Mountain National Park. The management's policy, techniques, and regulations of people's access are still confusing.
- There are no specific surveys and details on new-found flora, fauna, and other exotic creatures.
- The locals of the nearby villages have not yet got any advantage from the existence of the national park

Law enforcement and natural disasters are other problems that the management has to encounter. In the conservation sector, enforcing the law is not an easy task. They often have to deal with impossible situations, like people stealing the wood and wild living creatures. Like enforcing the law, natural disaster has not yet been in the natural park's management's side either; pine trees often dangerously fall down while fire happens in almost every dry and climbing seasons.

3. Data Collection and Methodology

This chapter presents the methods employed for collecting the data, the variables used, and the methods of data analysis.

3.1 Primary Data Collection

This study used the primary data of a cross-sectional household survey. The survey was conducted in three villages in Kuningan Regency, during a period of one and half month with the help of enumerators. The target was to get a minimum of 90 samples, due to time and budget limitation; collecting more samples was rather impossible.

A total number of 100 samples of households were successfully pooled. That amount contains samples from Linggasana, Trijaya and Pejambon. They represented 62% of total forest farmers in the study area.

Table 2 presents the comparison among three study location

Table 2 Total Population and Sample Size

No	Villages	Number of households	Number of forest farmers	Sample Size
1	Linggasana	502	60	45
2	Trijaya	257	70	50
3	Pejambon	585	21	5
	Total			100

Those three villages were chosen because of their different perceptions of the existence and objectives of the national park. While the locals of Trijaya show their dislike of the Ceremai Mountain National Park, the locals in both Linggasana and Pejambon are more positive to the establishment of the park.

Questionnaires were not the only methods taken in order to gather data. Focus group discussions, semi-structure interviews, key personnel interviews, and meeting participations were also conducted during the fieldwork as shown below:

Questionnaires

Ninety five questionnaires were distributed in the Linggasana and Trijaya villages. The number of samples that each village received was determined by the number of forest farmers in that village. And since Trijaya has more forest farmers than Linggsana, it received questionnaires; whilst the locals in Linggasana received 45 questionnaires. See Appendix 1.

Respondents were chosen randomly. This refers to the technique of questioning people who happened to be around when the survey was conducted. The enumerator went to forest farmers' houses and if the head of the household was not in the premises, the enumerator continued to the nearest house.

Semi-Structure Interview

This method was particularly carried out in Pajambon since the village only has 21 forest farmers and with two of them no longer active. Five farmers in Pajambon were interviewed, but the questions asked were a bit different from other villages. They emphasized more on the ecotourism programs that have been executed in the area. See Appendix 2.

Key Informant Interview

Several in-depth interviews with the heads of the villages, respected people, and local NGO's representatives were conducted in order to collect information about the management of the national park, possible conflicts between the locals and Perhutani, understanding and appreciation of previous management schemes; PHBM, the process of establishing Ceremai Mountain as a national park, and the characteristic of the locals.

Focus Discussion Group (FGD)

A focus group discussion did also take place. This was done in order to obtain information about groups' opinions. During the FGD, several additional questionnaires

were distributed to the participants, mainly to get general information about the locals' livelihood, understanding, and perceptions about Community Forest Management.

Meetings Participation

Several seminars and meetings on forest management issues were held in Kuningan during the fieldwork. I was able to attend a couple of those seminars and meetings.

I participated in a multi-stakeholder's seminar which was held on November 16th 2006 at Ayong Hotel, Kuningan. Some very important stakeholders such as the local parliament members, forestry department's officers and the leader of the Community Forest Management were there and presenting both their opinions about and ideas on the Ciremai Mountain National Park's management.

The second meeting that I went to was the village discussion meeting, which was held on December 7th 2006 in Trijaya village. The main topic of the discussions was ways to protect the forest. I was also able to join the inauguration of *Pamswakarsa*; the locals' volunteer team whose duty is to protect the forest from illegal logging and illegal hunting. They are also responsible for encouraging farmers not to open new areas for farming with the use of fire during the dry season. Among the participants were the forest farmers from Trijaya and Seda, the representatives from forestry department, BKSDA, the head of Mandirancan's District, and a representative from Kanopi.

3.2. Methodology

This is qualitative research where descriptive analysis is used to explain the perceptions and attitudes of the changes in the management of Ciremai Mountain. In addition, a quantitative analysis of the responses in the questionnaires was also used. Some of the data processing is with the use of Microsoft Excel and Stata 9.0.

4. Results

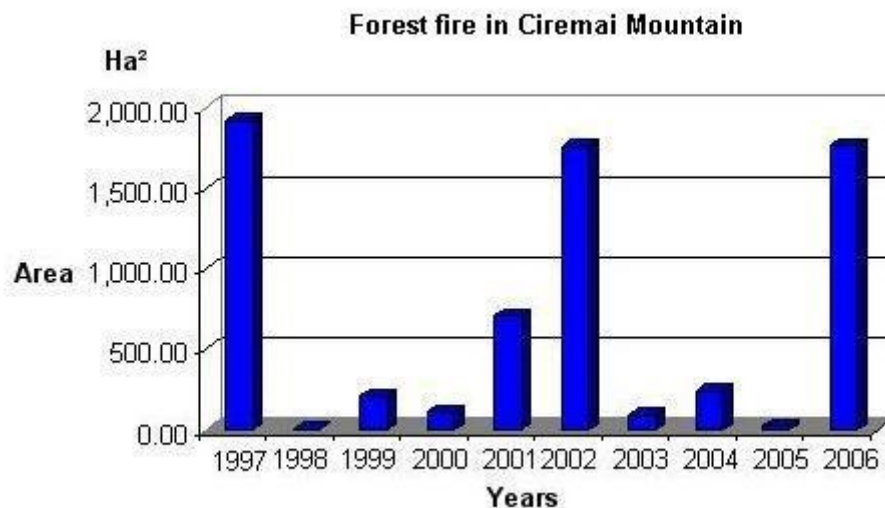
This chapter gives information about the locals in Trijaya and Linggasana. It also addresses the perception of the community forest management, and the impact of the National Park on people's livelihoods. This chapter also describes the impact of the two management schemes on deforestation in Ciremai Mountain.

4.1. Deforestation

About 20% or 2000 hectares from 8900 hectares of the forests' width in Ciremai Mountain has been disturbed. The main causes are: (1) forest fire, (2) land use intensification from farming, and (3) legal or illegal logging.

Almost every year Ciremai Mountain suffers from forest fires. The fires mostly happen in scrub areas where timber had been harvested by Perhutani but was not replanted. Coffee, bananas, and jackfruits, which belong to the farmers, can also be found in the scrub area.

Figure 3 Forest Fire in Ciremai Mountain



Source: Perhutani and TNGC 2007

According to the locals of Trijaya Village, a forest fire in November 2006 was the worst they have ever experienced. It came from the state's own forest all the way to the forest

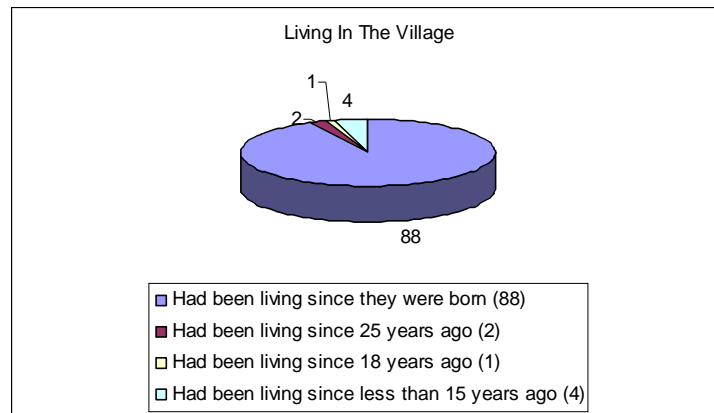
farmers' land. The national park management's lack of coordination with the forest farmers made the condition even worse. Factors which exacerbated the firefight problems include:

- November 2006 was a Ramadhan month (an Islamic month), the time for the Moslems do fasting. In Trijaya village, most of the villagers are Moslems.
- Fire points were in the meadows, from where they could easily spread.
- Lack of personnel and lack of coordination within the National Park's management.
- Perhutani refused also to be involved after their contract was terminated.
- The local government reacted slowly and poorly.
- The locals used traditional tools to extinguish the fire.
- The water sources were too far from the fire areas.

4.2. The Locals

4.2.1. Demography and income

Figure 4: How long had the respondents lived in the village?



The figure 4 shows that most of the respondents have lived in the village since they were born and that most of them have been staying there for more than ten years.

The level of education of the respondents in general was low, with 62 respondents who only went as far as elementary school, 18 respondents graduated from junior high school,

and 11 respondents finished their senior high school. None of them ever studied in the university.

There are no significant differences in the level of education between the respondents who live in Trijaya and in Linggasana.

Table 3: Respondents' education level

Education Level	Trijaya		Linggasana	
	Number	%	Number	%
Elementary	29	58	33	73.33
Junior High School	10	20	8	17.78
Senior High School	7	14	4	8.89
Unknown	4	8	0	0.00
Sum	50	100	45	100

Table 3 shows that the average education level in both villages is low. About 73% of the respondents from Linggasana have elementary schools as their highest education level. This was a slightly higher level than Trijaya, where only 58% of the respondents had finished elementary school. None of the respondents were found to have college education.

Table 4: Respondents' main occupations:

Type of Main Job	Trijaya		Linggasana	
	Number	%	Number	%
Building worker/ carpenter	1	2.00	22	48.89
Farming worker	25	50.00	6	13.33
Farmer	14	28.00	11	24.44
Village official	2	4.00	0	0.00
Retirement	0	0.00	2	4.44
Seller	0	0.00	1	2.22
Private employee	0	0.00	1	2.22
Public service	0	0.00	1	2.22
Etc.	2	4.00	1	2.22
Unknown	6	12.00	0	0.00
Sum	50	100.00	45	100.00

All respondents do not work for the whole year. They only spend 4 to 6 months working in the forest, and for the rest of the year, they work in other places or are doing other jobs. For the duration of work in the forest, see Table 5.

Table 5: Forest farmers' time spent in the forest

Duration Working In The Forest (Hours / Week)	Trijaya		Linggasana	
	Number	%	Number	%
<10	0	0.00	1	2.22
11 – 20	3	6.00	2	4.44
21 – 30	21	42.00	15	33.33
31 – 40	7	14.00	8	17.78
41 >	6	12.00	12	26.67
Unknown	13	26.00	7	15.56
Sum	50	100.00	45	100.00

Ten respondents said that at least two people in their family worked in the forest, while the other 85 respondents said that only one person in their family did work in the forest. One respondent said that he worked 10 hours per week, 36 respondents said that they worked 21-30 hours per week, 15 respondents said that they worked 31-40 hours per week, and 20 respondents said that they worked more than 40 hours per week.

Table 6: Respondents' income from the forests

Income from the forests (per year)	Trijaya		Linggasana	
	Number	%	Number	%
< \$ 50	20	40.00	20	44.44
\$60- \$100	5	10.00	11	24.44
\$ 110 – \$ 200	0	0.00	5	11.11
\$ 210 – \$ 300	1	2.00	3	6.67
\$ 310 – \$ 400	6	12.00	5	11.11
\$ 400<	1	2.00	1	2.22
Unknown	17	34.00	0	0.00
Sum	50	100.00	45	100.00

Table 7: Importance of forests for the respondents

How Important the Forests for the Respondents	Trijaya		Linggasana	
	Number	%	Number	%
Very Important	11	22	36	80.00
Important	31	62	5	11.11
Not Too Important	0	0	1	2.22
Not Depended on the Forests	8	16	0	0.00
Unknown	0	0	3	6.67
Sum	50	100.00	45	100.00

Table 8: Respondents' opinions on forest management decisions.

Who Should Decide the Forest Management System	Trijaya		Linggasana	
	Number	%	Number	%
Government	31	62.00	33	73.33
Perhutani	2	4.00	4	8.89
Local Community	3	6.00	6	13.33
Others	7	14.00	0	0.00
Do Not Know	7	14.00	2	4.44
Sum	50	100.00	45	100.00

Table 9: Respondents' perceptions of their access to the forests

Having Enough Access to the Forests	Trijaya		Linggasana	
	Number	%	Number	%
Yes	48	96.00	44	97.78
No	1	2.00	0	0.00
Do Not Know	1	2.00	1	2.22
Sum	50	100.00	45	100.00

Table 10: Most important forest resources for the respondents

The Most Important Forest Resource	Trijaya		Linggasana	
	Number	%	Number	%
Land for Farming	11	22.00	37	82.22
Wood	0	0.00	0	0.00
Fish and Wild Animals	0	0.00	1	2.22
Water Source	38	76.00	7	15.56
Others	0	0.00	0	0.00
Unknown	1	2.00	0	0.00
Sum	50	100.00	45	100.00

4.2.2 Community Forestry Management (PHBM)

Table 11: PHBM's Objectives

The Most Important Objectives of PHBM	Trijaya		Linggasana	
	Number	%	Number	%
Ownership of Land (Tenure)	15	30.00	34	75.56
Access Land for Farming	33	66.00	6	13.33
Logging	0	0.00	1	2.22
Hunting and Fishing	0	0.00	0	0.00
Gathering	0	0.00	0	0.00
Community Participant	2	4.00	4	8.89
Sum	50	100.00	45	100.00

It is clear that Community Forestry Management (PHBM) affected the respondents' lives and was important for their livelihood. The most important objective of PHBM was perceived to be land tenure or access to land for farming, although opinions on ownership and access differ between the two villages.

Table 12: Level of respondents' trust in their leaders of PHBM

Level of trust to the leader	Trijaya		Linggasana	
	Number	%	Number	%
Trust	29	58.00	40	88.89
Do Not trust	9	18.00	1	2.22
Do Not Care	11	22.00	3	6.67
Unknown	1	2.00	1	2.22
Sum	50	100.00	45	100.00

Generally, the trustworthiness of the leaders was high, but there were also quite many among the Trijaya residents who did not trust them or who cared less about this.

Table 13: Participation in discussion

Participation in Discussions and Meetings About the Forests	Trijaya		Linggasana	
	Number	%	Number	%
Yes	22	44.00	44	97.78
No	18	36.00	0	0.00
Do Not Know	10	20.00	1	2.22
Sum	50	100.00	45	100.00

The lack of trust and/or indifference in leadership in Trijaya (Table 12) may also be reflected in their lack of participation in village discussions.

Table 14: Opinions on the effectiveness's of PHBM to prevent forest damage

By the Presence of PHBM, Forest Damage Decreases	Trijaya		Linggasana	
	Number	%	Number	%
Very Agree	5	10.00	22	48.89
Agree	24	48.00	6	13.33
Do Not Care	1	2.00	1	2.22
Disagree	17	34.00	7	15.56
Very Disagree	0	0.00	8	17.78
Do Not Know	2	4.00	1	2.22
Unknown	1	2.00	0	0.00
Sum	50	100.00	45	100.00

There was a general opinion among the respondents that PHBM would prevent forest damages. However, the considerable disagreement expressed in Trijaya may be another aspect of the negative and indifferent responses in Trijaya as of Tables 12 and 13.

Table 15: Respondents' opinion about PHBM being good for the future.

PHBM is good for the future	Trijaya		Linggasana	
	Number	%	Number	%
Very Agree	3	6.00	33	73.33
Agree	23	46.00	12	26.67
Do Not Care	0	0.00	0	0.00
Disagree	6	12.00	0	0.00
Very Disagree	0	0.00	0	0.00
Do Not Know	18	36.00	0	0.00
Sum	50	100.00	45	100.00

The responses as of Table 15 fits with the responses in Tables 12-14: Quite many of the respondents in Trijaya disagreed or did not know about advantages of PHBM.

Table 16: PHBM causes problems for the respondents.

PHBM Causes Problems	Trijaya		Linggasana	
	Number	%	Number	%
Yes	7	14.00	0	0.00
No	43	86.00	45	100.00
Sum	50	100.00	45	100.00

Respondents' opinion about problems originating from PHBM fits with the responses in Table 15, i.e. on positive outcomes from PHBM.

4.2.3. Institution for management and use

Table 17: Respondents' perceptions of forest ownership.

Forest Ownership	Trijaya		Linggasana	
	Number	%	Number	%
Government	41	82.00	40	88.89
Perhutani	2	4.00	4	8.89
Local community	1	2.00	0	0.00
Do not know	0	0.00	0	0.00
Not answerable	6	12.00	1	2.22
Sum	50	100.00	45	100.00

There was a general agreement in both villages that the forest were owned by the government, although six respondents in Trijaya did not respond to this question. This may again be correlated with their responses in Tables 12-15 above.

Table 18: Conflicts among the forest farmers

Conflicts Between the Forest farmers	Trijaya		Linggasana	
	Number	%	Number	%
There is	0	0	22	48.89
There is not	44	88	21	46.67
Do not know	5	10	1	2.22
Unknown	1	2	1	2.22
Sum	50	100.00	45	100.00

There are some evident differences in conflicts between Linggasana and Trijaya, with almost 50% of the respondents in Linggasana who experience some kind of conflict with other farmers who also use the forest.

4.2.4. The Ciremai Mountain National Park

Table 19: Decision on the forest area to become a national park

Forestry Minister Decided that Forests in the areas to be a National Park	Trijaya		Linggasana	
	Number	%	Number	%
Yes	31	62	42	93.33
Do not know	19	38	2	4.44
Unknown	0	0	1	2.22
Sum	50	100.00	45	100.00

Most of the respondents knew about the decision that their village areas became part of a national park. The many people in Trijaya who did not know could be explained by e.g. their lack of participation in village discussions (Table 13).

Table 20: Respondents' opinions on the legitimacy of the national park

Do You Agree with the Legitimacy of the National Park?	Trijaya		Linggasana	
	Number	%	Number	%
Very Agree	1	2.00	17	37.78
Agree	20	40.00	13	28.89
Do not care	4	8.00	2	4.44
Disagree	25	50.00	0	0.00
Not answerable	0	0.00	13	28.89
Sum	50	100.00	45	100.00

The respondents in Trijaya were particularly divided over this matter, and 50% did not welcome the transfer of their area into a national park. It is also interesting that almost 13% of the respondents in Linggasana seemed to be indifferent to this change of management.

Table 21: Advantages of the national park for the respondents.

Advantages from the National Park	Trijaya		Linggasana	
	Number	%	Number	%
Do not know yet	15	30.00	11	24.44
There is still access to the forests	3	6.00	4	8.89
Eternal forests	5	10.00	11	24.44
Law enforcement	4	8.00	0	0.00
There are no advantages	15	30.00	7	15.56
Not answerable	8	16.00	12	26.67
Sum	50	100.00	45	100.00

There seems to be no significant differences in the two villages about possible advantages from a national park in their areas.

Table 22: Disadvantages of the national park

Disadvantages of the National Park	Trijaya		Linggasana	
	Number	%	Number	%
No disadvantages yet	2	4.00	6	13.33
No disadvantages	4	8.00	17	37.78
Do not know	7	14.00	0	0.00
Less access to the forests and decrease of income	16	32.00	15	33.33
Unprotected forests	4	8.00	0	0.00
Social conflicts	4	8.00	0	0.00
Not answerable	13	26.00	7	15.56
Sum	50	100.00	45	100.00

Several respondents in both villages were concerned that they will have less access to forest resources in a national park, and that their income from forest farming would be less.

Table 23: Respondents' opinions about differences between PHBM and the national park

Differences between PHBM and the National Park	Trijaya		Linggasana	
	Number	%	Number	%
No different	5	10	17	37.78
Limited access in the national park	4	8	9	20.00
Risk partnership	1	2	0	0.00
Different management	1	2	1	2.22
Different, but cannot be explained	0	0	6	13.33
Do not care	1	2	0	0.00
Not answerable	20	40	11	24.44
Do not know	18	36	1	2.22
Sum	50	100.00	45	100.00

Although generally positive or indifferent to the transfer from PHBM to a national park, few of the respondents were able to explain the differences between the two management schemes.

4.3 The case of the Pajambon village

This village has different treatment in research. Questionnaires were not distributed in the Pajambon village because the total number of forest farmers was only 21, and two of them were stated to be non-active. They were member of KOMPEPAR (Tourism Working Farmer Society). The Pajambon village was one of two example villages where the PHBM programs related to the tourism were implemented.

In Pajambon village, there are many natural tourism objects. They are the two waterfalls, natural hot water, and land set aside for camping. This area is often visited by people from other villages or from out of the Kuningan municipality. Before 2000 Pajambon had not yet become the example area for PHBM programs. The villagers used land and opened it mainly for agriculture and farming. In that process villagers changed the forests to vegetable agricultural land. They did not plant trees and lands became sensitive to erosion.

The main objective (of PHBM was to change the villagers' way of thinking and not to use the state's forests for vegetable agriculture. It was clearly a hard task. The villagers preferred to plant vegetables because (1) it did not need long time before harvests, (2) their areas were very fertile and good for vegetables; (3) vegetables had quite high economical value, (4) trees, e.g. for fruits, took time to grow and needed a long time before they could be harvested.

The PHBM programs in this village placed emphasis on natural tourism, but encouraged also forest farmers to plant fruit trees such as banana, avocado, jackfruit, coffee, and other species, which can store water and provide income. The success of PHBM's efforts is shown by less of the state's forestry areas to be planted with vegetables, which now only is on the farmers' own lands. There are only fruity trees in the forest, such as bananas, jackfruit, avocado, and coffee. The planting of banana trees is still allowed because the trees can grow on rocky areas. The economical value of coffee is important to the farmers, because it can easily be marketed and sold. Each coffee harvest may produce 200 kg per farmer valued at IDR 6000 or \$ 0.8 per kg. In one year, coffee may be harvested three times. So from the coffee the farmer earning IDR 360 000 per year (\$400). And almost all the forest farmers in this village plant coffee in forest area.

Tourism areas in the Pajambon village were opened on August 18, 2001. PHBM programs were assisted by the NGO Visita, which organized the tourism initiatives and worked with farmers. Many people were employed as ticketing staff or guides for tourists. They could also open small shops around the entrance of the natural tourism area.

The ticketing system for the forest farmers in Pajambon is as follows: There are 19 members of KOMPEPAR who work in the tourism areas. Each day, there are five persons who work; three persons who are the ticketing staffs, and two persons who are guides or security staffs. The five persons work for three weeks, and then they are replaced with other members. Ticket prices to enter are IDR 4000 or \$ 0.50. The price is different for foreigners (non Indonesian); who are charged IDR 10000 or \$1.2. The

money (IDR 4000) must be divided: IDR 250 for the village, IDR 750 for PHBM, IDR 500 for Kuningan's local government, and IDR 2500 as payment for the five persons who work. Every month, there are 200-300 visitors. In high season, such as a school holiday, the total visitors may reach 500-700 persons in a month. According to the head village, the money that village earn from the tourist area each year is not less than IDR 900 000 (\$100). The money goes to any village celebration and village administration.

Up until now, these tourism activities in Pajambon still continue and more are under development. The head of the village tries to find investors to build tourism's facilities such as parking area, fix the road and others in his territory. Pajambon's head villager wants to repair the road to the tourism objects and build a luxury hotel there. This is considered a potential business opportunity for some investors, but until today such plans have not been realized.

Pajambon village was the least affected of the study areas when it was decided that the forest areas in their village should be included in the National Park. This is because:

- There were fewer forestry- farmers; only 19 persons.
- For a long time, the forests in their territory were not production forests. Therefore, there was not a sharing system on wood as in other villages.
- Villagers consider that the presence of the national park will protect the tourism objects of their village.
- To the villagers may still maintain their fruit trees and harvests of coffee and other products.

5. Discussion

5.1. Demographic characteristics and differences between Trijaya and Linggasana.

The location of Linggasana is close to the main road, which is also the gate to the Ciremai Mountain. Access to the main road and public transportation allow villagers to have many alternative jobs. Of the 45 forest farmers who were interviewed, 22 persons worked as building workers, which are almost 50% of from the respondents. Only six persons had farming as their main job (Table 4). With jobs as building workers villagers leave their village for about 4-8 months each year, and then they live in their village for the rest of the year when they farm in the forests. For 50% of respondents farming is only a part time job. Products from the forests are also investment or savings for famine periods or when they have fewer jobs. Their main needs can be covered by their jobs as building workers from which they may have income of IDR 4500 000 – IDR 9000 000 or (\$500 - \$1000) each year.

However, the forests nevertheless important to them with quite large income contributions, as seen from table 6. At the time when the forests in this area were still managed by PHBM, the forest farmers planted and harvested in the forests as their investment or savings, and in particular when they needed money for their children's education. When asked how much money they would have available each month, they found that difficult to answer. It is therefore not surprising that many of them stated that their income from the forests is only \$50/ year, although their working hour in the forests is quite long (see Table 5 and 6).

More than 80% respondents in both villages confirmed that forest is important for their livelihood (see Table 7). Table 9 shows they also felt that they have adequate access to the forest- and that there were no complaints about that. The villagers felt that they can work and get the resources from the forest anytime they want, as long as they know the rules and do not cut trees or cause deforestation in other ways.

Both villages are dependent upon forest resources and mainly for farming (Table 10). But 76% of the respondents in Trijaya also consider water to be the most important resource in the forest, against 15.56% in Linggasana. Water is used for drinking, for other domestic activities and for irrigation. The forests in the Trijaya area have three water outlets in the form of natural springs that are important, not only for the village's own requirements, but also by supplying other nearby villages with water, and against payment. Nearby villages pay Trijaya for getting access to their water supplies. Even if this seems cheap, and only IDR 300 000 \$33 USD per year, it is still an important income for Trijaya.

Table 20 shows that 25 people in Trijaya did not agree about the establishment of the national park, and this is because some of the forest farmers of Trijaya village also were the Perhutani's workers; they made incisions in pine trees to obtain sap. They did this from when the status of the forests still was limited production forests, and when the status was changed to be PHBM, they could continue with this. But when the management status was changed to be a national park, the activity was stopped and prohibited. The incision on Pine trees was considered to cause pine tree damage and even tree deaths. When the management status was changed to a national park, these workers were the first people to object, because they lost an income of about IDR 480 000 (\$53) per month from sap collecting.

There is also some resistance on the management changes in the Linggasana village; even if it is not as big as in Trijaya. The Linggasana village also suffers some losses by the change of the forests' status in their area. One of them is the loss of a "Sharing System" from the time when the forests' status was limited production forest and PHBM. When Perhutani still logged the forests it was agreed that from 10 trees that Perhutani harvested, three trees would be given to the forest farmers who then would take care of the forest. The three trees that were given to the villagers would be paid in cash by Perhutani in accordance with the price of timber on the market. But because forest farmers often leave the village for quite long periods, they seldom attend meetings and could not take fully

take care of the forest as expected and agreed. In such cases, they cannot demand too much either.

Table 18 reveals a conflict between forest farmers in the Linggasana village, but not in Trijaya. The conflicts in Linggasana are caused by the access and use of farming areas in the forests. Because many of the forest farmers also are building workers, they leave their lands for a quite long time and work in other places for up to 8 months. Other forest farmers therefore “lend” such land to plant crops that are growing fast with quick returns, such as banana. The “land lending” practice, which is without prior permission or agreements, is often the main cause of conflicts between the forest farmers. This is, however, not a problem in Trijaya, where most of the farmers remain in the village throughout the year.

Resources from the forests are important both in Trijaya and in Linggasana, because the forests represent a form of economic security and:” ... economics makes the assumption that human beings will aim to fulfill their self-interests. It also assumes that individuals are rational in their efforts to fulfill their unlimited wants and needs.” (Investopedia n.d)

It is reasonable that the locals from both villages are concerned when access to forests may be changed by the national park. Ironically, there are several results from the application of PHBM that, contribute to make the locals’ insecurity. As a consequence of the transformation of forests status to be national park, the locals could not continue with sap collecting from pine trees. New regulations prohibited residents to do that. Furthermore, the new regulation sometimes is not well explained to and discussed among the residents, which contribute to distrust towards their local leaders.

5.2. The Locals’ level of trust

More than 60 % respondents in both villages agree that the government should be responsible for the forest management system (Table 8), even though they have been quite happy with collaborative management under PHBM. They do not have any other ideas about forest management responsibilities. They are afraid that the local community

in charge of management will create new problems. All the forests in Indonesia are owned by the government and it is therefore reasonable that villagers accept that government institutions also are responsible for forest management.

However, Table 8 shows that 14 % in Trijaya did not trust the government, Perhutani or their own community, but favoured “others” without specifying who that should be. The people in Linggasana had more confidence in these institutions.

Table 12 shows that there are significant differences in the locals’ level of trust of the PHBM leadership in Trijaya and Linggasana. In Trijaya, the respondents were divided into two about level of trust to the Government, NGOs, and even to the leader that they have chosen. Eighteen percents of respondent in Trijaya did not trust their leader, even worse, 22% of respondents do not care about their leader. Although 58% in Trijaya trust their leader, very many also did not trust or did not care. In Linggasana there is an overwhelming trust in their leadership. This lack of trust in Trijaya is also reflected in Table 13 with less participation in discussions, in Table 14 where they disagree that PHBM means less forest damage and in Table 15 where 36% cannot say that PHBM is good for the future. According to Kanopi (local NGO), it is considered difficult to recover the trust of Trijaya’s. This can be solved by gradually socializing the idea that the concept of the national park does not need to mean that they are closed off from access and future use of the forests.

The study found that the source of the locals’ distrust to both their local leader and to local NGOs was because they consider that none of the parties can accommodate for their needs. In addition, repeated changes in government policies contribute to uncertainty and were somehow believed to be the source of the locals’ losses. The locals expect that the future policy with regard to forest management should be based upon their opinions and considerations. Therefore, it seems obvious that the problems are rooted in lack of communication and misunderstandings between the local government, local NGO, and the villagers.

At present, the cooperation between stakeholders seems to grow. When this research was conducted, the forest farmers of Trijaya sat with the local government's officials at the meeting on December 7, 2006. The meeting was also attended by the forest unit and BKSDA, and the participants discussed territorial protection of the forests at Trijaya and Seda (Seda village is located beside Trijaya village). This study revealed, however, that the residents still seem to have apathy to anything offered by the management of the National Parks. Whilst there is an overwhelming participation by people in Linggasana when forest issues are discussed, the villagers of Trijaya are less interested in attending meetings and discussions that are related to the national park. This also may be explained by their lack of confidence in their own leadership (Table 13). This could be a potential problem in the future. As experience in Banyumas, Central Java (Miranda 2002) showed that the apathy from the residents can initiate other social problems that end up with more severe problems related to forest management and use.

The low level of trust to the leader in Trijaya and their lack of participation in meetings and discussions also explain why many of the forest farmers did not know about the establishment of the national park (Table 19). Table 20 adds to this as half of the respondents in Trijaya did not agree on the establishment of national park but four respondents did not care at all about national park issues. The study furthermore revealed that most of the respondents in Trijaya did not understand the differences between management of that national park and PHBM (Table 23). They were therefore not in a position to have any opinion about advantages and disadvantages related to changes in management systems (Tables 21 and 22). The survey even found that seven of the respondents stated that PHBM caused problems for them (Table 16).

In Linggasana the level of trust to the leader is quite high. Approximately 88% of the respondents in Linggasana said they trust their leader (Table 11). As a consequence, the locals' participation on the discussion on forest management system is quite good (Table 13). The forest farmers in Linggasana also appreciated PHBM and would also be good for the future (Table 15). When the status of the forest in their area was changed into a national park, they also accepted that without foreseeing many problems. They seem to

be well informed that residents can still get access to the forest and utilize them more or less as they have been doing (Table 21 22). Even though they lose money from abandoning the “sharing system”, they believe that the national park would give them other benefits. Among others, they recognize the benefits of the sustainability of the Ciremai Mountain, and that the more tourists may be coming to visit Ciremai Mountain through Linggasana, which will create more opportunities for Linggasana’s local economy to grow. More new jobs can also be created for the Linggasanas residents by supplying the visitors. Therefore, this study believed that the socialization of the information from the leader to the village members in Linggasana was good. As a result, the local government has considered that Linggasana does not need an NGO to guide them for protection of their forest.

5. 3. The case of Pajambon village

The change of the forests’ management status has only impacted 19 forest farmers in the Pajambon village. Even though these 19 forest farmers considered that their main profession was forest farming, there was no conflict when the forests’ status of this village was changed. The tourism activities, which have been being conducted by the forest farmers, should be enhanced with the national park. There are no changes of the forests’ status in this area, and BKSDA plans to increase the price of the ticket to enter this tourism area. This may have some positive impact for the forest farmers. “The Sharing System”, which is applicable in the territory of Trijaya and Linggasana, is not applicable in the forests of Pajambon, because Perhutani did not have any logging activities in this area.

The confirmation that villagers still may farm in the forest reduces conflicts in this village. Coffee is the main crop from the forest farmers in this area, in addition to avocado banana and jackfruit. Some of these crops provide for important income, but some is also used by the farmers’ families.

5.4. Ciremai Mountain National Park

On April 17, 2007, Indonesia's newspapers referred to a press conference by the Indonesian Greenpeace, which revealed Indonesia is mentioned by Guinness Book of Record as the country which has the lead in forests destructions, with 1.8 million of Ha in a year (Tempo, April 27, 2007). Indonesia needs to act fast in handling this problem. The Indonesian government is aware of this problem, which is the reason why areas previously allocated for limited production forests now become national parks. This is also the reason why the Ciremai Mountain now is a national park.

The decision to make the Ciremai Mountain into a national park may after all be a good idea. If the Ciremai Mountain was to be continued to be managed by Perhutani for logging, it would sooner or later have some negative impacts for natural conservation. Perhutani has already caused ecological disturbances to the Ciremai Mountain. There are some areas which are deforested, because Perhutani did not replant after logging. As an example, the forests in Trijaya are now full of scrubs, wild trees, and the locals' fruit trees. The areas are very sensitive to forest fires in dry season every year.

The Ciremai Mountain National Park is classified according to IUCN standards in category II; which emphasizes ecological and cultural forest functions: "Provide a foundation for spiritual, scientific, education, recreation and visitor opportunities, all of which must be environmentally and culturally compatible" (IUCN 2002)

However, making changes without good planning and proper consultations with villagers and other stakeholders will have negative consequences. , Perhutani spent a lot of money in developing and supporting the PHBM, which allowed for active local participation in management and for some use of forest resources. It seems that the Central Government and the Local Government pays less attention to 9 local participation and partnerships. There has been a misunderstanding between the government and the locals in interpreting the objectives of the national park, and which the parties have tried to resolve until today. The locals interpret the national park to be a conservation area that does not allow any access for the locals at all. The local government tries, however, to make a national park

which adheres to aspects of community conservation, as described by Barrow and Murphee (2001):

“There are three major types of community conservation, they are:

1. Protected area outreach, seeks to enhance the biological integrity of national parks and to reserve its existence by working to educate the people and at the same time enhancing the role of protected area for the benefit the local communities.
2. Collaborative management, a creative agreement between local communities or groups resources and conservation authorities in order to negotiate access to natural resources. The agreement is usually made in a form of statutory authority.
3. Community-based conservation, a kind of sustainable management of natural resources through the devolution of control over resources with the community as its chief objective.”(Barrow and Murphee 2001).

The bureaucracy seems too slow in harmonizing and integrating the perceptions and priorities of the locals and of the government. The zone system is the main homework for BKSDA. Mapping and research are needed to decide the zones of the area. Until this research is finished, the problem will remain and will make the locals feel disappointed. They are uncertain about their farming activities in the forests and worry if the lands they plant will be part of the prohibited zones for farming activities. Even if BKSDA moves slowly to define the zones, the problem must nevertheless be solved as soon as possible in order to meet the locals’ livelihood needs and secure their future.

The slow handling of forest fires must also be resolved. The locals expect that BKSDA can decide fast whether or not they may plant again in their forest farming areas. The lands are left behind for a quite long time because the conditions from the fire must be reported by BKSDA to central government which takes long time. BKSDA has still not decided whether the seeds will be provided by them or if the locals are expected to provide their own seeds. BKSDA is still looking for some types of trees that are resistant to fire, but has not yet any solution to that problem.

Proper consultations between the locals and national park management (which is BKSDA) and as required according to Barrow and Murphee (2001) is still missing. The information goes slowly; there is a lack of consultative processes.

5.5. Political intervention

Community Forest Management (PHBM) was the Kuningan Regency's top program at the time when Arifin Setiamiharja was the Regent of Kuningan. As explained in Chapter 2, the PHBM was included into the part of the annual developing planning of Kuningan Regency for the period of duty 2001-2005. At that time, the areas of Ciremai Mountain were still under PHBM. But in 2003, Pilkada (the Regent election) of Kuningan pushed Arifin Setiamiharja out of his position as the Regent of Kuningan. It was the start of the changing status for management of the Ciremai Mountain. The new Regent, Aang Suganda, has different perceptions about community forest management in Ciremai Mountain. Although community forest management is still effective in other areas of Kuningan, it is not a top program for the Kuningan's local government anymore, i.e. for the period of duty 2003-2008. The weakness of Indonesia's governing system is that every leader replacement of a region may change previous programs.

The APBD (regional budgeting) of Kuningan 2003-2008 does not put PHBM on their working programs. The community forest management schemes in the Kuningan's area today, receives fund only from Perhutani and the locals. According to central government regulation, the decision to make Ciremai Mountain into a national park is their responsibility. The local government cannot thus make any advantages from the resources that exist in the area any longer. But the proposal that an area should become a national park must come from the region, because the region is considered to understand more about its own area. Such a proposal will be considered and eventually approved by the central government (Usep from environment department, Kuningan regency - personal communication). The decision to have the Ciremai Mountain as a national park implies that the local government of Kuningan transfers its management responsibilities to the Central Government. In the seminar of multi-stakeholders that was conducted in Ayong Hotel on November 16, 2006, the Second Level of Local People's Representative of Kuningan Regency and the local government gave support to the establishment of the national park in the form of policy, people development, and Ciremai Mountain National Park's supervision.

Aid politic also plays its role when the Ciremai Mountain became a National Park. Forests in Indonesia are often described as the world's lungs. The international intervention upon Indonesia to maintain its forests is quite massive and demanding and is also supported by foreign countries' fund for natural conservation. The Ciremai Mountain will therefore also receive international funding. One of the requirements for such funding is that use of natural resources within the park will be prohibited. Unfortunately, international funding for the natural conservation in Indonesia with pushes to save the environment may also often ignore the locals' interests and needs.

5.6. Environmental degradation.

The awareness level of the locals from the three villages on environmental damages is very high, because their dependency on forests is also high. Permanent water sources is one main concern and also forest fires which is the main cause of the deforestation's acceleration in the Ciremai Mountain. Their environmental awareness can be seen from the many volunteers who register their names as Pamswakarsa; a unit that takes care of the forests in their areas. The locals' were involved in extinguishing the forest fire in November 2006. But they also admit that there are still some of them who steal logs or clear the forests by scrub fire.

Figure 3 shows that forest fires occurred regularly in the Ciremai Mountain over the last ten years and with big fires in the dry season almost every five years. The type of forest management which has been applied in Ciremai Mountain did not significantly reduce forest fires. However according to the locals, the contribution of the national park management to reduce or prevent fires is less than Perhutani's efforts. In November 2006, the locals in Trijaya had to fight the fire themselves and without support and coordination from national park management.

The tourism area in Pajambon has also an impact upon the nature. Not all visitors have a proper environmental awareness; especially teenagers in the camping area of Pajambon leave a lot of plastic wastes hanging on the trees and much graffiti on trees and big rocks. The management of the natural tourism's area is managed by Pajambon village as a

whole, but the farmers who work in the areas seem not too take care as expected. They received NGO assistance only when the tourism area was opened, but according to the farmers, that NGO does not exist anymore.

Moreover, the locals want to develop the tourism area with constructing of facilities such as a luxury hotel and a parking lot raises another problem. They see the economical potential, but are less aware of the environmental consequences. In such cases, assistance from the local government, BKSDA, and NGOs are much needed.

6. Conclusion and recommendations

The locals in three villages are dependent upon the forest, and accesses to forest resources are important for their incomes and livelihood. In Trijaya, the locals also benefits significantly from access to water, not only for their own use, but also by supplying other villages with water against payment. The sustainability of water supplies is therefore a main priority for them. Trijaya depends upon farming and the forest all year, whilst people in Linggasana and Pajambon use forests only part time and have other jobs outside the village. There are conflicts in Linggasana when forest plots are taken over by others in the farmers' absence.

The roles of the leaders are very important in any organization, whether in high levels such as a regent or in lowest level such as a village. Good leadership and appropriate communication is a pre requisite for building of trust between leaders and their constituency and is a requirement for local people to understand, accept and adapt to changing management regimes. Linggasana village provides an example where forest farmers trust their leader, where communication within the village is transparent and good, and where villagers seem to be able and willing to adapt to a new national park management regime. The leader in this village has succeeded in ensuring his people that they will not loose access to forests and that the changes are only on management and some limitations of farming areas and use of forest resources. In Trijaya village, however, the forest farmers' level of trust is less, and they are divided into two groups; those who still trust their leader and those who do not. This is because their elected leader seems unable to voice the villagers' needs and aspirations when the issue of the forests to become a national park emerged. Besides, they accuse their leader to be too busy with his owned matters. The villagers' lack of interest in meetings and discussions related to forests issues has consequences fore their understanding of what is happening in their area; leads to complaints about lack of information, confusion about such information, etc. This observation fits well with findings from others projects and programme: Awareness among villagers and their readiness to cooperate for common good is very much dependent upon a functional leadership, which is answerable to its people, and

which encourage villagers to participate in meetings, discussions and common decisions as a functioning village democracy (Barrow and Murphee 2001).

Leadership on higher levels, i.e. in this case at the level of the Kuningan regent, is also important. The replacement of Kuningan's Regent in 2003 had consequences for the status of the Ciremai Mountain. Many activities under the PHBM is no longer part of the working program of the Kuningan's Regent which also means that there is no funding anymore to support such programs. The changing of the management status of Ciremai Mountain creates impacts for the locals who live under the Ciremai Mountain which, however, is beyond the authority and powers of the local leaders.

The involvement of the local people in policy and management related to their immediate interests are important factors for the success of the national park. The locals expect that the policies should not be top-down, but rather bottom-up. For example, when park zones, e.g. areas for miscellaneous use, are discussed and determined, the locals expect to be involved. The areas have always been part of their lives and their livelihood, and they have local knowledge and insight which is important for future management and use.

National park policy and regulations must be promptly delivered to the villagers and other stakeholders in order to avoid further misinformation and confusion, which ultimately adds to suffering for the locals. The organization of the national park's management is therefore another source of concern, because it will be impossible to manage the forests properly by only two persons. Professional assistance may therefore be needed, not only for local leaders and villagers' e.g. in Trijaya, but also for the national park's management itself. Such assistance can be provided by local NGOs such as Kanopi.

Reference:

- Adams, W.M., 2004 “Green Development, Environment and Sustainability in The third world”, Second edition, Routledge Taylor and Fracis Group, London and New York
- Aliadi, Arif, 2006 “Promoting Good Forest Governance Practise in Indonesia”. Latin, Bogor, Indonesia http://www.latin.or.id/assets/pdf/Laporan_GFG_LATIN.pdf
- Brann, Joshua, 2002 “Trade Policy in Indonesia: Implication for Deforestation”, the Bologna Center Journal of International Affairs. Spring 2002
- Barrow, E and Murphree M, 2001 “Community Conservation from Concept to Practice” In: Hulme D. and Murphree M. (eds.), 208-226 (2001). African Wildlife and Livelihoods: The Promise and Performance of Community Conservation. James Curry Limited, Oxford, UK
- Bapeda Kuningan, 2006 ” *Kebijakan dan Strategi Pembangunan SDA-LH di Kabupaten Kuningan* ”, Paper for Multi stakeholders meeting in Kuningan, Bapeda Kuningan, November 16, 2006
- Bryman, Alan, 2004 “Social Research Methods”, Second Edition, Oxford University Press, New York
- Colchester, Marcus, “Challenges To Community Forestry Networking In Indonesia”, CIFOR
- Djarmiko A Wibowo, 2004 “ *Hejo PHMB ; Leuweng Hejo Rakyat Ngejo*” Latin, Bogor, Indonesia
- DPRD, 2006 “*Peran DPRD Dalam Pengelolaan Taman Nasional Gunung Ciremai Kolaboratif* “ DPRD, Komisi B, Paper for Multi stakeholders meeting in Kuningan, November 16, 2006
- FAO, 2007 “State of the World's Forests 2007; Food and Agriculture Organization of the United Nations” Rome
- Forest Watch Indonesia, 2006 “Gunung Cermani dijadikan Taman Nasional” Forest watch Indonesia <http://fwi.or.id/index.php?link=news&id=335>
- Forestry Departement, 2004 “Keputusan Menteri Kehutanan Nomor: SK.456/Menhut-II/2004 Tentang 5 (Lima) Kebijakan Prioritas Bidang Kehutana Dalam Program Pembangunan Nasional Kabinet Indonesia Bersatu”
<http://www.dephut.go.id/temp/index.php?lempar=dl.php&&idlempar=2227>

Isnaini, Ratna, 2006 “Enabling Policy and Procedures in National Park: A Struggle for Equity Case study in Kuningan Regency, West Java” The Indonesian Tropical Institute (LATIN), Bogor, Indonesia

Investopedia (n. d.), 2007 “Economics Basics: Introduction” [online] available from <<http://investopedia.com/university/economics/>> [27 May 2007]

IUCN, 2002 “The IUCN Protected Area Management Categories “Information sheet number 3, Cardiff University July 2002 www.cardiff.ac.uk/cplan/sacl

Keputusan Menteri Kehutanan 1999 “*Hutan Kemasyarakatan* No.677/Kpts-II/1998” [Kepmenhut 865 1999 Hutan Kemasyarakatan.rtf](#)

LATIN, 2005 “*Catatan Mengenai Progres Kegiatan Makin Komuniti forestry works di Indonesia*” (MKFW), Latin, Indonesia

Lynch, Owen. J and Lauren Baker, “Community-Based Natural Resource Management: Indonesia.” <http://www.ciel.org/Lac/lacindonesia.html>

LPI, 2006 ” *Peran LPI PHBM Dalam Mendorong Sistem Pengelolaan Hutan Kolaboratif di Kabupaten Kuningan* ” Paper for Multi stakeholders meeting in Kuningan, November 16, 2006

Miranda, Temi I, 2002 ”Social Resistent Forest Peasant In Banyumas, Indonesia ” Bachelor Thesis, Purwokerto, Indonesia

Muslima, Hapsary 2007 “*Indonesia Perusak Hutan Tercepat versi Guinness Book of Record*”, In Tempo Interaktif Newspaper, Friday April 27, 2007 <http://www.tempointeraktif.com/hg/nasional/2007/04/27/brk,20070427-98894.id.html>

Muhtadin, 2006 “ *Arah Pengelolaan Dan Pengembangan Kawasan Taman Nasional Gunung Ciremai* “ Paper for Multi stakeholders Meeting in Kuningan, November 16, 2006

MFP, 2005 “Regional Strategy Java: Multi stakeholder Forestry Program” Multi stakeholder forestry program (MFP) www.mfp.dephut.go.id

Nugraha, Agung, 2000 “*Quo Vadis Kehutanan Indonesia* “Biograf Publishing, Yogyakarta

Nugraha, Budi,2005 “*Sistem Hak Pengusaha Hutan Dan Manajemen Hutan*”, Jakarta, Indonesia www.lipi.pdii.go.id

Perone, Jenifer S, Philip L. Winters, Melissa Read, Isaac Sankah, “Assessing Hierarchy of Needs In Levels of Service” Final Report, National Center For Transit Research

Center For Urban Transportation Research (NCTR), University of South Florida, October 2005

Perum Perhutani & KPH Kuningan, 2004 “ *Dokumen Proses Implementasi Sistem PHBM, Kuningan*” Perum Perhutani & KPH Kuningan, Kuningan, Indonesia, January 2004

RYO, 2004“*Pengelolaan Hutan Bersama Masyarakat Lebih di Minati*” In Kompas Newspaper, December 11, 2004

Raden, Bestari & Abdon Nababan, 2003 “ *Pengelolaan Hutan Berbasis Masyarakat Adat: Antara Konsep dan Realita*”
http://dte.gn.apc.org/AMAN/publikasi/Pengelolaan_Hutan_Berbasis.html

WWF, 2004 ” Indonesia Established 1.3 million hectares of Protected Areas and Commits to further Improve PA Management effectiveness ” WWF, Gift To The Earth #97, November 18, 2004

Yusuf, Arif A, 2005 ”*Simulasi Kemiskinan di Jabar*” in Pikiran Rakyat Newspapers, October 17, 2005

Appendix 1

Research Questionnaire Local people's perceptions of forest management in the Kuningan Regency

I. Place	
1	Number of Questioner
2	Provincy
3	Regency
4	District
5	village
6	Orchard
7	Tribe (ethnic Group) :

II. Respondent			
1	Name of respondent:	4	Long has he/she lived in this village :
2	Ages of respondent :	5	Education Background:
3	Sex : Male Female	6	Occupation : - as a main Job : - Second Job :

IV. Household Income

1. How many members in this family are working in the forest?
2. How long they have work in the forest?
3. How much (in average) Income you can get from the forest in a years?

V. Forest Management with Community

1. Who owns the land and the resources in the forests in this area?
 - a) Government
 - b) Perhutani (State's logging companies)
 - c) Local community
 - d) Other (Describe)
 - e) Do not know
2. Do you know that the forest in the Kuningan Regency is under forest management with the communities, i.e. a PHBM forest?
 - a) Yes
 - b) No
3. What are the most important objectives of forest management with the communities (PHBM)? Rank from 1 to 6.
 - a) Ownership of land (tenure) and resources
 - b) Access to land for farming
 - c) Logging of timber Hunting and fishing
 - d) Gathering (e.g. firewood, honey, medicinal plants etc
 - e) Community participation in decision making over use of land and resources
 - f) Do not know
4. Is access to land and forest resources important for you/ your family's livelihood?
 - a) Very important
 - b) Important
 - c) Not so important
 - d) Not dependent upon forest land and resources

VI. Institutions for Management and Use

1. Who decides how the forest should be managed and used?
 - a) Government
 - b) Perhutani (Private timber companies)
 - c) Local community
 - d) Other (Describe)
 - e) Do not know

2. Is there a community institution/ local leader for PHBM forest management and use on behalf of the members of the community?
 - a) Traditional community institution
 - b) Elected community institution
 - c) Traditional leader
 - d) Elected leader
 - e) Do not know

3. Do you trust your community institution/ leaders?
 - a) Yes
 - b) No
 - c) Indifferent

4. Do you and your family participate in community discussions and decisions on use of land and resources in the forest?
 - a) Yes
 - b) No
 - c) Do not know

5. What can be improved under forest management with the communities (PHBM) in the Kuningan Regency? (Describe).

VII. Access to Forest Resources

1. Do you your family have adequate access to the forest resources?
 - a) Yes
 - b) No
 - c) Do not know

2. Which are the most important resources in the forest for you and your family?
Rank from 1 to 4.
 - a) Land for farming
 - b) Timber
 - c) Fish and wildlife

- d) Water sources
 - e) Other (e.g. firewood, honey, medicinal plants etc)
3. How are benefits from the forest used? Rank from 1 to 4.
- a) For subsistence by the respondent and his family
 - b) To be shared among community members
 - c) Selling products
 - d) Other
4. Are there conflicts with other users of the forest?
- a) Yes
 - b) No
 - c) Do not know
5. If so, who are they and what kind of conflicts?
6. Do you agree that there is less deforestation in the Kuningan Regency After Introduced (PHBM)?
- a) Strongly agree
 - b) Agree
 - c) Indifferent
 - d) Disagree
 - e) Strongly disagree
 - f) Do not know
7. What can be done to reduce deforestation?
8. Do you agree that management of forest resources by local communities by PHBM in the Kuningan Regency is good for future generations?
- a) Strongly agree
 - b) Agree
 - c) Indifferent
 - d) Disagree
 - e) Strongly disagree
 - f) No opinion
9. Have forest management with communities (PHBM) in the Kuningan Regency Caused you any problems? If yes, explain.

VIII. A National Park for the Cermai Mountain

1. Do you know that the Ministry of Forestry plan to establish a national park for the Cermai mountain?
 - a) Yes
 - b) No

2. Do you agree that such a national park shall be established?
 - a) Strongly agree
 - b) Agree
 - c) Indifferent
 - d) Disagree
 - e) Strongly disagree

3. What are the advantages of national park?

4. What are the disadvantages of national park?

5. What are the differences between PHBM and national park?

Appendix 2

Interview Guides for the Locals in Pajambon village

1. How is benefit to the members of this group?
2. How much income they got from this program?
3. How is the run the program?
4. Are you also do agriculture activities in the forest?
5. What kind the activities that benefit you?
6. How much income that can earn from the tourism?
7. Which activities benefit more? Agriculture or tourism?

