

# Kasodo, tourism, and local people perspectives for Tengger Highland Conservation

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The relationship between God, nature and society among Tengger people at Tengger highland, East Java Indonesia is expressed in Kasodo ceremony. From the tourism perspectives, Kasodo is one of the Indonesia's best tourism attractions, and many domestic and international tourists entertained Tenggerese culture and the beautiful landscape of Mt. Bromo - Tengger Caldera (BTC). While Kasodo becomes an important tourism event, there are few studies related to the relationships of the ceremony, tourism and BTC conservation. Most of the scholars attention to Kasodo addressed the socio-religion and anthropological perspectives. The aim of the research is to examine some of the dynamic complex of the Kasodo, tourism, local people and the perspectives of ecosystem conservation to ensure sustainability of Tenggerese community and tourism industry. Semi structured interviews and questionnaires were employed to explore Tenggerese perspectives toward Kasodo, tourism and BTC conservation issues. Our findings show that Kasodo is an important part for Tenggerese to reflect their thankfulness, and it should be conserved to ensure the Tenggerese culture sustainability. The dependency of Tenggerese to BTC was high, mainly for Kasodo ceremony. According to Tenggerese, tourism should be managed to ensure the sacredness of the ceremony than nature conservation issues. However, less attention and participation for BTC conservation among Tenggerese should become the main issues of discussion to draw the conclusion, both for national park authorities and local government. Hence, Kasodo, tourism and nature conservation should be viewed integrally, particularly to the regional planning policy to ensure sustainable society.

Keywords: Kasodo, Tenggerese, Mt. Bromo, Tengger Caldera, highlands conservation

## 1. Introduction

Tourism is a fast growing industry throughout the world, and in Indonesia tourism becomes an important factor for generating foreign earning income. Some studies had conducted to assess economic impact of tourism to local community (Walker et al., 2000; Walpole and Goodwin, 2000), to improve local people roles through participatory planning for tourist development (Timoty, 1999), to assess ecotourism and rural tourism implementation (Wall, 1996; Iswantoro, 1998; Ross and Wall, 1999), and to determine the future of tourism after Indonesia's economic crisis and terrorism issues (Prideaux et al., 2003). Such studies indicate that growing concern for Indonesia tourism among scholars are indications that tourism if well managed will lead nations problems due to the economic raises from foreign earning.

Bromo Tengger Semeru National Park (BTSNP) is the main tourism destination in Indonesia, particularly those tourists who visit East Java. Besides its famous complex ecosystems, tourist enjoys local people (known as Tenggerese) and its culture. Tourism is allowed in some location at national park, known as *intensive uses zone* of national park management system, and tourism practices should be coexistent with conservation program. The tourism policy was drawn at official documents such as "*Long Term management plan for Bromo Tengger Semeru National Park (1995-2020)*", and "*A study for Nature-based Tourism in Bromo Tengger Semeru National Park (2001)*". While there are two Tenggerese villages inside national park, namely Ngadas and Ranupani, such documents lack of policy for local people involvement for tourism development (TNBTS, 2001).

The relationship between people and national park has been studied intensively, and produce several documents for management purposes. Hence, anthropological perspectives shows that local people for a long time in their history has developed interrelationship between human and nature, and frequently it leads a links between sites of religious-traditional values and nature such as sacred mountains for ceremonial purposes. This finding was similar to the other places throughout the world, particularly in Indonesia (Hefner, 1985; Whitten et al., 1996; Stone et al., 1997). Moreover, in tourism perspectives, such conditions lead interesting events which lead tourist enjoy the ceremony, cultural and landscape performance. While tourism growth lead to economic benefits, social and ecological impact has emerged as shown by many authors (Whitten et al., 1996; Erb, 2000; Walker et al., 2000).

The effort to minimize such problems has lead responsible tourism concept development throughout the worlds. The word ecotourism, rural tourism, nature-based tourism and other word, which indicated responsible travel to the wilds, was introduced and practiced. One of the key factors for such implementation is respect to the local culture and involving people and their culture into tourism and conservation strategy (Honey, 1999; The Mountain Institute, 2000, Gunn and Var, 2002). While many studies related to culture preservation, nature conservation and tourism have been done in western countries, less attention has been done in developing country. This paper aimed to examine some of the dynamic complex of the local culture, tourism, local people and the perspectives of local people of Tenggerese in East Java, Indonesia.

## 2. Study site

The area of Tengger highland is part of the Mt. Bromo – Mt. Semeru mountainous regions. The whole area has declared as Bromo Tengger Semeru National Park in 1992. It covers an area of about 50,276 ha mountainous region. The flora of mountainous regions are *Acacia decurens*, *Cyatea* sp., *Dacrycarpus imbricatus*, *Cyperus* spp., *Casuarina junghuhniana*, *Vacinium varingaefolium*, *Albitzia lomphata*, *Anaphalis javanica* and *Anethum graviolens*. A 10 km wide Tengger Caldera exist near Mt. Bromo. Originally, Tengger caldera was a protected area prior to its declaration as a strict nature reserve in 1919 for the purpose of protecting the sand-sea landscape that form the floor of caldera. Five mounts exist at caldera, namely Mt. Bromo (2,392 m), Mt. Batok (2,470 m), Mt. Kursi (2,581 m), Mt. Watangan (2,610 m) and Mt. Widodaren (2,650 m). The vegetation and wildlife of caldera are not yet identified completely. However, *Imperatta cylindrica*, *Polygonum chiaense*, *Styphelia javanica*, *Foeniculum vulgare*, *Cheilanthes tenuifolia*, and some ferns were recorded in the floor of caldera in the southern part (TNBTS, 2001).

Among Tenggerese villages, Cemoro Lawang and Ranupani are the main tourism destinations at Tengger highland. While restaurants, souvenir shops and hotels are found at Cemoro Lawang, tourism facilities and infrastructures at Ranupani was lack. However, recently Ranupani received more attention from local government due to in term of tourism objects was rich than Cemoro Lawang. It was predicted that in the future Ranupani will become favorite tourism destination (Whitten et al, 1999; TNBTS, 2001; GoEJ, 2005; Supriadijo, 2005).

## 3. Methods

Field study was conducted at Cemoro Lawang, Ranupani, and Ngadas villages. Before interviews and questionnaire were applied, previous works such as getting permission, personal approach, and informal communication with Tenggerese has done to ensure the sustainability of studies. It is also used to explore brief ethnographic features of Tenggerese and to arrange location, time and length of interviews.

Questionnaires were employed to explore respondent perspectives toward Kasodo, tourism and Mt. Bromo - Tengger Caldera (BTC) and conservation issues. The interviews and questionnaires were conducted in local language, *Bahasa Jawa*. Ten issues were asked, and it was entirely designed to explore tree objectives of the studies mentioned above. Firstly, Tenggerese attitudes to BTC was explored by asking several questions such as the roles of BTC for their daily life, respondent perspectives to BTC, and their general opinion of BTC ecosystem. Secondly, questions were driven to explore tourism issues by questioning respondent perspectives for tourism development, government policies to promote Kasodo as tourism events, the need of facility improvement, impact of tourism to Kasodo, their perspectives to manage tourism. Finally, the questions of respondent perspectives for BTC conservation were asked. It is comprised of questioning such as the needs of BTC conservation, the roles of government in conservation, and respondent participatory in conservation issues from the perspectives of the respondents.

Intensive studies for tourism development carried on Ranupani Village. This village was chosen due to the government policies leading it to become International Rural Tourism Destination at East Java. In August 2005, a public discussion was

organized by Biology Department, Brawijaya University Malang at Ranupani Village with the special objectives was exploring local community and stakeholders attitude towards tourism development. Local government, national park authorities, and village leaders presented their policies related to tourism development, and it was followed by discussions. Team of Biology Department mediated the discussion, and documented its results. Following discussion findings, intensive interviews were done. Key informant consist of *Dukun* (Tenggerese priest, an informal leader), *Pemangku* (Hindu leader) *Kepala Desa* (formal village chiefs), *Bayan Desa*, *Kepala Dusun*, *Ketua RT* (villages staffs), *Tokoh desa* (community figures), *Karang Taruna* (young generation), and staff of Bromo Tengger Semeru National Park.

## 4. Results

### 4.1. The people of Tengger

The people of Tengger, known as Tenggerese, live at mountainous villages of Tengger highland. Historically, Tenggerese is isolated Javanese Hindu after the rise of Islam in the late of 18<sup>th</sup> century at Java. Tenggerese rich folk beliefs and its lead them to the wise uses of natural resources. Kasodo, which takes place every 270 days, is the main ceremony among Tenggerese in Tengger highland due to its relationship with history of their origins. This ceremony opened with the inauguration of the honored members of Tenggerese society, and followed by classical art performance. At the midnight, inauguration of new priest is performed at the *Poten* (a temple) on the sand sea of Tengger Caldera. The Kasodo consists of a huge ceremony centered on the crater of Mt. Bromo, into which offerings are thrown, and on a temple at the foot of Bromo and Mt. Batok, the neighboring peak. At the time of the Kasodo, it is estimated that an additional 20,000 to 25,000 people enter the park, the majority of whom are domestic tourists (Hefner, 1985; Whitten et al, 1999; TNBTS, 2001; Supribadijo, 2005).

The majority of Tenggerese is highland farmer, where modern farming technology and knowledge is low. Some Tenggerese involved in tourism business by rent of horse, cars, accommodation and offer adventure guiding to Mt. Semeru. Some people operate restaurants and souvenirs shop for tourist needs. The economic of Tenggerese is quite moderate. Length of formal studies are 6 years, it means people has only elementary school education.

Traditional knowledge and practices related to agriculture have been applied for along time, and several traditional ceremonies are performed as a part of agricultural system. However, in the late 1970's and early 1980's, new technology has been adopted among Tenggerese and replaces traditional knowledge. Farmer uses pesticide and fertilizer to improve agricultural products. Recently, only old people practices traditional knowledge in agriculture practices. The main agriculture product is cabbage (*Brassica oleraceae*), potato (*Solanum tuberosum*), corn (*Zea mays*), onions (*Allium porrum* and *A. sativum*).

The interactions between Tenggerese and natural resources at BTSNP are seem co-existent. Tenggerese believe that natural resources should be managed carefully to omit Mt. Semeru and Mt. Bromo eruptions as they believe there are symbols of God angry due to disturbance. Their contributions to reduce forest fire at BTSNP is

significant, particularly in dry season, where fire potentially destroy forest and its natural resources.

#### **4.2. Tenggerese perspective to BTC**

The main role of BTC in the Tenggerese daily life is mainly as a spiritual site (60%), site to generate economic income through tourism (35%), and others (5%). The perspectives of Tenggerese to the BTC shows that Tenggerese dependency was high. BTC has considered as very important as a sacred site (75%), sacred (20%), and non sacred site (5%). It is indicated that Tenggerese appreciation to BTC was high, particularly BTC as Kasodo site. They state that, recently, landscape BTC are very good (10%), no changes (75%), decrease (15%). It is indicated that, at least there are no changes of the landscape.

During the meeting, authors noted that the whole ecosystem of Bromo Tengger Semeru plays an important role for Tenggerese community, particularly Bromo and Tengger Caldera as center of Kasodo ceremony. There are no significant changes related Bromo and Tengger Caldera ecosystems in the perspectives of Tenggerese. However, qualitative perspective among respondents show that some species were fluctuate (Table 1).

#### **4.3. Tenggerese perspectives to tourism development**

All of the respondents have positive perspectives for tourism development. About 85% strongly agree, and 15% agree if tourism will be developed. According to respondents, government effort to promote Kasodo as tourism events are good (70%), fair (20%), and need improvements (10%). However, mostly respondents stated that government initiative to introduce tourism development policy was less (70%), fair (15%) and good (15%). Tenggerese stated that physical building development is really needed to develop and improve (90%), and about 10% is not agree. Furthermore, the impact of visitor to the Kasodo varies. People stated that visitor should be strictly limited (60%), not limited (30%), and neutral (10%). Mostly respondents stated that visitors should be managed (70%), not managed (20%), and neutral (10%).

During intensive discussions at Ranupani village, authors note that Tenggerese has positive perspective towards tourism development. Interestingly, they stated that Kasodo should be promoted as tourism icon to generate a lot of tourists going to Tengger. Special reason are: (1) Kasodo is the key word for Bromo and Tengger, and become tourism icon (as *Dukun* stated), (2) Kasodo has been famous before landscape of BTNSP was known (as *Kepala Desa* stated), (3) Kasodo events lead more tourists to come to Tengger (as *Karang taruna* stated)

Several suggestions for tourism development in the perspective of local community are: (1) improving environmental quality, (2) improving human resources, (3) improving system and management of tourist, particularly during Kasodo ceremony, (4) improving attention to local culture, (5) improving local people involvement in planning.

#### 4.4. Tenggerese perspective for BTC conservation

Tenggerese stated that BTC should be conserved for spiritual purpose (90%), and biodiversity conservation (10%). Respondents stated that environmental impact of visitors after Kasodo has no environmental impact (90%) and have environmental impact (10%). Among 10% respondents, they stated that wastes, and vegetation disturbance were the dominant environmental impact after Kasodo ceremony. The role of government in conservation effort was good (30%), fair (50%), and less (20%). Respondents participatory for conservation were good (30%), fair (10%) and less (60%).

Through the intensive discussion, mostly key person stated that government attention to conserve BTC was low. However, they stated that the role of national park authorities to conserve BTC was high, particularly to reduce forest fire, illegal harvesting, vandalism by tourists, and habitat disturbances. Less of Tenggerese participation to the BTC conservation was affected by lack of knowledge and information as they believe nature would not be changes, except there are natural disasters. In addition to that, they argued that conservation education was low.

Few key informants argues that BTC conservation was needed due to besides ceremonial purpose, a *Tirta Suci* (Holly water, a part of ceremony) which taken from cave of Mt. Widodaren, a part of BTC ecosystem.

### 5. Discussion

Our findings show that links between local people and nature was closely related, particularly nature as sites of religious-traditional values. Tenggerese attitudes to the Mt. Bromo and Tengger Caldera (BTC) were evidence of such relationships, and it leads community appreciations to the nature. Many scholars argues that according to Javanese perspectives, mountain and its surrounding forest are home and territory of the Gods, which should be undisturbed and omitted by human. This attitude evolves from years of people experiences, observations and perceptions, as shown in Kasodo. However, the recent use of BTC was not merely for religious purpose. Tourism grows among destination of BTSNP and lead BTC to become famous tourism destination. While respondents argue that there are no landscape changes, impact of tourism was numerous such as species extinction (Table 1), alien species existence, waste abundance and forest fire accidents. While Edelweiss (*A. javanica*) become extinct due to illegal harvesting by visitors, many alien plants species (particularly plants which has ornamental function) was introduced to improve landscape performance and home garden as a aesthetics factor of destination. This findings suggest that, recent uses of BTC is not merely to meet site of religious needs, but also site for leisure needs through tourism. The integral planning for tourism was needed, particularly to reduce conflicts between local culture preservation, environmental conservation and economic growth through tourism in BTC. Moreover, the planning should be drawn to ensure local people and its environment sustainability.

There are, however, several limitations for the tourism development in BTC as discussed below.

First, the concept of tourism in protected area is not yet understood integrally. It is shown by the lack of tourism planning introduction to the community, and the needs

of establishing new physical tourism facilities within BTC that potentially lead to ecosystem disturbance. Tourism planning within national park seems to have a lack of habitat assessment and monitoring, and our previous study in Alas Purwo National Park suggests that ecological assessment is needed to meet destination competitiveness (Hakim et al 2005). Moreover, the planning of tourism development should be taken carefully because it frequently affects social changes (Gunn and Var, 2002; Walker et al. 2000).

Second, the involvement of local people in tourism development and natural resources uses seem less and potentially it will lead local people to less participation toward development programs. While local people attention and involvement in tourism planning and development in developing country is still less and need improvements (Timoty, 1999), people who has close relationship with nature as shown by Tenggerese shows different perspectives. Hence, participation that triggered by religious spirits interest seems important to promote, and it may become the key issues for nature conservation and tourism development.

Third, while natural resources were potentially contributed to tourism growth in BTC, tourism based-culture (Kasodo) was believed as the main icon for tourism growth, particularly among Tenggerese. Hence, the introduction of nature-based tourism among community should be promoted, with the aims: (1) diversifying tourism objects and destinations, (2) improving economics benefits, (3) promoting biodiversity, and (4) triggering environmental conservation. The initiatives for promoting nature-based tourism should be designed to contribute substantially to those area's conservation and enhancement of local people benefits from sustainable uses of natural resources. Furthermore, local people should be aware that many brochures and website are promoting their ecosystem beauty internationally, and now is the time to give more attention to BTC for human welfare.

Fourth, a regulation related to visitor number should be implemented. It is not merely for religious purposes, but the other important thing is to ensure ecosystem sustainability. Hence, the concept of carrying capacity of national park induced by visitor should be drawn and implemented strictly. The issues of carrying capacity to tourism destination has been discussed in western (Simon, 2004), but less attention among developing countries. This may reveal reactions of the local people and tourist against such regulation in their locality that has been induced. In this regard, carrying capacity should be drawn not merely based on environmental perspectives, but social perspectives should also be involved in its concept. By taking local people into decision making process, it may minimize emerging conflicts between development and nature conservation

The overall result of this study suggest that nature, whether as site of religious or tourist destination, is the complex system which need attention integrally. The integrity of the ecosystem will not merely improve human satisfaction in religious-traditional practices, but will also contribute to the human satisfaction through traveling to nature. It means, among the religious-traditional practices, tourism and nature conservation should be coexistent to achieve sustainable community in the world.

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## **Reference**

- Erb, M. 2000. Understanding tourist: interpretation from Indonesia. *Annals of Tourism Research* 27 (3):709-736.
- GoEJ.. 2005. Government of East Java: Annual Report of East Java Tourism. Office of Culture and Tourism of East Java. Surabaya.
- Gunn, C.A and T. Var. 2002. *Tourism Planning: Basic, Concepts and Cases*. Fourth edition. Roudledge.
- Hakim, L., A.S. Leksono., D. Purwaningtyas, N. Nakagoshi. 2005. Invasive plant species and the competitiveness of wildlife tourism destination; A case of Sadengan Feeding Area at Alas Purwo National Park. *J. of International Development and Cooperation* 12 (1): 35-45.
- Hefner, R.W. (1985) *Hindu Javanese: Tengger Tradition and Islam*, Princeton New Jersey: Princeton University Press
- Honey, M. 1999. *Ecotourism and sustainable development: Who Owns Paradise?* Island Press.
- Iswantoro, S. 1998. Rural tourism: the impact on rural communities in Indonesia. Paper presented at FFTC International Seminar on Rural Tourism, Korean Academy of Tourism and Agriculture. Choonchun, Korea.
- Prideaux, B. E. Laws and B. Faulkner. 2003. Events in Indonesia: exploring the limits to formal tourism trends forecasting methods in complex crisis situation. *Tourism Management* 24: 474-487.
- Ross, S and G. Wall.1999. Evaluating ecotourism: The case of North Sulawesi, Indonesia. *Tourism Management*. 20 (6): 673-682
- Simon, F.J.G., Y. Naranganjavana, D.P. Marques. 2004. Carrying capacity in the tourism industry: A case study of Hengisbury Head. *Tourism Management* 25: 275-283.
- Supriadijo, D. 2005. Potency and Strategy for Ranupani Village Development, Lumajang, East Java. Paper presented at Ranupani Special Meeting, August 2005. Ranupani, Lumajang, East Java.
- Stone, D., A. Compost, M. Aw and M. Severns. 1997. *Biodiversity of Indonesia: Tanah Air (Indonesian Heritage)*. Butterworth-Heineman.
- Timoty, D.J. 1999. Participatory planning: A view of tourism in Indonesia. *Annals of Tourism Research*. 26 (2): 371-391
- TNBTS. 2001. *A study for Nature-based Tourism in Bromo Tengger Semeru National Park. Book one: data and analysis*. Directorate General for Forest Protection and Nature Conservation, Bromo Tengger Semeru National Park, Malang.
- The Mountain Institute. 2000. *Community-based Tourism for Conservation and Development: A resource Kit*, The Mountain Institute.



- Walker, J.L., B. Mitchel and S. Wismer. 2000. Impact during project anticipation in Molas, Indonesia: Implication for social impact assessment. *Environmental Impact Assessment Review*. 20 (5): 513-535.
- Wall, G. 1996. Perspectives on tourism in selected Balinese village. *Annals of Tourism Research*. 23 (1): 123-137
- Walpole, M.J and H.J. Goodwin. 2000. Local economic impact of dragon tourism in Indonesia. *Annals of Tourism Research*. 27 (3): 559-576
- Whitten, T., R.E. Soeriaatmadja and S.A. Afiff. 1996. *The Ecology of Indonesia Series Volume II: The Ecology of Java and Bali*. Periplus Ltd. Singapore.

Table 1. Plants species status at Tengger Caldera according to respondents during field work at caldera. Notes: Decr. is decrease, Incr is increase, stab is stable and Ext. is extinct.

No	Scientific name	Local name	Community status			
			Decr.	Incr.	Stab.	Ext.
1	<i>Imperata cylindrica</i>	Alang-alang		*		
2	<i>Cyatea</i> sp	Paku tiang	*			
3	<i>Casuarina junghuhniana</i>	Cemara gunung	*			
4	<i>Anaphalis viscida</i>	Senduro			*	
5	<i>A. javanica</i>	Edelweiss				*
6	<i>Nephrolepis hirsuta</i>	Paku-pakuan		*		
7	<i>Pteris</i> sp	Paku-pakuan		*		
8	<i>Cheilanthes tenuifolia</i>	Paku-pakuan				
9	<i>Foeniculum vulgare</i>	Adas		*		
10	<i>Vacciniun varingifolium</i>	Mentigi			*	
11	<i>Acacia decurens</i>	Akasia	*			
12	<i>Penisetum purpureum</i>	Rumput Gajah			*	
13	<i>Polygonum chiaense</i>	Rumput			*	
14	<i>P. plebeium</i>	Rumput			*	
15	<i>Stypelia javanica</i>	-			*	
16	<i>Deyeuxia</i> sp	-			*	
17	<i>Pennisetum</i> sp	-	*			
18	<i>Ageratum</i> sp	Wedusan	*			
19	<i>Erica</i> sp	Anting-anting			*	
20	<i>Cyperus</i> spp	Rumput			*	
21	<i>Rhododendron retusum</i>	Rhododendron			*	

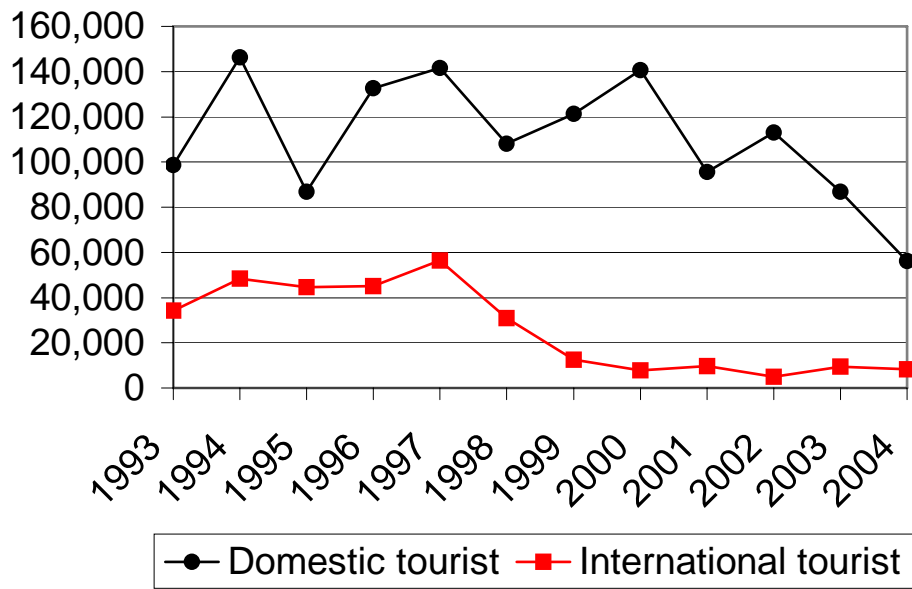


Figure 1. Domestic and international tourists arrivals at Bromo Tengger Semeru from 1993 to 2004

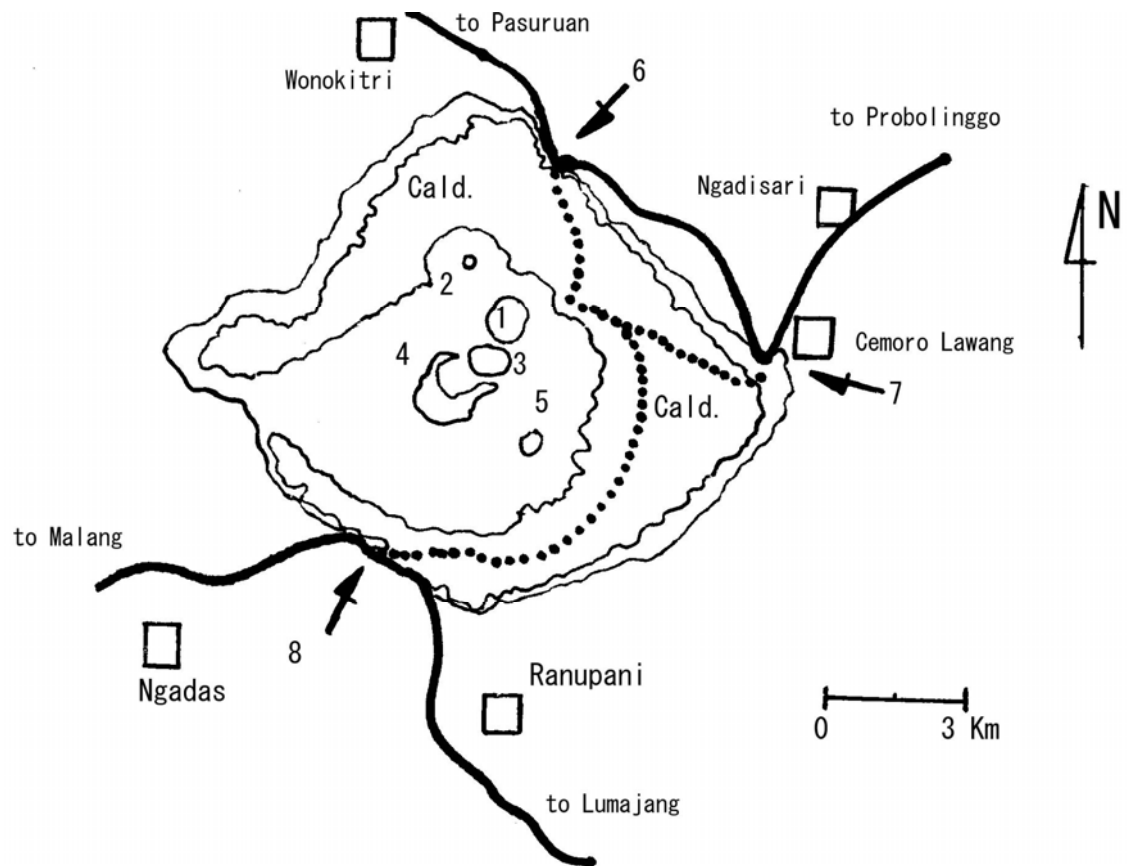


Figure 2. Map of Tengger caldera and the access road to Mt. Bromo. No 1 is Mt. Bromo (2,392 m), 2 is Mt. Batok (2,470 m), 3 is Mt. Kursi (2,581 m), 4 is Mt. Widodaren (2,650 m), and 5 is Mt. Watangan (2,610 m). There are three gates to Mt. Bromo: Penanjakan (6), Cemoro Lawang (7) and Jemplang (8). The dot lines indicate the route from such gates to reach Mt. Bromo through Tengger Caldera (Cald.). The bold lines are roads from Pasuruan, Probolinggo, Lumajang and Malang to Mt. Bromo.