

## Transformation of resource management in Upland East-Java, Indonesia – From directive power to social and institutional interactions\*

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### ABSTRACT

Until 1998 Indonesia was ruled by an authoritarian regime under which natural resources had been exploited excessively. Legal enforcement at the local level, especially in upland forests with fertile volcanic soils, was weak. Despite difficult conditions for agricultural cultivation, state enterprises, for instance the so called “PERHUTANI” which was concerned with forestry, moved to areas with steep slopes ignoring environmental risks from degradation and deforestation. Throughout the contemporary reform process with decentralization of power via local and regional autonomy, natural resources are no longer dominated by direct state power only, but by more actors at various levels of society. Legal enforcement in areas under conservation has been strengthened during the last five years. With this context in mind, the paper seeks to focus on the question of how regional demographic and cultural patterns in upland East Java influence the struggle over natural resources and their management by different stakeholders (i.e. government institutions, NGOs, village communities and households).

The theoretical approach follows the concept of political ecology. The struggle over natural resources goes along with the political patterns of social interactions, including cooperation and competition. Three villages in the highland areas around the Bromo Tengger Semeru National Park (BTSNP) are selected for case studies due to their highly differentiated social-cultural settings. The analyses show how local stakeholders fight over natural resources in an ecologically sensitive environment. Based on a qualitative research (170 semi-structured interviews, 30 in-depth interviews with key informants, 5 focal group discussions) we found the following preliminary results:

In the early stages of the reform era many actors demanded and gained unlimited access to the use of forests. In the mean time this concept has changed into a situation in which access to forest resources is the result of a negotiation among stakeholders. Intensified bargaining among different parties on the limits of consumption and selling of forest products can be observed. These conditions have encouraged the actors led by NGOs, National Park officials, and traditional institutions to discuss about restrictions of and sanctions on the land use by households (i.e. limitations on the exploitation of tree species, efficiency of water consumption). We show that public dialogue encourages power sharing in the system of the use of resources. Various local adaptations to environmental changes as well as varying sanctions which take the cultural backgrounds into consideration are found.

**Key words:** Indonesia, resource management, political ecology, social interaction, public dialogue, power sharing

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## **1. INTRODUCTION**

Southeast Asia including Indonesia is facing problems of deforestation, desertification, loss of soil fertility, wildlife habitats and biodiversity, deterioration of aquatic ecosystems and the lack of accessible, good quality water. These problems are a result of industrialization and modernization. But most of the people are still poor despite living amidst the abundant resources. This is due to the long influence of professional resource management since the colonial era. PELUSO (1994) mentioned it as an “ironic” condition in which government limits the legal access and the customary rights of peasants to the forests, so they are pushed toward illegal use of the forest resources. Most of the policies that are based on the professional management system and adopted from German-European traditions and FAO have been created by the Indonesian government after the Second World War to address such problems. This has no impact on the maintenance of the sustainability of natural resources (PELUSO, 2006).

The Indonesian forestry department has a lack of understanding the complex relationship between society and nature which involves socio-economics, politics, ethnicity and local leadership. The degradation of environment will not be fully understood without the political and social processes of access to, control over and management of resources. For instance, the study offered by LESTRELIN and GIORDANO (2007) in Ban Lack Sip in the upland of the Luang Prabang Province in Laos has shown that rural development policy addressing environmental degradation and socioeconomic conditions aggravates the working situation. Villagers face actual land degradation and upland environmental degradation due to the construction of the Laotian state and international development actors. Conflicts over access to resources often involve violence in Indonesia and other Southeast Asian countries. These conflicts are the result of policy makers’ misunderstanding on the complex relationship between society and resources.

In light of the waning central governing power after the era of reformation and decentralization, all actors try to control resources according to their own manners. The State Forest Company, the National Park, and the local people follow their own perceptions and ignore the basic functions of resources. Upland Java had been commercialized since the colonial era. This was followed by the green revolution policy in the early 1960s and it increases the demand for land. The increasing population and the tendency for commercialization in the forest state company and National Park during the early reformation era encouraged exploitation of natural resources. At the same time, a new wave of NGOs’ activities supported by international agencies which are concerned with the protection of culture and conservation of environment gives more diverse aspirations in the local context. According to the above explanations, this paper focuses on the question of how regional demographic and cultural patterns in upland East Java influence the struggle over natural resources and their management by different stakeholders (i.e. government institutions, NGOs, village communities and households).

## **2. ACCESS TO AND CONTROL OF RESOURCES: A POLITICAL ECOLOGY FRAMEWORK**

This study employs the approach of political ecology to understand the relationship between human and environment in upland Bromo where the environmental changes are massive and play a pivotal role in the early reformation era since 1998. BLAIKIE and BROKFIELD (1987) claim that political ecology is a theory that attempts to understand the political sources, conditions and ramifications of the change in ecosystems. It is a radical critique against the a-political and de-politicizing effects of mainstream environmental research and practice. It explains a complex relationship between resources and society at the local, regional, and international levels in which they are embedded economically and politically. By employing the historical dialectic approach in the main inquiry, it becomes a new solution to replace a simplistic determinism of former environmental science in order to explain the political dimension of their theoretical thought. In his themes, NEUMANN (2005) mentions six tenets of political ecology. These are urban political ecology, landscape and

meaning, environmental security and violence, ethics, identity and environment, and biotechnology and biodiversity.

Political ecology explains the recent debate concerning interactions between nature and society as well as interactions within the society itself (BLAIKIE & BROOKFIELD, 1987). Thus, it is the robust theoretical framework to analyze how access to and control of resources are defined, negotiated and contested among social groups in the multi-level social structure. 'Access' is defined as an opportunity to make use of resources, but without the authority of taking decisions on how to use them. RIBOT and PELUSO (2003) define 'access' as "the ability to derive benefits from things", broadening from the property's classical definition as "the right to benefit from things". The control, on the other hand, is defined as the complete authority to make decisions on the use of resources. Nature and society are both socially constructed to a significant degree, yet both are determined to some extent by what may be glossed as system-like constraints that are neither the deliberate nor inadvertent products of human purposive activity (GREENBERG and PARK, 1994:1).

In the post-structural theory of political ecology, institutions facilitate all variables related with the degradation of natural resources as a consequence of a tendency to question the extent and 'narratives' of degradation. Focusing on the institutional level of analysis gives more balanced explanation in which each variable can be captured properly. Citing ROGERS works (2002), MUNGO`ONG`O (2009:193) mentions that governance is best defined as constitutional politics and rules of conduct that define practices, assign roles and guide interactions by which it can reduce the over-influence of the actors over social structures. The structure of politics and policy can be explained locally, nationally, and even across the domestic-foreign frontier through institutions of governance (MUNGO`ONG`O, 2009).

Resources governance as a system facilitates all interest groups to participate in the policy making process related to the management of resources. In this manner, access to and control of resources are socially constructed by actors who have interest for their own benefits while at the same time, a powerful actor will dominate the construction. Power is an ability of actors to mobilize their resources to create appropriate definition that tends to give benefits to them. Interest of actors will be facilitated through the legislation system at the local, regional and national levels to give practical legal guidance for governance. To address the degradation of resources at the local level, political ecologists agree to locally based responses in face of the resource management problems. This is based on the concept of 'local-level decision-making by grassroots actors' (BRYANT and BAILEY, 1997: 5).

According to the work of SUNDERLIN and RESOSUDARMO (1999), population growth must be accompanied by the non-population factors in explaining deforestation in Indonesia. They suggest that "non-population factors should receive greater attention in policy measures directed at controlling inappropriate deforestation". In this respect, population growth will be explained along with the process of development offered by the local authority in the villages. Cultural settings which include identity and demographic dimensions contextualize and identify clearly the flows of power between different actors. This is a foundation to analyze how access to resources are defined, negotiated, and contested among actors. It will give contexts to the questions of why and how actors do have different points of view over resources.

An institution is the field or medium for actors to channel their interests in certain ways over time. At the same time, this article elaborates the physical environmental changes that appear in upland Bromo as a factor that contributes to shape the interaction pattern between human and nature. Factors which include physical changes will give a more balanced description. According to the work of STONICH (2001:4057-4058), political ecology as an emerging theory tends to ignore environmental changes itself as a factor that shapes the interactions between human and environment.

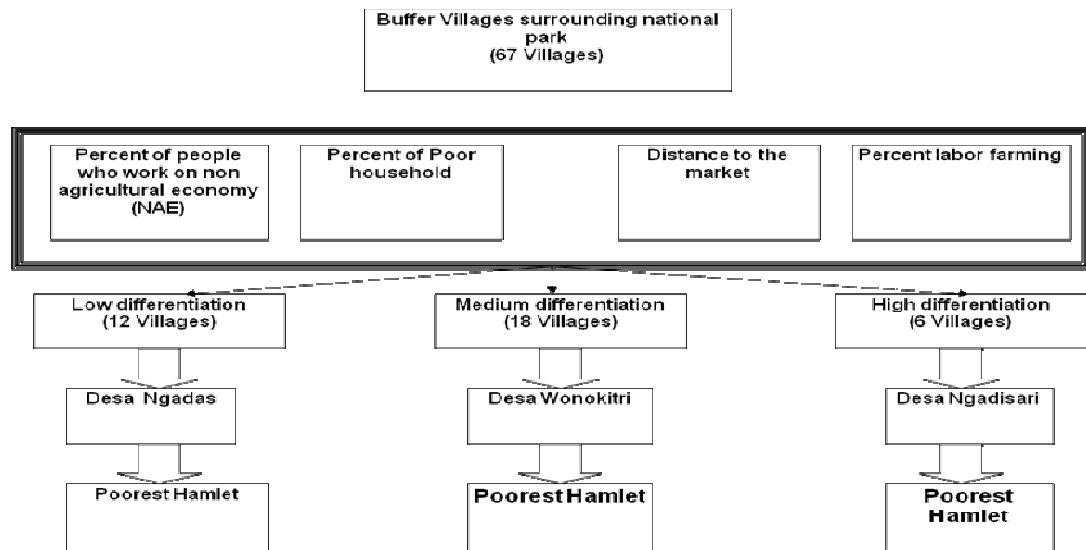
### 3. METHODS

Three villages in the highland areas around Bromo Tengger Semeru National Park (TNBTS) have been selected for case studies due to their highly differentiated social-cultural settings. These three villages have been selected because they represent the general conditions of the cultural, social, economic and agro-ecological settings of current upland conditions. The first village, Ngadisari, is the most differentiated village where tourism grows rapidly in the last ten years. Additionally, an intensive agricultural system has been developed by villagers through products such as potatoes, onions, and cabbages on fertile soils. Socio-culturally, most of the Ngadisari villagers believe in TENGERESE custom (Adat) and have a tendency to “refuse” Balinese liturgical system although they have a PURE-place for the Hindu prayers.

In the second village, Wonokitri, agriculture is the most important sector followed by tourism. Different from Ngadisari, the liturgy of Balinese Hinduism is followed by villagers due to the successful mission in purifying Hinduism by the Parisada Hindu Dharma-organization in Indonesia. In the late 1950s some young men were invited to Bali with the intention to study religion and became leaders in the village government (PANGARSA, 1995, HEFNER, 1987). Influences of Balinese Hinduism on architecture can be found in the architecture models of both private and public buildings especially in the temples. Wonokitri represents the mediumly differentiated village in which the influence of the industry of tourism is not very significant.

The third village, Ngadas, is dominated by a purely agricultural economy in which the industry of tourism has small contribution to the village economy. Therefore this village depends on the sustainability of natural resources. Most villagers work as farmers or go to forests to collect firewood, charcoal, or herbs. In this village, the followers of Hinduism and Buddhism are approximately 25% and 60% of the population respectively. Islam is just 25% of the total population but they control the village government and economy. All of the religious institutions in this area have relationship with the organizations from the other villages in Malang or Surabaya.

**Figure 1:** Village sample selection



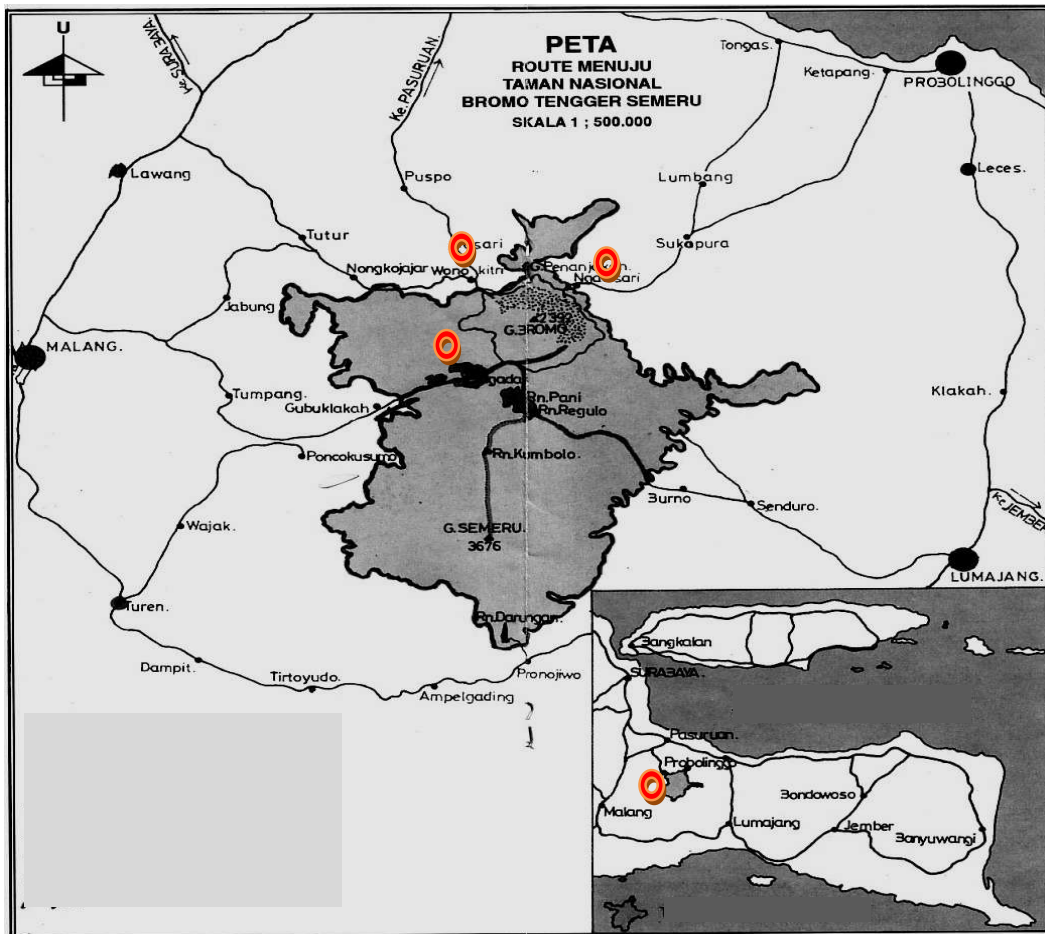
The primary data are collected by the semi-structured survey (179 semi-structured interviews, 30 in depth interviews with key informants, 5 focal group discussions). The questionnaires include demographical aspects in the last ten years, the pattern of land ownership, local resource management system, access to and control of resources and other information. The in-depth interviews were conducted particularly to collect information on values concerning inheritance and kinship systems and other data related with the environmental changes in each village. In-depth interviews were employed to collect

qualitative data in the households. These data are related to their activities in defining, negotiating, and contesting for access to and control over natural resources to maintain their livelihood. Focal group discussions were conducted to verify all data related with the villages' concept about their identity, territorial claims, the history of the development of National Park management system and PERHUTANI, and also the dynamism of NGOs' activities. Interviews with key informants give information about the governmental policy related to the resource management system, the history of village, local culture, values, and other information.

#### 4. RESEARCH SITE: TURN TO UPLAND BROMO LANDSCAPE

Upland Bromo constitutes a major part of the forest resources of East Java Province-Indonesian. It is located geographically at 07°51' - 08°11' S and 112°47' - 113°10'. The temperature is between 3 to 20°C. The lowest temperature is between 3 to 5°C, which happens mostly at midnights during the dry season. Based on Schmidt-Ferguson climate classification, the area is classified as B type. The average rainfall is 3,000 mm per year (In the eastern and southern areas). On the sandy field and surrounding areas, the climate type is C with the average rainfall being 166 mm per month (Nature Indonesia, 2010). Cold temperature especially during the dry season encourages villagers to make fireplaces, so firewood becomes their primary needs.

**Figure 2:** Map of East Java Showing BTSNP and Upland Bromo (Source: Bromo Tengger Semeru National Park)



This upland area was divided into three areas that are Sub-montane (750 - 1,500 m ASL), Montane (1,500 - 2,400 m ASL), and Sub-alpine (2,400 m ASL). In the sub-montane area, forests range from lowland tropical rainforest to mountain forest. This area has several density levels of biodiversity and can be found at the southern, eastern, western parts of Mount Semeru. Some of the vegetations come from the family of Fagaceae, Moraceae, Anacardiaceae, Sterculiaceae and Rubiaceae. Crop covers mostly come from various genuses such as Calamus spp., Piper spp., Asplenium, Begonia spp., and from the family of Anacardiaceae, Araceae, Poaceae and Zingiberaceae. The montane area mainly consists of primary forests, but its biodiversity is less. Most of their vegetations are pioneers that grow well on the open bare area. Some of the species are CEMARA GUNUNG (*Casuarina junghuhniana*), CANTIGI (*Vaccinium varingiaefolium*), KEMLANDINGAN GUNUNG (*Albizia lophanta*), and ACACIA (*Acacia decurrens*). Examples of crop covers species are EDELWEISS (*Anaphalis longifolia*), SENDURO (*Anaphalis javanica*), FERNS (*Pteris* sp.), RUMPUT MERAKAN (*Themeda* sp.), CALINGAN (*Centella asiatica*), and ALANG-ALANG (*Imperata cylindrica*). Vegetations in Sub-alpine Forest are mostly small and less diverse, such as mentigi gunung (*Vaccinium varingiaefolium*), kemlandingan gunung (*Albizia lophanta*), and edelweiss (*Anaphalis longifolia*). Most of the vegetations in the zones have been used by villagers as firewood, cattle feed, foodstuff, materials for the ceremony, and building materials which are for their own use or for selling.

The upland Bromo is mainly domiciled by the TENGGERESE ethnic group. Native people have been living in this area for centuries and they depend on forest products and agriculture. The native people have much knowledge of the settlement history of the upland Bromo which is articulated through their local legends. These legends are a source of their claims on the territory of upland Bromo. Others describe the upland Bromo simply as the area surrounding Semeru and Bromo ridge where TENGGERESE live as an ethnic minority. The region that we define as the upland Bromo has experienced significant economical, political, and social changes since the invasion of the Islamic Empire, colonialism, and the development in the new order (HEFNER, 1987, PANGARSA, 1995) in which road building efforts and electricity started in the mid-1980s and early 1990s.

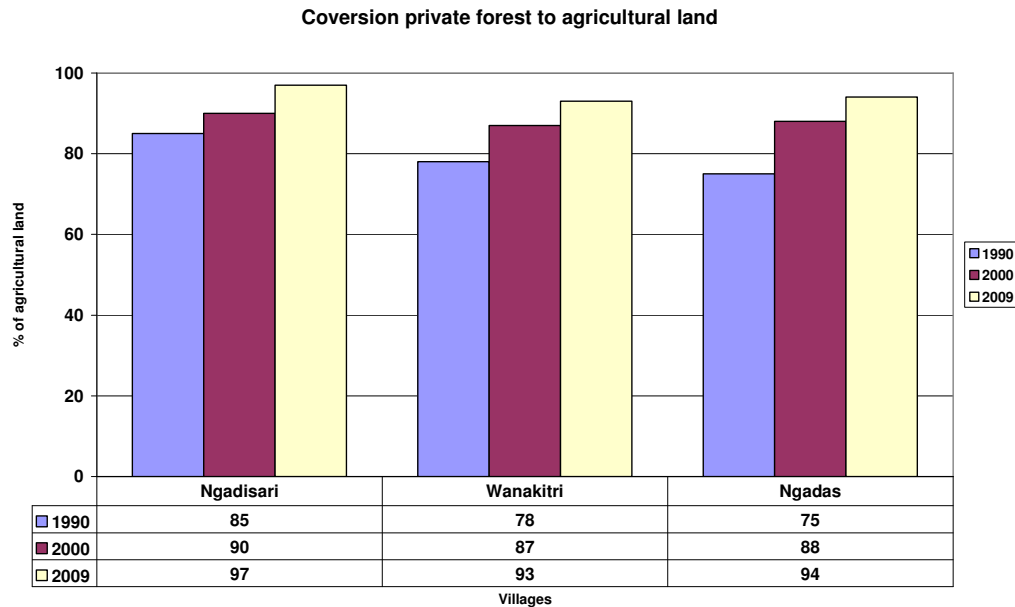
According to the village's statistic data, population growth in the upland Bromo remains high in comparison with the average population growth in East Java. This condition is related to the tradition of TENGGERESE where women are to become married when they are 16 or even less than 16 year old. Officers of National Bureau for Coordinate Family Planning (BKKBN) who have responsibility to campaign family planning program (KB) are refused by the villagers. Most of them still get married when they are under 18 year old, have more than two children, and do not have access to primer health and nutrition services. They tend to go to village priests to get medicine rather than the governmental doctors or other health counselors in spite of the fact that they also believe in modern healing system.

Another factor that has a close relationship with excessive exploitation of the land in upland Bromo is the introduction of modern tillage technique along with the green revolution program in the early 1970s. East Java agricultural bureau sends officers of agriculture called *mantri pertanian* to modernize agricultural practices such as making terrace, planting system, new potato seeds, and the training of other technical assistant to multiply cash crop production. The government also sends several farmers to production centers of potatoes like Batu (East Java), Dieng (Central Java), and Lembang (West Java) to study potato planting system especially the seed production. In the early 1980s, the government replaced old Granola seed that was introduced in 1970s with the new one that is more resistant to plant disease. Along with the process of industrialization in East Java and Indonesia, demand for horticultural product increased rapidly in 1990s in which more than 80% of the land was planted with potatoes and other commercial products.

At the same time, the government built infrastructure to connect upland Bromo with economic centers such as Malang, Surabaya, and Jakarta. Makadam road was replaced with paved road, so the upland Bromo has direct connection both within Bromo area with other cities. Agricultural infrastructure was built to connect main roads and farming supported by village leaders. Horses have been replaced by motorcycles as main transportation for agricultural products. Therefore, building infrastructure increases circulation of goods and

services at the village level. Increasing demand for horticultural product makes the villagers cut their trees that give shadows to potatoes and clear their private woods to make space for the plantation of agricultural commodities.

**Figure 3:** Proportion of agricultural land to forest cover from 1990 till 2009



Sources: Interview with 179 households in Ngadisari, Wonokitri, and Ngadas Village.

On the other hand, firewood and charcoal consumptions among villagers are still high as they are needed for cooking and keeping the houses warm during the nights. Even though new energy sources such as petroleum and natural gas are introduced to the village in order to replace firewood and charcoal, most of TENGGERESE people still use wood and charcoal for their everyday activities. It is an inseparable tradition for them to make fire at night before sleep as an activity of social interactions. Moreover, timber prices are relatively high because of the increasing housing sectors in the city. This potentially pushes the villagers to exploit forests to get benefit from them. At this point, the demand for forest products in upland Bromo is caused by internal consumption for housing and energy as well as high prices of timber product due to housing in the cities. Besides that, commercial development in the villages encourages villagers to clear their private forests that were previously an energy stocks. Therefore timbers become scarcer.

## 5. SHARING POWER AMONG ACTORS IN THE POST SUHARTO ERA

In this chapter we will elaborate the way in which power was distributed to actors as a result of democratization and decentralization processes in the reformation era. Once the directive power from the government has shrunk, the element of civil society gradually gets power to express their aspiration in the social and institutional contexts freely. In light of the strengthening power of the new government, state apparatus at the regional and the local levels revitalizes their power and creates new strategies to implement new government policies. In this respect, village administration promotes bottom up mechanism in the decision making process that includes NGOs and other elements in civil society. National Park and forest state company on the other hand commercialize their institutions to gain more income for central, regional, and local government.

## 5.1. The Waning Government Control on Resources

For more than three decades, Indonesian was lead by authoritarian regime in which all of the resources were directed toward the economic growth by giving concessions to private and state forest companies. That policy excluded local people to gain access to and control of resources, so their activities were considered as illegal according to the governmental perception. On the other hand, local people, having seen outsiders given access to exploit forests, made more devastating impact on resources without reserve. When the governmental control over the natural resources decreased after the reformation movement in 1998, the local people have been back to exploit resources with no respect. In the three villages examined more than half of the forest is logged by people for the consumption and selling of firewood and building materials. Village authority cannot do anything due to the fact that they tended to support the central government to exploit resources in the past. As a result, there is no control over the local people from the government apparatus who has responsibility to the resources. These government apparatus include police, military force, village governments, National Park officers, and state forest company rangers.

At the village level, the waning government control can be seen through the decreasing ability of village leaders to organize their people to participate in the public work particularly in the conservation of the forests in their own land and the state forests. The numbers of villagers who do not go to public work have increased rapidly since the early reformation era. Village leaders see this period as non- coordinated in which all people can voice their own aspirations without control. They cut trees in the borders of the roads, which give shadow to their land without permission from the village leaders. More and more villagers go to collect firewood and charcoal freely due to the decreasing confidence in the official National Park and state forest company to enforce the laws. Former village leaders described that condition as a release of “euphoria” from people who had been put to pressure for more than three decades. Police, military groups, and other state officials who have full responsibility to control the situation do not do anything. Local governments were made difficult to extract land tax from the villagers due to their skepticism toward the government.

Mc CHARTY (2000:91) explains this condition as an impact of political turmoil in the wake of the meltdown of currency in which environmental devastation combined with a wider economic and political crisis. At the village level, people just try to attract the attention of the government and do anything they want that are banned by the authoritarian regime before. Certain parties take advantage of this uncertain situation to gain illegal profits. According to the interviews, in addition to the local people, there are also people from the outside of the villages who gain access to the forests. Some people may just be the receivers of stolen timbers from the local people. Some of them use sawmills that have been banned before to log timbers in several areas that are near to the main roads.

The most influential state institution shaping the economy of upland Bromo society is BTNSP which is a National Park. The National Park is the certain area owned and declared by government as under the environmental conservation. This area protects the environment, the animals and the local people who live there and it is also for human recreation and enjoyment and it is restricted from most of the commercial development. The main purpose of this area is to protect the area of the local community particularly in view of their customs and livelihood. It is a product of the international ideology and the political ecology project related with the biodiversity program called Integrated Conservation and Development Project (ICDP) that has been addressed since 1980 by IUCN, UNEP and WWF in the World Conservation Strategy. Two largest ICDP's projects in Indonesia are Kerinci Seblat National Park (TNKS) in Sumatera and Lore Lindu National Park (LLNP) in Sulawesi. Along with other National Parks in Indonesia, Bromo Tengger Semeru National Park (BTSNP), the area where the TENGGERE ethnic group lives, was declared in 1982 by the ministry of agriculture as a part of restricted area to preserve biodiversity that is endorsed by international institutions based on professional forest management system.

The local economy influences the state forestry institutions in two ways: through the role that the forest products play in the economy and through influencing the fiscal capacity of



governments to fund professional forestry institutions. Professional management claims territory that is owned by the local community through legal enforcement in the local community. The local people have dominated the forests long before the National Park forms their livelihood. The ethnicity of TENGGERESE is not only an identity claim but also a territorial claim. A territorial claim refers to the right to control area and gain access to the resources from there just like what their ancestors did in the past. Different perceptions and views concerning who has right to exploit forests is the main problem in the social relationship between the forest officials and the local community. More than three decades after BTSNP was declared in 1982s, TENGGERESE still considers the National Park area as part of their territory.

Another actor who controls the resources surrounding the upland Bromo is the State Forest Enterprise (PERHUTANI). Different from the National Park, PERHUTANI is a commercial institution that was built by Government in 1972, adjusted under new regulations in 1986, 1999, and became more commercial under the Government regulation (PP) number 30 of 2003 in which PERHUTANI operation was coordinated under the Ministry of State Owned Enterprises (BUMN) and received a technical assistance from the Ministry of Forestry. In those periods, the company as a commercial institution encouraged efficient strategies to give more benefits to the government (CHRISTOPHER BARR, et. al, 47-53). All the branches had been managed to generate profits not only through the production of timbers and other related products but also through the increasing environmental services of both tourism and non-timber products (NTP). In upland Bromo, after political turmoil in 1998, PERHUTANI intensifies the exploitation of the highly tilted regions which previously have not been used as a production area.

Intensified exploitation in the highly tilted regions began in 2004 when PERHUTANI introduced a contract system that involved villagers in the forest management system in the border areas between village and forest. This contract system is called kontrak by the local people. More than 100 hectare square meter of forests was cleared by the villagers and replaced the tress with potatoes, onions, cabbages and carrots. The villagers had responsibility to plant pine and acacia trees every 16 meter square and took care of it until the canopy shadowed land in 2 or 3 years. Those activities continued every year in the steeper areas that potentially have benefit for agricultural activities without taking into consideration of the value in conservation. Even, in the very fertile land villagers did not maintain trees, so they still occupied land for more than 3 years. Every year villagers give un-official rent of land of around one to two million rupiah to PERHUTANI officers and give some tips when they have benefits from their plantations after every harvest. They must be willing at any time to plant trees or built infrastructure in other forest areas for free.

The control over the TENGGERESE resources claimed by the National Park and PERHUTANI limited the opportunities of the local people to make use of the resources for their livelihood. Installation of boundaries in the 1990s along with the increasing people pressures to the National Park is a sign of government claim. At the same time, government added more officials who were trained as professional rangers in this area. Additionally, new economic opportunities potentially can be exploited due to the increasing number of local and international tourists. The fight for control over resources has become more intensive as a part of customer services minimally in the tourist view point. Infrastructure such as hotel and other accommodation facilities owned by private enterprise were built to support tourism.

Recently, these activities have become more commercial when the land can be rented to other people inside and outside of the village for intensive agriculture. This is exemplified in the case of Wonokitri. There are five rich villagers who rent kontrak land close to their land. Each person receives 10 more hectares of land than other villagers. Farmers from the outside of the village also rent kontrak land from the native farmers and build very intensive agriculture with low respect to activities of conservation. Temporary access to and control over land encourage renters to extract land to give more benefit to themselves. All of the transactions between the native villagers and the farmers outside are created in an un-official manner, so it is very difficult to control land rent market.

Though access to resources was restricted during the reign of the authoritarian regime, the local people still participated to built infrastructure in the National Park. The village

leaders also mobilized them to plant trees in the National Park area as a social work. During the New Order, the government was a very strong power to control all activities of citizens, especially in the voluntary work for the public interest. According to the opinion of the local people, they still had right to exploit resources because of their contribution in the past. In the opinion of the forest officials most of who were graduated and trained as professional foresters considered the activities of the local people as unlawful. Disharmonious relationship between the forest officials and the local community in the New Order encouraged the local people to devastate forest when control of government decreases during the reformation era. It didn't last too long as the new government has strengthened its power since the general election in 2004. Unlimited freedom has begun to be gradually regulated through inter-party dialogues starting at the village level.

## **5.2. Raising TENGGERESE Identity and Territorial Claim**

For more than 32 years, the New Order regime tried to homogenize not only the TENGGERESE people but also most of the other surrounding Indonesian ethnic groups. Central to its policy was to categorize people into just five religious groups (Islam, Christianity, Catholic, Hinduism, and Buddhism). There were traditional belief aliran kepercayaan at the individual level and the single principle azas tunggal policy at the organization level. In this era, they faced dilemma whether to follow the existing religious group or the traditional belief aliran kepercayaan. The TENGGERESE people have the tendency to follow customs which are inherited from their ancestors in the Majapahit Empire. Aliran kepercayaan is not the best choice because it is associated with the kejawen-syncretism of Javanese belief and Islam which is different from their tradition. Hinduism is chosen by most people because the Hindu cosmology is closer to their belief than the other religious groups.

The TENGGERESE is associated with the territories and the communities who have unique traditions as the remnants of the Majapahit Empire who lived in the upland Bromo. The territorial claim here does not refer to the term in political economy or the aggregation of political administration, but refers to just an effort to preserve their identity and religious heritage without political action. According to HEFNER (1993: 44-46), the TENGGERESE cannot be identified as a distinct social region. Today, along with the process of democratization, more or less, identity and territorial claim support each other as legitimate sources of value to shape the control over and the access to the resource system. Their identity has been very dynamic in the Indonesian modern history and it still looks for a new form to address both external and internal changes.

Besides the pressure from the government, the TENGGERESE identity is also under the pressure from Hinduism itself. This is because a religious treaty has been signed in order to formalize the Hindu liturgy since the purification mission that was offered by Parisada Hindu Dharma (The organization of Hinduism in Indonesia) in the early 1980s (HEFNER, 1987). Most villages built a temple Pure as a center for the Hindu activities such as religious education for children, reading of the holy book, marriage ceremony, and other activities. Poten (Central temple) which is close to the Bromo volcano is the biggest and the most influential Hindu Pure. At the same time, Bromo is the most sacred area for the TENGGERESE. Although there does not seem to be an open conflict between the TENGGERESE and the Hindu priests, both groups still have different points of view in regard to their religions and customs. Claims which state that the TENGGERESE is identical to the religion of Hinduism have been refused by conservative priests. For instance, the Ngadisari Balinese Hindu liturgy has just been accepted into the formal Hindu prayer and other ceremonial activities in the temples or village houses. Villagers who follow Hinduism totally can be identified through the altar of sacrifice called padmasari which lies in front of their houses.

Two of the biggest influences on the TENGGERESE identity are the Islamic movement since the dark period in 1965 and the modernization carried out by the government - the second one was explained in the previous sub-chapter. Today only seventeen villages are still maintaining the TENGGERESE customs through their priests. And only one village Keduwung can depend on their indigenous customs with minimum changes. Activities of Islamic communities in both the politics and the economy of several villages are dominant

because they have skills and networks with other Islamic communities outside of the upland Bromo. For instance, the Muslim community occupies just 20% of the population in Ngadas village but the village leader and his secretary and other village elites are all Muslims. Additionally, modernization and new life style that are brought by immigrants as well as the massive campaigns through televisions and radios gradually erode the TENGGERESE's own identity. Therefore, the TENGGERESE as an identity is losing its potency as sources of value for its own society. Confidence in the culture is shrinking.

The lack of confidence has serious impact on the territorial claim where increasing areas cannot be called as the TENGGERESE villages anymore. In addition, the mapping process provided by the central government to separate the village territory and the forests decreases their claims to the surrounding resources. PELUSO (1995: 383-384) mentions that the mapping of forest resources is therefore an intrinsically political act: whether the borders are drawn for their protection or production, they are drawings of a nation's strategic space. The local people are losing authority to influence the local consensus in refusing state's claim over resources. That means that the state and the other actors have more opportunity to influence the decision making process in the local political structure. Reclaiming areas through building Padmasari (building for prey) in every border to signal that it is the TENGGERESE territory has no impact on the access to and control over resources. When the majority who has supported the government is losing their power in the reform era, some of the TENGGERESE villages try to revitalize their identity and territories to get more access to and control over resources.

### **5.3. NGOs supporting Traditional and Environmental Movements**

During the reform era, NGOs that previously could not express their ideology to mobilize local cultures and environmental movements have gained momentum to become important in the society. Some of them open political education to the local communities and hold campaigns in regard to the conservation of resources. There are two kinds of NGOs that have activities related to the upland Bromo. These are the religious and cultural movement NGO (CM-NGO) and the political environmental NGO (PE-NGO). The former focuses on the revitalization of the TENGGERESE identity and religions through education, promotion of culture and art, the latter tries to cultivate their critical political point of view, to introduce a simple technology to change agriculture planting system and energy consumption. The latter also aim to promote the values of conservation through public meetings, posters, lectures, and training. Although there are different focuses from the activities and goals, all of the NGOs cultural or conservationist events would contribute in raising awareness of the TENGGERESE identity and their claims on territory.

For instance, CM-NGOs along with the other religious institutions re-map DANYANG or spiritual places where the ancestors were buried. Every DANYANG has a territory that is used by recent TENGGERESE society to give a fixed border to the area of the upland Bromo according to their points of view. The borders signal that these areas are TENGGERESE villages in which customs and laws are based on local perspective rather than national perspective. It also gives more confidence to villagers to save their territory and support local religious activities that have previously waned due to the influence of the other cultures particularly the Islamic culture. At the village level, there are also influences from the village authority to allow non-official laws to restrict the numbers of the Islamic mosques, churches, or other religious buildings if the numbers of followers have not increased. According to the Indonesian laws, villages are autonomous and can create a local consensus to manage their order on condition that they do not act in contrary to the national laws.

In the resource management system, they influence the village legal system by creating an informal law that prohibits the villagers to sell or rent their land to outsiders. In Ngadisari (The highly differentiated area) this law becomes a legal village law (Perdes-Peraturan Desa). Therefore the village authority has power to punish people who sell their land to outsiders even though these outsiders might be relatives. The village authority also asks an amount of 500 Rupiah to be contributed by the land renters every year for the village developmental programs and involves them in social working activities to maintain public

roads. In Wonokitri (The medially differentiated area) that law is just an informal convention among the villagers. Furthermore land renters do not give money for the village developmental programs. They just have responsibilities to clean the roads, conserve the trees in their land and occasionally participate in the village meeting if the themes are related to their farming activities. In Ngadas (The lowly differentiated area), an outsider cannot buy land permanently but is allowed to rent the land. There is no formal law to manage these activities as long as there are no problems between the owners and the renters.

NGOs that focus on the environmental issues influence the decision making process through providing training and practices related to the conservation for the villagers and the village officers. In addition to the provision of training on how to conserve water resources, they also introduce the political dimension of resource management system in which all parties are encouraged to control resources for their own benefits. During the reformation era, whenever there are issues related to the local autonomy in controlling their resources, NGOs always support the local communities. In the past, when the district government introduced modernization of water supply system by privatizing water supply, the organization refused to comply due to several issues related to their beliefs. Today they use political ecology as a reason to refuse some plans from the private company and PERHUTANI in commercializing their water resources even though PERHUTANI has a legal control over the area of the water resources.

## **6. UPLAND BROMO: A CONTESTING TERRAIN**

### **6.1. The Actors and their Interest**

According to the above explanation, we identify five actors who are related directly to the resource management at the local level. The State Forest as a commercial company tries to increase its output by intensifying activities of exploitation in the forest. They log young timbers to supply for the increasing demand in the building sector and industries. They carry out their activities in the traditional area and slope area that have been previously forbidden for timber cultivation. Moreover, marginal forest which is a reserved area (Hutan lindung) has been exploited in order to gain income for the company. In addition, they also rent the forest land for agricultural activities in order to gain more income from the fertile area. All of the respondents told that the kontrak system is just a reason for the company to gain money easily and to get cheap labor for planting trees.

The National Park with the professional forest management system increases protection surrounding their areas by limiting the access of villagers to forest products. They just allow villagers to collect firewood from dry trees, herbs, flowers, and other products in certain areas where tourists never see. The National Park only conserves the area surrounding the tourist routes. They are interested only in gaining benefits from the activities of tourism. They tend to ignore the conservation objectives that have been campaigned by the villagers in the many village meetings. One of the recent programs of the National Park is to invite the Private Forest Company (PFC) to plant commercial trees in the part of the National Park through the Clean Mechanism Development scheme (CDM). This gives more doubt to the villagers because it is relatively different from the role of the National Park which is to conserve the area.

Other interests are also coloring the competition for control over natural resources. These include the activities of the NGOs that are affiliated with the local social institutions and have full support from the international funding. Before the reformation era, some of them hid their real aspirations and focused on supporting technical assistants for the rural developmental program which aims to improve the villagers' skills and knowledge in relation to agriculture and conservation. The process of decentralization has allowed direct election for local leaders such as Governor and Mayor. This allows local NGOs to get involved in the political practices. This in turn has decreased the villagers' trust to them. According to the villagers' point of view, when NGOs are involved in political practices, they would get their voters to get power in the political institutions. As a result, the NGOS has gradually lost their importance when the central government provides the decentralization policy.

The village authority that has control over development, legal enforcement, and social order use resource management issues as a means to develop power in order to create bargaining power with the district government. Power is needed to pressure the district government to combat against poverty, to build infrastructure, to organize education, health and many other programs. At the same time, the village authority needs proof that they still have control over the villagers. Mutual relation between the village authority and the district government becomes a source of power for the village authority to control the villagers' activities that are related to forest resources. Furthermore, the control over villagers is used to create a bargaining position with the National Park and the officers in the forest company. At this point, the village authority plays an important role in the power structure among parties in the resource management system.

The last group of actors that has interest in the resources is the villagers. Cold weather at nights pushes most of the TENGGERESE to continue their traditional practice of making fire all day to keep their buildings warm. According to the surveys carried out in the villages, more than 90% of the upland Bromo still takes firewood as the main source of energy even though natural gas has been introduced by the central government as a substitution. Other forest products such as charcoal, herbs, mushrooms, and flowers also give opportunities for some households to gain extra income. In certain cases, this even becomes the main livelihood for poor households. In order to store food in preparation for the bad season, the poor not only collect their food from the marginal forests but also from some of the harvests which are left behind by their owners. They would also sell potatoes or cabbages to the markets at a minimal price in exchange for cash. The economic crisis in recent years forces the rich farmers to tighten the surveillance of their harvests. Therefore very little is now left over in the crop fields.

## **6.2. The Struggle for Power among Actors**

We divide the above actors into three categories that are states (National Park and Village Governments), companies (PERHUTANI and Private Forest Company), and civil society (NGOs and Households). There are two practices in regard to the exercise of power. These are exercise of power within the group itself and the exercise of power among groups.

Firstly, the exercise of power appears within each group itself as a result of the instability of the laws in addressing the issues of how to manage resources during the decentralization era, how to do right and how to ascertain the responsibilities between the village authority and the BTSNP. For instance, water resources belong to the village but the village authority actually ignores the need to conserve the surrounding. They even protect the people who deviate from the agreement by taking the firewood. The village is the entrance for tourists. As a result, the setting and activities of tourism are always discussed with the village authority. In this way, the village authority has legitimacy to gain benefits from the income of tourism such as car/jeep rental fees, fees from accommodation and outdoor activities.

In the business fields between PERHUTANI and private forest companies, there is no open competition. However each other actually tries to gain resources and sympathy from the village authority and the BTSNP in order to stabilize their business interests in the upland Bromo. The private forest companies, through their agency, have explored the possibilities to create business there for more than 5 years. In the first step they used the social corporate responsibility program (CSR) as a tool to approach the BTSNP, the village governments, and the villagers. They have lobbied the head of the BTSNP to allow the clean mechanism development (CDM) program in approximately 100 hectares of the restricted areas by signing a 50-year contract. This will be extended to other sides of the National Park. The PFC becomes a potential competitor for PERHUTANI because its activities will exploit resources and labor in the same area. The struggle for power between the NGOs and the households at the grass root level is not too flashy and is just associated with the re-interpretation of the conservation efforts that conflict with the culture and their livelihood in some cases. The NGOs usually make use of the religious leaders or the village governments to offer legitimacy to their programs that are not in the interest of the households sometimes. According to our

surveys, the NGOs' activities that are related to the conservation of natural resources through a simple technology are almost not used consistently by the farmers.

Secondly, the struggle for power among groups appears as an impact of their effort to develop an appropriate power to control resources. For instance, the village authority approaches PERHUTANI to allow the villagers to make limited use of the forest resources such as grassing, logging firewood, and collecting other products that can be tolerated by the conservation principles and that do not damage the main trees. They also facilitate the Kontrak program in which the villagers can open forests in certain areas on the conditions of bearing many rights and responsibilities. However this has become a means for PERHUTANI officers to gain cash money from the villagers illegally.

The village authority also pushes the BTSNP to allow the villagers to exploit certain plants such as flowers, *klandingan*, herbs and mushrooms in certain areas for their livelihood. In the sector of tourism, the villagers are allowed by the BTSNP to gain cash money by working as local tour guides, renting cars/jeeps, or selling food and handicrafts. The authority of each village government to control and enforce the laws is used optimally to allow other actors to follow their interests. At the same time they also make use of this power to mobilize villagers. The village authority also influences the NGOs' activities by determining the target groups of the program. The village governments make use of their strategic position to mobilize the villagers to participate in the developmental programs such as social work for public infrastructure by contributing both their money and labor.

In the hierarchy of power, the villagers have a low bargaining position in comparison with the other actors because they have no formal position to gain access to and control over resources. The identity as a TENGGERESE and a village inhabitant is the only reason to gain access to the forest resources legally. Forest officers still allow them to access forests in a limited way. However they often need to obey a common agreement which include the prohibitions in collecting herbs, fresh wood, edelweiss flower, charcoal and animal in the tourist areas and in the National Park. Despite the fact that some of the villagers' activities have a fatal impact on the sustainability of the forests, forest officers tend to give light punishments like planting trees without salary for 2 or 3 weeks.

### **6.3. Village Decision Making Process**

The pre-reformation era in which the village authority and the National Park government representatives had unlimited power to control the civil society, all of the policies related to the resource management were created by the elites of institutions with very limited concerns for the villagers. The NGOs had no access to be involved in the village decision making process. On the other side, the forest companies just took all of the decisions of government for granted. To control resources, they made use of the state organizations such as police and military officers to intimidate people who want to gain access to the forests illegally. Under the "New Order" administration, Suharto constructed a strong, centralized and military-dominated government. Damaging resources during this era was a result from mismanagement and corruption. Whoever had power and relationship with the local and central governments could exploit forest resources even in the most restricted areas. Some villas and hotels that were built in proximity to the borders of the National Park that would have been banded were the empirical proofs of the corruptions and mismanagement of resources.

The fall of the New Order at the same time encourages freedom of speech in accordance with their respective interests. Along with the weakening of the state control on the citizens, illegal logging and forest clearing for agricultural activities occur in areas such as Bromo. Even the village authority does not take decisive action to take control when the central government has weakened. Consequently, recovery is a slow and complex process, as new institutions have to be created, and the old ones are reformed under successive short-lived administrations since the early reform era. The directly elected president with a strong popular mandate is in power. Step by step the new government builds a new system where all resources are deployed to restore state revenue as well as to restore the economic and

social order. The village governments, the BTSNP, and the state and private forest companies begin to gain legitimacy and authority to regulate the use of resources within their authority. On the other hand, the NGOs and the villagers can also provide aspirations in the decision-making at village level which has been prohibited previously.

How does each actor influence the decision making process related to the use of resources at the village level? We will discuss three types of resource use in upland Bromo, namely (1) the access to forest products, (2) the access of the area for tourism, and (3) access to water sources:

Firstly, forest clearing is initiated by the village government because of the pressure from the farmers who do not have adequate land for farming. In fact there are several areas in the forests which technically can be cleared for agricultural cultivation. The plan has received strong opposition from the BTSNP for the reason that the forest areas of the National Parks can also be opened for agriculture in the future. In addition, the BTSNP is also concerned about the security of the protected forests because these forests are cleared in the proximity of the borders of the National Park. After negotiations, the decision is taken that the village authority guarantees that there is no opening in the forest park. Meanwhile, in relation to the utilization of forest products, farmers can only take the dry twigs for firewood, grass for fodder, mushrooms for consumption, and certain interests to be sold as long as they do not exceed the limit.

Secondly, during the New Order period and the beginning of reform era when the tourism was not giving a lot of income for the National Park with few people being involved, there was no special arrangement involving the village administration. The BTSNP coordinates the people involved in tourist activities to order the manners and types of merchandise or services that can be sold in the areas of tourism. This time when many people are involved (370 horse rental, jeep rental 367, 237 motor rental, more than 70 food and craft vendors, 16 hotels, 39 local guides who work both legally and illegally, and more than 28 home stay) in two principal tourist destinations namely Wonokitri and Ngadisari, the BTSNP is forced to encourage the village governments to participate in regulating their activities. The village governments and the National Park have agreed to establish the various associations such as a horse and jeep owners association, traders' associations, motorcycle taxi associations, and associations of tour guides as a way to simplify coordination. At the first establishment of this association, there is some tough opposition as this has the potential to restrict the business activities and reduce their income. The village governments together with the National Parks eventually implement a unilateral policy in which people who are not included in the association is not allowed to engage in the National Park. Through these associations, the village governments and the National Parks get additional revenue from monthly contributions of members.

Thirdly, access to and control of water sources is a persistent issue which always gets serious attention because it involves the lives of many, especially in the mountains where water resources are rare. The first water source is fully controlled by the villagers without external interference even from the central government. Therefore the forest companies and the National Parks as the parties that control the area where the sources of the water are still do not have the right to manage it. It is stated in the informal agreement among the village governments, the villagers, the National Parks, and the forestry companies that outsiders cannot use water for commercial purposes. The village governments are supported by the people in allowing only drainage repair without changing the existing management as that was done by the district government and the international funding.

## **7. CONCLUSION**

In the early stages of the reform era many actors demanded and gained unlimited access to the use of forests. The villagers could gain access to all forest products even timbers for building in the restricted areas that had been previously prohibited. The waning power of the village governments as a result of political turmoil in the central government and increasing awareness of identity and territorial claim among the TENGGERESE leads

villagers and irresponsible people from outside the village to exploit resources excessively both in private forests and state forests. Increasing population pressure and the development of infrastructure in the last 20 years give rise for that action. It took place before there has been a strengthening of power from the new directly elected government since the general election in 2004.

In the mean time this concept has changed to a situation in which access to forest resources is the result of a process of negotiation among stakeholders. Unlimited freedom gradually began to be regulated through inter-party dialogues started at the village level. These conditions have encouraged the actors to discuss on restrictions and sanctions on land use by the households (i.e. limitations on the exploitation of tree species, efficiency of water consumption). The main actors are NGOs, the National Park officials, and the traditional institutions. At the same time the commercialization of the National Park and the state forest company as a new central government policy encourages the forest officers both from PERHUTANI and the BTSNP to intensify their exploitations and limit the access of villagers to the forest. As a result, each actor creates power to increase the bargaining position in the village decision making process to get more control over and access to resources.

We show that public dialogues encourage power sharing among actors in the resource management system. Collectively, they decide the patterns of resource utilization in addressing questions such as what types of forest products can be taken, the area which can be opened for agriculture, what are the economic benefits that can be utilized in the areas of tourism, and how the water resources can be utilized. The villagers supported by the village governments demand better access to the National Parks and the state forestry to maintain their livelihoods. Tourism and forest products are sources of additional income for the villagers. Taking advantages of forest products and tourist activities are part of their adaptations to environmental changes. Although they often excessively exploit the forests that may damage the environment, the punishments provided by the forest officers are often very light and do not provide the deterrent effect. Forestry officials often deliver them to the village heads to be punished in accordance with the local agreements such as planting trees in the forests, social work, or helping forest officials to improve the infrastructure in the forests.



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