Ecotourism, Conservation and Sustainability: A Case Study of Bromo Tengger Semeru National Park, Indonesia

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by

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Abstract

The relationship between tourism and conservation was investigated in the Indonesian national park of Bromo Tengger Semeru, in East Java. Beforehand, the salient features and contradictions of sustainability, tourism and protected areas management were examined. It was found that some development strategies failed to achieve the desired outcomes through incompatibility with the socio-cultural circumstances where they were applied, particularly in the case of biodiversity conservation through protected areas establishment. More recent strategies were seen to take the realities of context into account.

Aspects of the Indonesian socio-political context relevant to natural resource management and tourism were researched, and local aspects of resource utilisation at Bromo Tengger Semeru were investigated. The tripartite relationship between the local people (the Tenggerese), the tourists, and the national park was studied. The Tenggerese are farmers who relied on the national park for fuelwood and were heavily involved in providing tourism services in certain places. They maintained a strong position in tourism by retaining ownership of basic elements of the product and by demonstrating a high degree of reflexivity in reacting to available opportunities. The quality of local leadership was significant in whether social and economic initiatives were taken. Tourism-induced prosperity seemed to be reducing reliance on fuelwood by fostering a switch to convenience fuels, but only where tourism levels were substantial.

A majority of tourists (70%) were domestic visitors, while the remainder were mainly East Asians and Northerners. There was little awareness amongst park administrators of the needs of different groups, and the regulatory framework designed to protect the park was not enforced. Revenues earned from the park had not resulted in improved park protection. Underlying the weak protection measures was a low level of conservation consciousness amongst the Indonesian population.

Although tourism was currently successful in terms of attracting large numbers of people, and it was fostering some social and economic development amongst the Tenggerese, the conservation benefits for the national park were very limited, and it seemed unlikely that tourism here could be judged to be truly sustainable.
Acknowledgements

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List of Abbreviations

ADB  Asian Development Bank
AITO  Association of Independent Tour Operators
DfID  Department for International Development
FAO  Food & Agriculture Organization
GEF  Global Environmental Facility
ICDP  Integrated Conservation and Development Project
IIED  International Institute for Environment and Development
IPAS  Integrated Protected Areas System
IUCN  International Union for the Conservation of Nature and Natural Resources
LKMD  Lembaga Ketahanan Masyarakat Desa (Village Stability Council)
LMD  Lembaga Musyawarah Desa (Village Consultative Council)
NAD  Nanggroe Aceh Darussalam
PHPA  Direktorat Jendral Perlindungan Hutan dan Pelestarian Alam (Directorate General of Forest Protection and Nature Conservation)
PPP  Participatory Process Projects
PPT  Pro-Poor Tourism
PT  Perseroan Terbatas (Limited Company)
PTD  Participatory Technology Development
SL  Sustainable Livelihoods
TALC  Tourist Area Life-Cycle
UNCED  United Nations Conference on Environment and Development
USAID  United States Agency for International Development
VSO  Voluntary Service Overseas
WCED  World Commission on Environment and Development
WCMC  World Conservation Monitoring Centre
WCS  World Conservation Strategy
WSSD  World Summit for Sustainable Development
WTO  World Tourism Organization
WWF  Worldwide Fund for Nature
General Introduction

Sustainability is now an integral part of the thoughts and actions of many people, from individual householders to government policy-makers. Twenty-five years ago, however, hardly anyone was aware of the concept: the dominant development paradigm was progress measured by quantifiable growth targets and achieved by whatever means were available, according to political preference. Economic expansion was considered the only way to reduce poverty and achieve ‘progress’. Yet at the same time, increasingly strident calls were being made that the world’s resources were finite, and also that plants and animals were becoming extinct because of anthropogenic pressures such as hunting and habitat loss. Huge efforts have since been expended on finding ways of reconciling the needs of humans and the natural world. Some of this effort has focussed on setting aside tracts of land where the natural processes of plant and animal interaction can take place unfettered by human interference.

Of course, neither the desire to improve people’s lives nor the protection of the natural world sprang from nowhere: they arose from a historical well of consciousness, of attitudes shaped over centuries by cultural, scientific and religious influences. And as with most fields of human endeavour, it is unlikely that a ‘right’ and definitive way of achieving either development or nature conservation can be found. Approaches to both are continually evolving as ever-greater complexities of social, cultural, environmental and ecological interactions are discovered.

These changing approaches have not been simply a matter of objective, empirical judgement; they have been informed by political and cultural stances. However, when strategies for human welfare or biodiversity conservation are applied in practice, the outcome may be very different to the intention. This is partly because of poor awareness of context by policy-makers, with proposals inadequately tempered by acknowledgement of obstacles. It is much easier to produce proposals than to implement them: at its worst, planning can become a sort of fantasy game, where targets are unerringly achieved through deploying certain levers or agents. On the other hand, realistic planning which
takes into account the complications of human opinions and capabilities and ecological processes is much harder. While one reason for this is a poor appreciation of context, another is the lack of information on how change actually happens in practice; because of this, assumptions are often made which rely on norms shared by the planners, but not by the intended beneficiaries.

An awareness of these shortcomings is not particularly revolutionary, and more recent approaches to development tend to be more strongly contextualised; yet in certain fields there are still few studies which delineate this context, and two of these fields are tourism and biodiversity conservation. Over the last three or four decades, tourism has expanded into one of the world’s largest industries, and because it is highly visible, superficially easy to understand and, at least in its early stages, may cause few negative impacts, it has been used as a tool to engineer development on national and regional scales and, in protected areas, as a way of combining the aims of development and conservation. In conservation, meanwhile, some stark examples of incompatibility between policy-making and implementation have emerged because the importance of preserving biodiversity, which seems self-evident to Northern societies, is less obvious to people whose daily livelihood depends on immediate use of the natural resources around them.

It was the combination of tourism and conservation which first caught my attention in the early 1980s, during work with VSO in Indonesia for a local conservation organisation. Accompanying groups of foreign tourists to Indonesian national parks revealed a huge and under-used national asset: even in densely-populated Java, away from the cities and intensively-farmed agricultural areas, there were still large tracts of forest and uplands where remnant populations of much of the native fauna and flora survived. In other parts of the archipelago, of course, there are even larger areas where Indonesia’s extraordinarily rich and diverse complement of plants and animals still lives. Many of these areas are officially protected as national parks, nature reserves and the like, but for justifiable reasons the Indonesian government has prioritised social and
economic development over the preservation of natural resources which may or may not have a long-term economic benefit. This means that there are very real threats to national parks and biodiversity; and tourism has been seen as one of the ways in which pressure on them might be alleviated.

After completing a Masters of Science degree in tourism studies in 1985-86 (during which the potential for wildlife tourism in Indonesia was investigated) I returned to Indonesia on several occasions as a nature tourism consultant, working for various aid agencies, to try and put into practice support for conservation through tourism. During this work, it became apparent that, as with the development planning process mentioned above, there were many discrepancies between the theory and practice of achieving conservation through income-generating schemes. One of the reasons for this was insufficient understanding of tourism within some development agencies, in particular the dynamics of nature tourism in a national park in a developing country. There were few studies which shed any light on this subject, and as a result, impossible objectives were being set. This was really the inspiration for this thesis, since it was hoped that by looking in detail at tourism in a national park in Indonesia it might be possible to clarify whether tourism is actually beneficial to conservation, and if so, by what means. I therefore decided to return to Indonesia in a research capacity to investigate the mechanism of tourism in a protected area, and for reasons which will be explained later on, chose the national park of Bromo Tengger Semeru, in East Java, as the location for the study.

The work which follows is structured according to the main aspects researched. As a background to the investigation, major relevant policies of post-war economic development and the emergence of sustainability will be outlined. The principal characteristics and forces of tourism will then be examined, along with attempts to make tourism more sustainable. The third chapter will look at the history of protected areas management, including the incompatibility between approaches developed in the North and applied in the South and recent attempts at overcoming this. Throughout these
chapters, a framework for the study in Java will be created through discussion of the socio-political and cultural environment here.

After this, the rationale of the case study and methodology used will be explained: briefly, the research was carried out within a social science paradigm of qualitative evaluation of the actions and motivations of the principal actors in tourism in Bromo Tengger Semeru. The following three chapters will describe the manifestation of tourism in the national park, the livelihood strategies of the Tenggerese, and the impacts of tourism on the protected area. The findings of the field study will then be related to the central research questions. Finally, some conclusions will be attempted which, it is hoped, might have some relevance to the techniques of achieving sustainable tourism in protected areas.

Throughout the thesis, important conceptual advances in development, tourism and protected areas management will be discussed and applied to examples from Indonesia and other countries, while the findings of the field-work will be analysed in terms of these advances. Since the impetus for the study arose from a first-hand and highly practical appreciation of the challenges to development and biodiversity conservation, a pragmatic awareness will also be applied to the conclusions reached. It is believed that a more sustainable form of development is only likely to be achieved when the broader, conceptual approach is cross-fertilised with empirical knowledge of the specifics of daily interactions between humans and the environment.
Chapter 1 - Towards Sustainability

The process of development has given rise to a wide-ranging debate over the management of the world's economic resources which increasingly includes consideration of its environmental ones too. It is now well understood that the economic system and the environment are interdependent, and approaches to development have evolved accordingly. The focus of this thesis is to examine one aspect of the interface between the economy and environmental resources as shown by tourism in a national park in Indonesia. A background understanding of economic development, tourism, conservation and the culture and society of Indonesia is essential to this, since the interface between tourism and the management of protected areas will be examined within the framework of development strategies and will be contextualised within the culture of Indonesia.

Accordingly, this chapter will show how development policies have evolved from a focus on what Sage calls the "horizontal expansion of economic growth and rising levels of material consumption" (Sage, 1996:179) in earlier post-war decades to strategies which encompass a broader range of societal and environmental aims, including the fulfilment of basic human needs, respect for local cultural traditions, the right to self-determination in decisions over resource use, and the prudent long-term management of the Earth's natural assets – in other words treating development as a concept "which incorporates ideas of improvement and progress and includes cultural and social as well as economic dimensions" (Blowers and Glasbergen, 1995:167). Because many of the aims of development, according to this definition, are qualitative and subjective, they lend themselves more readily to a social science analysis than to the statistical analyses which prevailed in more traditional assessments of development, when economic growth and material consumption were measured. The fact that some of the aims of development turn out to be conflicting will also be approached from a social science perspective.

The first part of this chapter will outline the major trends in approaches to development since the mid-20th century, illustrated with examples from Indonesia. It will
be seen that the post-war, rationalist approach to development planning prescribed by neoclassical economics is giving way to an awareness of the need to adjust plans more closely to local circumstances and societal aims and to address distributional issues between North and South, partly by ensuring that the people whose lives are affected by development planning have a greater say in decisions over resource utilisation. The emergence of sustainability as a guiding theme to economic development will be traced, and recent strategies aimed at integrating economic and social development such as the sustainable livelihoods approach will be discussed. Again, since Indonesia is the setting for the case study which follows, examples from here will be used in order to establish a framework for the later chapters, while illustrations from other countries will also be brought in.

Major Trends in Post-war Economic Development

After the Second World War the two principal doctrines of economic development applied in Northern, industrialised countries were the neoclassical and the Marxist. We will concern ourselves here only with the former, since this approach has been applied in Indonesia for much of the post-Independence period.

Neoclassical economics was based on Adam Smith's 18th century concept of the free market, in other words that the interplay between supply and demand would provide social and economic benefits, while at the same time organising the prudent management of environmental resources through availability or scarcity (Stalker, 1984; Jacobs, 1991). In planning terms, neoclassical thought became a rationalist dogma according to which the careful implementation of well-thought-out plans would inevitably bring about the desired results (Rondinelli, 1983) which could be easily quantified: for example, an increase in the standard of living could be measured in terms of GDP and social indicators such as infant mortality, longevity, and literacy. It was believed that the most efficient way to promote growth was to create urban industrialised centres from which economic activity would gradually spread out (Schuurman, 1993; Tellegen, 1996), with social benefits such as better health and education growing naturally from this increased
economic activity. Another feature of this approach was its centralisation of policy-making and implementation, which was attractive to politicians because it was easily understood and made development planning appear coherent and well-coordinated (Rohdewohld, 1995). For newly-independent countries with a shortage of human resources, it also had the advantage of allowing plans to be made by a relatively small number of people in a central location, leaving administration to be carried out according to the plans in outlying regions.

It was these features which made it attractive to Indonesia's policy-makers from the late 1960s onwards. Indonesia had won its independence from the Netherlands in 1945, becoming a legally independent state in 1950 (Reid, 1986), but for the first two decades of independence it was led by the charismatic first president, Sukarno, who had abundant demagogic skills but lacked political and economic shrewdness; from 1950 to 1965 the emphasis on "ideologically inspired rather than economically meaningful policies" (Hardjono, 1983:48) resulted in economic chaos (Ricklefs, 1981). By 1965 inflation was running at over 500 per cent per annum (Ricklefs, 1981), and after what may have been an attempted Communist coup, up to half a million people were killed in violent civil strife during 1965-66 (Southwood and Flanagan, 1983). From the chaos emerged a new leader, the hitherto unknown General Suharto, who remained head of what was termed the New Order (Orde Baru) government until 1998.

Suharto's concern after consolidating his position was to create economic prosperity and social and political stability. In economic matters, he relied on economists trained in neoclassical principles in the US and other Northern countries, and they gradually liberalised the economy, reducing state subsidies and encouraging foreign investment. A system of five year plans was introduced from 1969 and policy-making and implementation were centralised. This was attractive for the reasons given above and because it helped the new and still insecure Suharto government to confirm the seat of power in the centre and discourage any tendency to fragmentation due to ethnic or historical tensions (van den Ham and van Naerssen, 1990). Suharto and the majority of his advisors and cohorts were
Javanese, and the centralisation of decision-making advocated by neoclassical policies coincided neatly with the traditional Javanese world-view, whereby the leader holds supreme power and the needs and wishes of individuals are subordinate to the overall stability and prosperity of the nation (Mulder, 1996; Rohdewohld, 1995; Schwarz, 1994; Vatikiotis, 1993). Kenji (1988) points out that there is a strong spiritual element to this, in that the power of a leader rests on his ability to make wise decisions.

Under this leader-orientated system, decisions were made by people at the apexes of different parts of the hierarchy, with the President at the very summit, Governors at the head of each province, and other government appointees as leaders of smaller administrative divisions.\(^1\) People in positions of power were reluctant to share decision-making powers (Timothy and Tosun, 2003), and decisions were invariably accepted without question by those lower down in the hierarchy, both because of the respect accorded to leaders and because of an emphasis on consensus and calmness (Geertz, 1960; Mulder, 1996). Anything which might lead to disharmony - such as criticism of government policy - was suppressed. This, in turn, gave rise to unwillingness on the part of Indonesian civil servants to take initiatives in case they ran counter to the wishes of their superiors, since differences of opinion might be interpreted as rebellion or an insult (which might have harmful effects on their career). The system also fostered the political passivity of most of the population (Hardjono, 1983). These traits of social and political interaction have an influence on the creation and implementation of sustainability policies and on tourism and conservation in Indonesia, as will be seen below.

While consensus and harmony may have been accepted by much of the population, the obverse to social and political stability was the repression of dissenting voices (Southwood and Flanagan, 1983; Dharsono, 1986) and a standardisation of cultural norms. The Indonesian national motto is 'Unity in Diversity', and to try and unite the diverse islands and ethnic groups of the archipelago an overarching framework of bureaucracy and development policies was imposed. These policies were sometimes carried out with

\(^1\) A table showing Indonesian administrative divisions is shown in Chapter 4.
ruthlessness but even so were, at least until the 1980s, broadly supported by the majority of
the population (Wild, 1988): the shock of the civil strife of 1965-66 had been so great that
there was widespread acceptance of the suppression of freedom of speech if this would help
prevent a recurrence of chaos. This is important for the discussion in this thesis in three
ways. First, the position of marginalised, non-Muslim communities such as the Tenggerese
amongst whom the field research was carried out was affected by the drive for
standardisation of cultural norms; secondly, the drive for cultural standardisation has helped
shape the tourism industry in Indonesia; and thirdly, the lack of democracy was one reason
for the environmental abuses which occurred during the Suharto period. These points will be
discussed below and in later chapters.

Returning to the hierarchical structures of bureaucracy and decision-making in
Indonesia, these meant that the rather disparaging appellation of ‘top-down’ policies used
for the neoclassical approach was fully justified here. Although the dictatorial style of
policy-making was a major reason for later dissatisfaction with the perceived imbalance
between revenue-generation in the regions through natural resource exploitation and the
distribution of benefits (Schlentrick and Ng, 1994; Booth, 2001), at the end of the 1970s
the neoclassical policies seemed to be working well. Oil price rises in the 1970s meant that
"virtually overnight, the country's balance of payments crisis was at an end and the
government had access to what must have seemed almost unlimited funds” (Rigg, 1991).

In 1982, however, the price of oil dropped, and as foreign exchange earnings fell and
the balance of payments moved into deficit, the Indonesian government had swiftly to re-
think its reliance on revenues from oil and gas, which by then contributed 70 per cent of
export earnings (The Economist, 1987; Rigg, 1991; Schwarz, 1994). Economic policy-
makers turned from import-substitution to export-oriented growth, and reduced government
intervention in the economy. This was in line with the shift in international (or at least
Northern) thinking on economic policy towards the increased market orientation of
neoliberal economics. Economic restructuring was carried out under pressure from
organisations such as the International Monetary Fund and the World Bank, and one of the
new export industries encouraged by such structural adjustment programmes was tourism (Brohman, 1996). This is one reason why the 1980s saw a considerable expansion in international tourism to Indonesia (and other developing countries): this will be discussed further in Chapter 2.

By the mid-1980s, when strong oil prices were no longer obscuring the shortcomings of the economic strategies used, it was apparent that however coherent neoclassical and neoliberal policies seemed in theory, in Indonesia they were affected by corruption and mismanagement (Ricklefs, 1981; Soesastro, 1996; Wong, 1993). It was obvious (in other countries as well as in Indonesia) that macro-economic planning was failing to resolve the inequitable distribution of the costs and benefits of development, as Rondinelli (1983), Redclift (1984), Trainer (1989) and others pointed out. Several reasons were identified for this. Principally, as Lea and Chaudhri (1983) and Schuurman (1993) comment, neoclassical strategies were designed for the economic and social conditions of industrialised countries and were almost certain to run into difficulties in the very different circumstances of countries which had not experienced the industrialisation process Europe and North America had been through. This was especially true if, as was often the case, physical planning was emphasised at the expense of economic and social relations (Simon, 1990). As former President of Niger, Seyni Kountché, put it: "extrapolations from the experience of other countries, or direct transplants, are often seized on because they seem to provide easy answers. In either case, an essential factor is neglected: the traditions and customs ... on which we have forged our civilisation" (Timberlake, 1985). In other words, the social science aspects of human society with its political and cultural constraints and conflicts of interest were ignored, with – in hindsight – predictable results, in that the policies failed to bring about the planned results in the longer term.

Despite this growing awareness, which resulted in a shift towards participatory methods of development (discussed in the next section), the now standard neoliberal tools of economic manipulation continued to be applied in Indonesia (and elsewhere) with, in
the short term at least, considerable success. By 1990, Indonesia was again winning plaudits for its economic performance (Schwarz, 1990; Vatikiotis, 1990), but by the middle of the 1990s questions were being raised about the sustainability of growth, partly because of doubts about President Suharto's continuing ability to lead the country (Saragosa, 1994). Particular concern was expressed about the continued lack of transparency and inadequate legal framework of the business world and because of expensive experiments with the Indonesian economy carried out by members of the President's family and others close to him. In 1996 widespread political and social unrest in reaction to the failure of the benefits of economic reforms to 'trickle down' (Schlentrick and Ng, 1994) began to make the Indonesian economy look vulnerable and was sufficiently newsworthy to make the non-Asian world take notice (Business Week, 1996; The Economist, 1996). Growing unrest led to the fall of the Suharto regime in May 1998 and to greater moves towards democracy, with attendant freedom of speech and devolution of responsibilities towards a more local level. These developments will be examined below, while the wider global movement towards a less 'top down' planning paradigm will first be discussed.

The Move Towards Participation

The realisation that top-down strategies were failing to deliver the benefits of economic growth coincided with a growing belief in some quarters that these benefits were themselves questionable, that people's needs were being manipulated to serve the economy rather than vice versa, and that resources were being unfairly allocated (Mishan, 1967 and 1993). The opposing view (Beckerman, 1974) was that economic growth leads to increased welfare and does not necessarily entail environmental catastrophe, and that society is prepared to accept compromises between the provision of goods and services on the one hand and environmental purity on the other. Beckerman was thus an early exponent of 'soft' sustainability, although the term had yet to be coined: the distinction between 'strong' and 'soft' sustainability is important because it informs current debates

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2 Growth rates increased from 2.47% in 1985 to 6% in 1989.
3 For example the ill-judged attempt by Suharto's youngest son to establish a monopoly over the trading of cloves in the early 1990s (Schwarz, 1991).
on development and will be used throughout this thesis as part of the theoretical framework for interpreting the findings of the study. To outline the distinction briefly, proponents of strong sustainability believe that none of the Earth’s resources should be diminished through utilisation by humankind, whereas believers in soft sustainability accept that natural resources can be substituted with other forms of resource, including that produced by human endeavour, as long as the total ‘capital’ of resources remains the same (Blowers and Glasbergen, 1995; Blamey, 2001). Some would characterise this difference as the debate between idealists (proponents of strong sustainability) and pragmatists (proponents of the softer, or weaker, form) - although this characterisation would in itself illuminate the stance of the commentator.

The debate on the use of resources and the shift away from state intervention had an effect on the activities of NGOs (non-governmental organisations) and on the policies of development funding agencies such as the World Bank, the United States Agency for International Development (USAID) and the International Labour Organisation (ILO). Although it is difficult to see that structural adjustment packages were much influenced by environmental considerations, they began to move away from centralised, top-down policies to a more decentralised, community-oriented rationale (Davies, 1992; Nelson and Wright, 1995; Rondinelli, 1983; Simon, 1990). There was greater emphasis on indigenous knowledge and innovation and on schemes such as credit provision for low-income groups, small-scale agricultural improvement, and low technology projects (Chambers et al, 1989; Panos, 1987 and 1989, Grierson, 1995). The new initiatives were attractive to aid agencies in part because they aimed to help people help themselves and, as will be seen in Chapter 3 when the management of protected areas is discussed, this rationale also informed approaches to protected areas management in the 1980s and 1990s.

The greater emphasis on local involvement crystallised into the participatory approach to development. This evolved throughout the 1990s in the belief that better

4 Rather than ‘soft’ and ‘strong’ sustainability, the distinction made is often between ‘weak’ and ‘strong’, but here the former term is preferred because it has fewer negative connotations.
resource management and more equitable distribution of development benefits would be achieved through a greater control over resources by the people most closely associated with them. As a leading researcher into participatory techniques put it, "the real goal of participatory development is to equip people with the skills, confidence, information and opportunities they need to make their own choices" (Edwards, 1993). Participatory techniques were constructed within the framework of moves towards the devolution of decision-making which, as shown above, arose from a shift away from interventionism and towards a market-oriented approach which places greater emphasis on individual freedom of choice and responsibility.

When it first manifested itself, participatory development "tried to generate consciousness of how the silence and invisibility of the poor was maintained by the workings of economic and political systems and to analyze how to influence them" (Wright and Nelson, 1995:58) and techniques such as PRA (Participatory Rural Appraisal), PTD (Participatory Technology Development), and PPP (Participatory Process Projects) arose to try and put this strategy into practice. Such techniques were quickly considered an essential prerequisite to sustainable development (Pretty, 1995). But, as with the neoclassical, government-led approach, local cultural characteristics were often not taken into account sufficiently in project design. A small but useful Indonesian illustration which demonstrates this occurred during a 1994 feasibility study for micro-enterprises based on forest products in Central Sulawesi. A US-based funding organisation, the Biodiversity Conservation Network, insisted that the potential beneficiaries of the project (members of remote and isolated communities) should write letters outlining their support for the proposed enterprises (TNC, 1995). However, not only were the majority of the villagers functionally illiterate but, in common with many Indonesians, they were unaccustomed to writing letters and reluctant to commit to paper thoughts which might disagree with the opinions of people higher up the social or political hierarchy, upon whom the letter-writer might depend for political or personal

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5 I was involved in this project as an ecotourism consultant.
patronage. As shown above, under the New Order government, any comment which could be construed as criticism of government policy could be damaging to the person expressing these views. The letter-writing incident was an example of how the lack of research into traditional cultural systems in Indonesia was one reason for the failure of development projects in the mid-1980s, as identified by the anthropologist Michael Dove (1988).

Similarly, an account of development projects in Nepal comments that "notions of self-reliance and independence in community development have meaning primarily for Western developers whose cultural values stress individuality and equality, but not for Nepalese villagers who perceive their world as operating through personal relations and hierarchical linkages" (Carroll, 1992:156), while a study by Mosse (1995) of water systems in southern India found that water management had always been based on political as well as natural principles, and attempts to graft modern participatory ideas onto a strongly hierarchical society resulted in patterns of power-play within the communities affected which were as complex as the indigenous systems. In Indonesia, the traditional strong hierarchies of the political and bureaucratic systems mean that achieving any kind of genuine 'bottom up' participation is difficult. Communication on development is nearly always carried out through a process of penyuluhan ("extension"), which is often "a situation in which the officials talk and the peasants listen (or pretend to listen, as is more often the case)" (Dove 1988:33). Meanwhile, village-level councils such as the LMD (Lembaga Musyawarah Desa - Village Consultative Council) and the LKMD (Lembaga Ketahanan Masyarakat Desa - Village Stability Council) were supposed to channel popular views up to a higher level, but in practice the channel of communication was in the other direction (Bijlmer and Reurink, 1986) - if indeed communication could be said to exist at all, given that, according to Sarjadi (1994) many pronouncements on development were couched in language too utopian to be translated into reality at village level and that village councils were often composed of people lacking in the educational background to respond to the directives which came down to them.
The indigenous hierarchies affecting access to resources referred to in the previous paragraph are highly relevant to the Bromo Tengger Semeru case study. Often, development processes are predicated on the existence of a harmonious ‘community’, a notion even propagated within the Indonesian bureaucracy. Antlöv (2001) remarks that Indonesian leaders had formulated the idea of an Indonesian form of peasant democracy that “protected the unity of people, was anti-party politics and pro-harmony and peace and where burdens were divided and favours shared, where ... everyone helped each other” (Antlöv, 2001:18), but he – and other commentators, such as Rigg (1991) – have questioned this vision of peasant communities in South East Asia. Similarly, in the context of Latin America, Carroll says that “the impression of harmony, of co-operation, of community” lent by the myth of a contented peasantry in fact “masks the real world of conflict, rivalry, and tension” (Carroll, 1992:159), while as Gronow (1995) puts it: “it should not be assumed that an indigenous arrangement is equitable. Indigenous systems are invariably effective arrangements for protecting a resource, but that protection is often achieved at the expense of the least powerful of the interest groups” (Gronow, 1995:130). The inequality of access to the benefits of development has been demonstrated in many places: for instance Cohen (2001) found that textiles produced for the tourism and handicrafts industries in Indian villages in Oaxaca, Mexico, increased income in some villages but also exacerbated existing inequalities. This of course is an example of élite capture, whereby better-off, more articulate people are likely to attract more attention and funding than poorer ones (Farrington, n/d; van den Ham and van Naerssen, 1990; Eyben and Ladbury, 1995).

On the other hand, not all agree that development increases the gap between rich and poor. In his long-term study of villages in East Java, Edmundson (1994) found that the poor had become richer through the techniques of the Green Revolution, while Hilton (2002) argues that not only have both rich and poor become richer, but the inequality between rich and poor has reduced thanks to the increased wealth generated through capitalism. There are also examples of where local level development using participatory
techniques has worked well: for example Telfer (2003) reports on an agritourism project in Bangunkerto, Central Java, which was successful because individual villagers co-operated fully with the scheme, and also because they maintained control over it at a local level. This, of course, is significant in suggesting some important characteristics of successful local-level initiatives. Later in this thesis, the distributional aspects of wealth-generation will be examined in the case of tourism in Bromo Tengger Semeru National Park.

We return now to the shift described earlier from the neoclassical approach to development, or what Kenny (2002) typifies as the ‘welfare state’ approach, with the state or NGOs taking an interventionist and paternalistic role, towards the participatory discourse which became more significant during the last two decades of the 20th century. One aspect of this, the devolution of decision-making to regional or community level, has become particularly relevant in Indonesia since the fall of the Suharto regime in 1998, as moves towards decentralisation of power have taken place. Although these measures are too recent for their long-term effect to be considered in the current study, it is worth mentioning them briefly as they may well affect how tourism and conservation are managed in the future.

In 2001 new laws on local government and the distribution of taxation became effective (Usman, 2001). The consensus of opinion seems to be that these laws are, first, a genuine response to some of the perceived injustices of the former regime, in that there was resentment in outlying parts of Indonesia of the unequal distribution of resource exploitation and development benefits (Bonner, 1988; Monbiot, 1989; Booth 2001) and, secondly, that they are a way of trying to forestall the fragmentation of the country predicted by some commentators. Specifically, the reforms aim “to bring the [regional] governments closer to their constituents so that government services can be delivered more effectively and efficiently” (Usman, 2001). There are undoubtedly weaknesses within the system, including the fact that the continuing centralisation of revenue collection results in a shortage of income in the regions, and the possibility, pointed out
by Booth (2001) and Vriens and Ronodipuro (2001) in the context of Indonesia and by Simon (1990) and Kenny (2002) more generally, that the human resources needed to devise and implement devolved policies may be lacking in the regions, and that attempts to decentralise decision-making are often “eclectic or [...] atheoretical, deriving their inspiration from the neoliberal obsession with debureaucratization, deregulation, privatisation, individual freedom and ‘choice’” (Simon, 1990:7). In practical terms, according to a 2003 report by area environmental specialists, decentralisation has meant that “the old central government kleptocracy has been replaced by a plethora of district-level kleptocracies” (Jarvie et al, 2003) as conflicts between individuals and commercial and public interests over resource use become more marked.

The concepts of individual freedom and choice mentioned by Simon in any case manifested themselves differently in Indonesia than intended by the proponents of liberal democracies, in that there was considerable freedom of the individual to flout regulations for personal gain. For most of the post-Independence era, Indonesians have enjoyed considerable scope to ignore regulations designed to cover civil aspects of society such as health and safety, the just and proper management of the nation’s finances, and protection of the environment. The neglect of these areas applies equally to those who are supposed to abide by the regulations and to people who are supposed to enforce them. Under the repression of dissent mentioned above, the voices of NGOs and individuals which might have been raised as a countervailing influence to environmental and human rights abuses (often linked) were silenced. The combination of the lack of public responsibility and the scope for unregulated individual enterprise has serious consequences for environmental sustainability in Indonesia, of which the management of protected areas and tourism development – the focus of this thesis - are two important elements. Other cultural reasons for the failure to take conservation measures will be discussed in Chapter 3.

Some commentators, for instance Didia (1997) and Patten (2000), have pointed to the importance of democracy in bringing about good environmental management, although it is too early to tell whether the more open political environment in Indonesia in
the last five years will have this effect. In the words of Chris Patten (admittedly a practitioner of liberal democracy): "the scale of corruption and its corrosive impact on sustainable development is limited by democratic practice and a free judiciary" (Patten, 2000). Unfortunately, reports on illegal logging in Indonesia confirm that few counter-measures are being taken to control the scale of the destruction (Jepson, Jarvie et al, 2001; Jakarta Post, 2002a). Of course, it is acknowledged that Indonesian society and its economy are in a state of transition, and it is still possible that the situation regarding resource management will improve. Some hopeful signs are that the global nature of the problem is recognised and that international networks within both the formal and non-formal sectors are succeeding in raising awareness of specific examples of corrupt and damaging practice and in bringing pressure to bear on the Indonesian government: for instance in 1998 the World Bank and International Monetary Fund managed to bring about the dissolution of certain monopolies of forest products in Indonesia (Seymour and Dubash, 2000), while an increased sense of empowerment of local people has resulted in an upsurge in successful local representations against outside commercial interests (Aglionby, 2001; Gunawan, 2003)6. It remains to be seen whether incidents of this type will become more widespread and perhaps result in more equitable distribution of the benefits of development both in the short and long term.

**International Co-operation and the Emergence of Sustainability**

If the approaches to economic management or decision-making over resources discussed above have proved unable to redress the imbalance in the spatial and social distribution of development benefits, they have also been unable to counter one of the principal areas of criticism levelled at neoclassical economics, which is that it ignores non-economic processes, whether social or environmental. It will be seen below that although some methods have been developed to try and address this issue, this dilemma lies at the heart both of conflicts over sustainable development and of protected areas.

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6 The cases referred to here are the successful campaign by local people in West Kalimantan, backed by NGO activists, to register their title to forest land and force the departure of companies which were carrying out illegal logging (Aglionby, 2001), and demonstrations by students in North Sumatra against mining in protected forests (Gunawan, 2003).
management – and thus has a strong bearing on the case study undertaken in Bromo Tengger Semeru.

Voices pointing to the social and environmental problems caused by technological and economic advances had been heard during the 1970s and 1980s, with public awareness heightened by writers such as Edward Mishan (mentioned above), Rachel Carson (*Silent Spring*, 1965); E F Schumacher (*Small is Beautiful*, 1974), H D Meadows (*The Limits of Growth*, 1974), and Raymond Dasmann (*The Conservation Alternative*, 1975). Some of the more alarmist predictions for global catastrophe have been criticised as not grounded in scientific fact (Adams, 1990; Moore, 2000) but much careful work has been done on documenting the loss of biodiversity and other environmental damage through changes to the natural habitat and industrialisation (including the industrialisation of agriculture), and the pressures of global market influences. Thoughtful writers on the causes and consequences of environmental change have included the biologist Norman Myers (*The Primary Source: Tropical Forests and Our Future*, 1984), the science writer Colin Tudge (*Last Animals at the Zoo*, 1991; *The Day Before Yesterday*, 1995), the environmental campaigner Jonathan Porritt (*Playing Safe: Science and the Environment*, 2000), and Naomi Klein, who in her book *No Logo* (2000) lamented the environmental and social impacts caused by large-scale, globalised business activity. Such books were a manifestation of what Hurrell (1994) describes as an important normative shift in attitudes to the environment which took place in the 1970s and 1980s.⁷

Another aspect of this change was the increase in the number and significance of international organisations which attempted to formulate and impose international environmental governance in response to the increasing awareness of the international interdependency of economic, social and environmental issues. In a virtuous spiral of ⁷ Although it is easy to think of these concerns as being very much of the late 20th century, such writers were in fact following the path first trodden by the economist Thomas Malthus (1766-1834), who by the end of the 18th century suggested that the Earth would not indefinitely be able to provide an ever-expanding human population with sufficient resources to feed and otherwise maintain it, and that poverty, war and disease would be the inevitable result (Plumb, 1950). Similarly, Donner (1987) reports that in the mid-19th century soil scientists were already anxious about soil erosion in Java caused by land-hunger, and about the destruction of the tropical forest in Indonesia.
good intentions, steps were taken by such organisations to address problems which were increasingly considered the province of the entire world community rather than of individual countries. In 1972 the UN Conference on the Human Environment, in Stockholm, produced a document (known as the Brandt report) which outlined the need to resolve conflicts between environment and development, but without - as critics pointed out - describing how this should be done (Adams, 1990). It was nevertheless clear that by now the concept of sustainability was being elaborated, and the term soon entered the lexicon of development economics and resource management. In 1975, for example, Dasmann defined conservation as "the rational use of the environment to provide the highest sustainable quality of living for humanity" (Dasmann, 1975:5).

Not long afterwards, in 1980, the World Conservation Strategy (WCS) was produced by one of the world's primary nature conservation organisations, the International Union for the Conservation of Nature and Natural Resources (IUCN). The report was, significantly, funded both by the World Wildlife Fund (WWF) and the United Nations Environment Programme (UNEP), whose human-orientated mandate balanced the wildlife focus of both the IUCN and WWF. The WCS gave a detailed account of the global environmental crisis and emphasised the need for the sustainable use and conservation of species and ecosystems, while at the same time recognising the role, rights and responsibilities of humankind in resource utilisation. As such, it influenced the establishment and management of protected areas throughout the world, as will be seen in Chapter 3.

An attempt to move the ideas of the Stockholm Conference and the WCS forward into the realms of practical policy-making came with the 1987 report Our Common Future by the World Commission on Environment and Development (known as the Brundtland Report). This articulated the concept of sustainable development and brought it to a wider audience, and argued that economic growth is not limited by the finite
quantity of the resources themselves but by the limitations of existing technology and social organisation to utilise these resources. The report was criticised by some (again, for example, Adams, 1990) as assuming a greater degree of enlightenment and altruism amongst politicians and businessmen than is actually the case, and it certainly took a stance of soft rather than strong sustainability in accepting that economic growth was bound to occur. It also, broadly, supported the viewpoint of people who believed that technological advances would ensure that the Earth’s resources could continue to support an expanding population.

The next significant international attempt to address the problems of the environment and development was the United Nations Conference on Environment and Development (UNCED, or the Earth Summit) held in Brazil in 1992. Pre-summit negotiations at government level resulted in the ratification of two international agreements on climate change and biodiversity and guidelines on how to make sustainable development workable (Agenda 21) (Keating, 1993). Not surprisingly for an event of such proportions and whose ambitious goal was to restructure the global economy according to the principles of sustainability, the Earth Summit was marked by considerable disagreement. On one side were the industrialised countries of the North which were seen as defending the international economic status quo and even, according to one view, as using the need to manage resources sustainably as a pretext for increasing their dominance over Southern economies (Vidal, 1992). Presenting the opposing view were developing countries, which criticised the North for attempting to limit their development (Brown, 1992). Meanwhile, the concern of the industrialised nations for the environment was not matched by an equivalent commitment to transfer funds and other means of helping the poorer nations protect these resources: for instance the US, Britain and other major aid donors would not agree to the UN target of giving 0.7 per cent of GNP in aid to the Third World (Jordan and Voisey, 1998). This reluctance will have particular relevance for the various proposals put forward for conserving biodiversity which will be discussed in Chapter 3.
A decade later, the World Summit for Sustainable Development (WSSD) was held in Johannesburg with the aim of giving the principles of sustainable development a more central focus in government policy-making and trying to find ways of distributing access to resources more fairly, partly through improving finance for development (IIED, 2001). Although some advances were made in this respect, such as an increase in donor funds for the Global Environmental Facility (GEF), which aims to tackle environmental problems of a global scale, the summit was seen as something of a disappointment overall in that little concrete commitment to progress in environmental management was made (Doran, 2002).

From the Global to the Local

While international progress on finding remedies to environmental problems is clearly necessary, what we are more closely concerned with in this thesis is the way that concepts of international policy-making and sustainability are translated into attitudes and practices on the ground, since progress towards better use of the world’s natural assets can only come about through individual actions, as well as collective ones. Before tackling the case study, we will try to gain an understanding of how the doctrine of sustainability can succeed or fail in practice in general terms. Chapter 2 will look at the specific issues of sustainability in the tourism industry, while some of the more general challenges will be examined here.

An initial problem lies in the abundance of definitions of “sustainable development” and “sustainability”, as many commentators have attempted to refine or explain the concept, for instance Adams (1990), Pearce, Barbier et al (1990), Lerner (1992), Elliott (1994), Blowers and Glasbergen (1995). Some people, including Redclift (1987), Young (1992), Schuurman (1993), Drummond and Marsden (1995) and Blamey (2001) have pointed out that sustainability means different things to different people and have highlighted some contradictions within the concept. In essence, however, all proponents of sustainability stress or infer the need to ensure the equitable distribution of the benefits of the Earth’s resources between individuals, between nations, and between
generations. This means moderating and regulating the pace and location of economic growth and the rate of utilisation of natural resources in order to ensure a good standard of living for everyone and the long-term survival of the planet’s ecosystems and living species, including humans. These questions of development and distribution are at the heart of international negotiations over environmental resource use, for instance in the various rounds of conferences held under the auspices of the International Panel on Climate Change which attempts to tackle global warming (van Beukering and Vellinga, 1996).

The most widely-used definition of sustainable development was produced by the 1987 WCED report *Our Common Future*, referred to above, which states that it is development which “meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987:8). Much work has gone into devising strategies by which these aims might be met. These can be summarised as: conservation of the planet’s existing capital of resources, whether in the same or altered form (the distinction depends on whether a position of strong or soft sustainability is taken); more equitable distribution of the benefits of resource use through international action, including the reduction of external pressures on developing country economies; and the devolution of decision-making powers over resource use and greater participation at local level in finding solutions to environmental and developmental problems. Efforts to achieve international co-operation and moves towards the devolution of decision-making have already been discussed above; here, an attempt will be made to identify some of the practical difficulties in achieving sustainability at a local level, since this may help give insights into the success or failure of nature tourism in bringing about the conservation of protected areas.

Some of the obstacles to “real world” solutions arise from sustainability’s central paradox of the broad, global and intergenerational focus versus the narrow, local and short-term one. Others arise from the discrepancy between what sustainability means for different interest groups or from the failure by some overly idealistic proponents of
sustainability to take into account the political, economic, social and cultural realities of
the people amongst whom policies are to be applied. Some examples of the barriers to
achieving sustainability will now be given, after which attempts to overcome some of the
problems will be outlined.

Many of the obstacles to achieving sustainability are manifestations of various
forms of conflict. One of these – the distinction between strong and soft sustainability –
has already been discussed, as it affects the basic interpretation of the concept. In addition
to this are the conflicts which can occur between local and national exigencies, and
between the needs of individuals at a local level. One manifestation of the local-national
conflict echoes the broader duality mentioned earlier in the context of applying
neoclassical methods in a different country to where they were formulated, in that
political, social and economic circumstances in one location may render inappropriate
methods developed in another. In a more local context, attempts to scale up small
initiatives and apply them more broadly may fail because of this: any project or enterprise
inevitably exists in a different situation from all others, and the characteristics which lead
to success in one situation may not exist in another. For instance, an analysis of
horticultural and tourism projects in Ecuadorean national parks which were intended to
reduce clearance of protected forest found that village-specific characteristics affected the
success or failure of very similar schemes (Bailey, 1995). A related point is that while the
spontaneous diffusion of ideas is often desired by both government and non-
governmental agencies, when innovative methods of organisation are concerned, the
scaling-up of small projects may bring these methods into conflict with national
structures (Carroll, 1992; Hurrell, 1994; Neefjes, 1995). In an ethnically diverse country
like Indonesia where under the Suharto regime the centralisation of power was felt to be
necessary but was sometimes tenuous, the potential challenge from small-scale initiatives
could be keenly felt.

The potential stumbling-blocks to development caused by hierarchical structures
and local-level interpersonal rivalries have been mentioned earlier in this chapter, but
another aspect of small-scale initiatives in hierarchical societies is that individuals may have a disproportionate but very positive importance. Knudsen (1995), for example, studied the conflicts and conflict-resolution surrounding a wildlife protection zone in northern Pakistan, and found that a respected local leader successfully negotiated a compromise agreement between villagers and government authorities, while in a study of social forestry in Thailand, Hafner (1995) comments that project effectiveness depends in part on ‘developed’ leadership. Similarly, a review of community-based wildlife management projects found that “the role of an enlightened leader is critical” (Roe and Jack, 2001:37). The importance of what Warner (2000) calls “micro-micro” level conflicts over access to resources and the significance of leadership in bringing about successful development will be further examined in the context of the Bromo Tengger Semeru case study.

Another area of conflict is over time-frames, which is also fundamental to sustainability. We are exhorted to conserve resources so that these will meet the needs of future generations as well as our own, but most people are unable to think in terms much greater than their own life-span, while it is accepted that politicians rarely think beyond the next election. Non-elected rulers fare slightly better on this front, in that they may be able to make plans unencumbered by the fear of losing power within half a decade - although they may abuse this power rather than using it for the benefit of their subject population. But no political figure of whatever stamp is likely to take the view of some academics, in particular scientists, that “we cannot take the environment seriously until we acknowledge that a million years is a proper unit of political time” (Tudge, 1995:12). It is hard to imagine even the most radical proponents of sustainability expecting the general population (and especially politicians) to incorporate this concept into their life strategies (or election manifestos), but it is nonetheless a vital point. Important mineral resources upon which we currently depend have taken millions of years to form and arguments over their abundance and finitude differ only to the extent of a few decades or centuries: there is little disagreement that the resources will not run out at some point. So
if there is little hope of ‘meeting the needs of future generations’ from these resources, the doctrine of sustainability is destined to failure. This, of course, is the Malthusian view: the more optimistic Boserupian stance is that human ingenuity will respond to the scarcity of mineral resources by engineering alternative sources of energy and sustenance to meet the needs of future generations (Boserup, 1981, in Sage, 1996; Simon, 1996), just as deforestation in Northern Europe is thought by some historians to have precipitated the Industrial Revolution (Oelschlager, 1991).

In any case, for the practical purposes of legislation and research, a finite time horizon has to be adopted, and in the context of the case study in this thesis it will probably be seen that long-term considerations are irrelevant to people whose needs are very much present ones. This raises another challenge to the possible success of sustainable policies: the question of what sustainable use of resources means to different people. Dasmann et al (1973) point out that interpretations of quality of life and rational use of resources vary, so that open-cast mining may seem an entirely rational way of earning a living to some while to others it is desecration of a unique habitat. It is generally accepted (by proponents of soft sustainability, at least) that resources must be used in generating economic growth if the needs of people who currently lack sufficient food, clean water, shelter and health care are to be met: but what constitutes “basic needs” is also different for different people, in that most people in industrialised countries now consider access to private transportation, education to at least high school level, a varied diet, television, and annual holidays as basic essentials, whereas these are unattainable luxuries for the majority of people in the South. If economic growth is to enable the entire world population to achieve the standard of living currently enjoyed by the average Northerner, it will be extremely difficult to maintain the planet’s resource base, even in an altered form, as a number of observers have pointed out, including Beckerman (1974), Redclift (1987) and Hurrell (1994). This conflict is essentially one of a North-South disagreement over access to and utilisation of resources, a debate at the heart of negotiations at the UNCED (1992) and WSSD (2002) Earth Summits - and one
which affects the way protected areas are perceived and managed, as will be seen in Chapter 3.

Just one of the many examples of the difficulty of reconciling economic growth with resource conservation concerns the use of land. Development planners have long recognised both the need for new land to support growing populations and the environmental damage that cultivation of unsuitable lands can cause, including increased soil salinity, reduction in biodiversity, and soil loss through erosion and landslides. Often, the agents of such damage are unable to choose an alternative course of action since none is realistically available to them – although in many cases political reasons underlie the decisions (or indecision) which affects resource use. For instance, the failure to prevent widespread forest fires and illegal logging in Indonesia has been ascribed to lack of political will (EIA, 1998; Pearce, 2000; AFP, 2002). Sometimes the debate over resource use gives rise to conflicts which reach from the local level through the regional to the national and international: an example of this is the 2002-2003 controversy over a road-building programme proposed by the government of the semi-autonomous Indonesian province of Nanggrooe Aceh Darussalam (NAD). The NAD government plans to build a major highway through the Leuser Ecosystem, a conservation area of global significance to which large sums of EU and GEF money have been devoted. An international campaign of letter-writing and petitions resulted in the Indonesian national planning board (Bappenas) writing to the governor of NAD province urging reconsideration of the road programme on the grounds of damage to the environment and to Indonesia’s reputation (Robertson, 2002; INCL, 2003), but because of the weakening of central powers through devolution and the special status the province of NAD has always enjoyed, any attempted influence from the national government is likely to be ineffectual. This does not augur well for this specific case or for the prospects for conservation of Indonesia’s natural heritage more generally.

Another aspect of the North-South conflict over resource use is the different cultural stance of the main protagonists. The concept of sustainable development is a
Northern-driven concept inspired partly by a collective survival instinct but also by altruism, idealism and aestheticism. For proponents of strong sustainability the latter two values seem to predominate, to the extent that some writing on sustainable resource use appears to hinge on the belief that if only people were liberated from the shackles of external economic pressures they would manage resources for the common benefit for generations to come, simultaneously leaving the environment intact. Trainer (1989), for instance, contends that: "it is distressingly obvious that people living in largely self-sufficient ways in unspoiled ecosystems and with rich social and cultural systems need only a few additional basic goods and services ... in order to enjoy a high and secure quality of life" (Trainer, 1989:71). However, this view does not recognise either the hardship of life in much of the South or the demonstrable material aspirations of most people wherever they live, which is a fundamental flaw in the arguments for strong sustainability. It is in fact rather surprising that peasant life is still idealised to this extent, two centuries after the Swiss philosopher Jean-Jacques Rousseau (1712-1778) romanticised the Alpine rustic as the healthy embodiment of primitive virtue (Schama, 1995). In reality, as Schama remarks, the peasantry were impoverished and unhealthy, suffering from goitres due to malnutrition and imbecility due to inbreeding. Antlöv (2001), has – as already mentioned – also remarked on the Rousseauist romanticisation of the peasantry by both the Indonesian authorities and NGO workers. During the field research amongst the farming communities of the Tenggerese, it would be interesting to see whether people were likely to be happy with just "a few additional basic goods and services" or whether, in fact, they aspired to a more materialistic lifestyle.

In a similar vein to Trainer, Redclift (1987) and Buege (1996) believe that forest-dwelling and other hunter-gatherer groups lived in harmony with their environment and that this was, in part, because it was the only way they could survive. On the other hand, Tudge (1995), Blench (1998) and others have used palaeontological evidence to show that the spread of humankind around the world in the late Pleistocene age resulted in the extinction of many mammals, particularly large and edible or dangerous species or ones
which were in competition with humans for the same ecological niche. For instance, the disappearance of most of the large mammals of the Americas closely followed the appearance of humans there about 11,000 years ago, and the arrival of humans in New Zealand around a thousand years ago resulted in a "biological holocaust" (Diamond, 1991). It is also suggested that the inhabitants of Easter Island, in the Pacific, drove themselves to extinction through deforestation of their surroundings (Diamond, 1991), and Dasmann (1975) reminds us that the irrigation canals of Babylon, Chaldea and Nineveh became silted up because of deforestation of the Lebanese hills in the centuries before the Common Era.

It seems, in fact, that "self-destructive use of our environment, far from being a modern invention, has long been a prime mover of human history" (Diamond, 1991:283). If this is true, the task of moderating the rate of exploitation of the Earth's resources is not just a question of tinkering with the modus operandi of the global economy, but one of altering a deep-seated human urge to modify and exploit the environment in order to demonstrate mastery over the elements and to fulfil short-term survival needs for food, warmth, shelter and procreation. This point has clear implications for the way in which national parks and other protected areas are managed, in that any policies may conflict with the desires of the people who live in and around them if these policies are not rooted in their cultural perceptions and livelihood needs. This will be further discussed when management of protected areas is considered in more detail in Chapter 3, and in the discussion of Bromo Tengger Semeru National Park.

Another aspect of environmental resource use is that exploitation accelerates on contact with the market economy and modern technology, with the gains to be made from environmental destruction appearing rapidly to overcome traditional constraints on resource use. On the Sumatran island of Siberut, for example, the Mentawaian people have lived from forest resources for centuries as hunter-gatherers. The island is biologically significant because of its four species of endemic primate (Whitten, 1979), but all four species are now extremely rare, which has been attributed to hunting for food
and for the pet trade (Wirawan, 1992a). While hunting for food by the Mentawaians may have been sustainable, hunting for export only arose after regular contact with the outside world developed. Further strain is being put on the Siberutan habitat by the unselective felling of *Aquilaria* trees, some of which contain a valuable substance called *gaharu* used to produce incense, but which can only be detected after the tree is cut down. Most of the *gaharu* ends up in the Middle East, thus linking even the formerly isolated Mentawaians to the global economy.

There is no sign of any traditional management techniques inhibiting the substantial gains to be made from the sale of *gaharu* (Wirawan, 1992a), and informed observers have noted that in parts of the island the Mentawaians "have largely discarded tradition in a rush to enter the market economy" (ADB, 1992: 82). This appears to be happening because of the complex pressures caused by contact with missionaries, government officials, and traders. The traditional community structure, where clan members lived in a communal house and were guided by clan elders and medicine-men, has been replaced by nuclear families living in government-sponsored housing under a village head who is often non-local. The young men are keen to experience life on the mainland of Sumatra, and fear of being laughed at or discriminated against discourages them from taking part in traditional adulthood rituals which include the incision of tattoos all over the body. They are also keen to obtain the trappings of modern civilisation such as jeans, trainers, radios and cigarettes, and with little cash circulating within the Siberutan economy, one of the best ways of generating income is through the sale of *gaharu*. Interviews with *gaharu*-collectors did not indicate any concern that the supply would disappear - merely that the collecting parties would have to go further afield.10

Even apart from the fact that traditional Mentawaian community structures had been at least partially demolished by the impact of religion and by the standardisation of Indonesian cultural norms referred to earlier, it seems likely that these structures were no better equipped to deal with the urge of young men to make money and have a good time

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10 The information on Siberut and Central Sulawesi was gained during consultancy work in 1992 and 1994.
than the community structures of villages and housing estates of the industrialised world. It also seems – in this case, at least – that there was no innate understanding of the ecological imbalances that could be caused by high levels of resource exploitation. Similarly, interviews with rattan-collectors around Lore Lindu National Park, in Central Sulawesi, revealed that they simply went further into the forest when supplies near roads were exhausted, and that the money earned was spent on partying in the provincial capital, Palu (Cochrane et al, 1994). Another Indonesian study, concerning forest-dwellers in East Kalimantan, found that although people had a clear understanding of the limitations of their environment, they were prepared to use any means at their disposal to make a profit from it – which from their perspective was a perfectly rational choice, even if in the longer term their activities caused environmental degradation (Vayda et al, 1985). In the context of marine resources, a study of traditional tenure of marine fishing rights in Indonesia and Papua New Guinea concluded that the reserves only preserved an equilibrium between human demands and nature because different groups of people were forced to confine themselves to one area due to population pressure, rather than through a free choice to restrain their exploitation of the environment (Polunin, 1984).

These examples show that the people most closely associated with natural resources are not necessarily any more likely than outsiders to make decisions of long-term rationality about them. This is in part because while reverence for the land - a sense of belonging to it rather than it belonging to us - may exist amongst certain indigenous groups, it cannot be assumed that all peoples on the fringes of the global economy are endowed with the same consciousness. Another investigation into resource use by native groups concluded that “indigenous people hunting just for subsistence are capable of hunting at non-sustainable rates” (Redford and Robinson, 1985:43). A leading advocate of conservation through economic development, Jason Clay, also concluded that “people don’t always manage resources for the best, because they don’t have the knowledge ... or it takes too much labour” (Clay, 1992:160). To this can be added the point made above in relation to gaharu collection in Siberut, that the pressures of the market economy
override traditional social regulation. Would the investigation into the livelihood strategies of the Tenggerese reveal a similar diffidence towards the long-term stability of the natural environment, and for similar reasons? On the evidence gathered from the literature, it seemed rather likely that it would.

Before moving away from broad considerations of sustainable development to a closer focus on the twin tracks of the current study, namely the tourism industry and protected areas management, it remains to outline significant recent approaches to sustainability. The most pertinent of these fall into two categories: techniques which influence development policies in the South, and policies which are beginning to permeate the commercial world. In the next section, approaches to development will be discussed first, followed by the strategies involving the market economy.

The Livelihoods Approach and Sustainability through Enterprise

The obvious failure of earlier techniques to tackle some of the underlying inequalities of development and the causes of these has given rise to a significant new branch of development thinking. As mentioned above, by the early 1990s it was realised that the participatory approach had its shortcomings, in that just as with neoclassical programmes, many development initiatives were overly constrained in spatial, temporal and sectoral terms, insufficiently related to the wider political, economic and cultural environment. Attempts to analyse why these techniques were frequently unsuccessful were made by Oakley et al. (1991), Carroll (1992), Biggs (1995), Eyben and Ladbury (1995), Nelson and Wright (1995) and Pretty (1995), among others. One conclusion was that as with sustainability, 'participation' meant different things to different people, sometimes simply meaning that lip service was paid to the concept in project documents, but broadly ranging from a slightly less autocratic approach under which more information is imparted, to self-initiated collective action taken independently of external institutions. As with other development approaches, of course, local socio-political characteristics affect participatory techniques: in Indonesia, for instance, the traditional
hierarchical power structures are inimical to popular participation, an aspect which will be further examined later on.

Building on this analysis, development strategists came up with a refinement of the participatory approach which uses this first to understand people's needs and then places these in the context of government institutional structures and the wider economy. In other words, it strengthens links between 'micro' and 'macro' levels and emphasises the qualitative element which was wanting in attempts to facilitate development through quantitative policies. This has become known as the sustainable livelihoods (SL) approach, a phrase coined in a 1992 research paper by Robert Chambers and Gordon Conway. It seems to offer an encouragingly realistic way of marrying policy and practice, and has been adopted by the UK Department for International Development (DfID) as a central part of its development strategy. It is acknowledged that it is more time-consuming than efforts more closely targeted at specific resources or facilities, while its necessary cross-sectoralism conflicts with the usual pattern of development projects being 'owned' by one particular government department (Farrington et al, 1999; Ashley and Carney, 1999; Farrington, 2001; Conway et al, 2002). As will be seen in Chapters 2 and 3, the SL discourse has also given rise to the parallel concepts of Pro-Poor Tourism and Community-Based Wildlife Management.

Another conclusion reached after analysis of participatory approaches was that people tend only to act co-operatively when an economic benefit for the individual is perceived. This awareness has been incorporated into the second branch of recent development thinking which concerns us here: the 'development though enterprise' approach. To some extent this has arisen because global recession since the mid-1980s has reduced funding available for development, with the provision of seed-money or credit for small enterprises increasingly seen as a cost-effective way of helping people to supply their own basic needs: "the interface between long-term national economic development and immediate poverty alleviation found in these programmes made them an attractive proposition for many NGOs" (Sahley, 1995:57). As will be seen in Chapter
3, the enterprise approach was incorporated into new ways of managing protected areas, and more recently has been used in attempts to integrate the principles of sustainability into the market economy.

One of the problems with the market economy is that it commodifies nature. Many elements of the production process are not assigned a value and therefore fall outside any calculation of the true cost of goods. Generally, when raw materials are abundant, these have been treated as a ‘free’ resource, so that any impending scarcity is not properly accounted for and that common resources are overused (a concept explored by Gilbert Hardin in his 1968 essay *The Tragedy of the Commons*). Some studies indicate that private ownership of resources goes some way to countering this, as summarised in Potter (1995) - although it is also clear that where good governance and the political framework for prudent resource management do not exist, private concessions do nothing to prevent environmental damage, as shown in conflicts over forest use around Lake Toba, in Sumatra (Down to Earth, 1998 and 2002a). Also, the cost to the environment and society of the negative externalities of production has not been taken into consideration (for example the air pollution caused by land clearance through forest fires in Kalimantan and Sumatra in the late 1990s). There has been awareness of this weakness in the market economy for some years, but it has only been since the 1980s that serious attention has been devoted to finding ways of integrating economic theory with ecological thought.

This has given rise to the field of environmental economics. One angle this takes is to internalise the cost of negative externalities on the ‘polluter pays’ principle, by calculating the cost of rectifying environmental damage and ensuring that the costs are borne by the agent which caused the damage. This can be done by government regulation such as the Climate Change Levy introduced in the UK in 2001 which imposes a tax on energy use by businesses (*The Independent*, 2000), or by industry self-regulation through developing and applying ‘best practice’ technology (Browne, 2000). An example of this is the high standard of ecological sustainability demanded by the British DIY company.

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11 The concept of the negative external effect was introduced in the early 1950s by Arthur Pigou (van der Straaten and Gordon, 1995).
B&Q (Welford, 1996), while another is the approach taken by the oil palm company PT Asiatic Persada in Sumatra, which has introduced anti-poaching teams on its concession and set aside 15 per cent of its land as a wildlife reserve (Kirby, 2003). Broadly, such approaches are known as ecological modernisation (Blowers, 1997; Mol and Sonnenfield, 2000) and reflect a position of soft sustainability in accepting the need for economic growth and trying to reconcile this with long-term environmental and social needs. Some specific approaches to ecological modernisation which particularly concern tourism will be assessed in Chapter 2. An awareness of the need to incorporate environmental responsibility into commerce is now widespread; for instance it was reported in 2002 that the Indonesian government is considering how to include environmental costs in economic growth measurements (Jakarta Post, 2002b). At an inter-governmental level, negotiations over global environmental problems such as long-range air pollution have given rise to complex schemes such as joint implementation, whereby a richer country will pay for abatement measures to be carried out in a poorer one, and emissions trading, where industrialised countries which produce high levels of air-borne pollutants can purchase part of the pre-established ‘pollution allowance’ of another country (Humphreys, 1999).

Discussion

In this chapter sustainability has been discussed as background to the case study, since tourism in a national park can only be judged successful in terms of sustainability if it contributes to the long-term conservation of the protected area. Some of the reasons for anthropogenic pressure on resources have been discussed, along with development strategies of the last half-century. It has been shown that human beings, whatever their level of sophistication, are not intrinsically inclined towards prudent management of natural resources, and that the aspiration for quantitative and qualitative lifestyle enhancements have undermined many apparently well-planned development initiatives, whether these sprang from the rationalist, easily-quantifiable strategies of neoclassical economics applied for much of the post-war period in both industrialised and developing
countries – including Indonesia – or from later, more people-centred participatory and livelihoods approaches. It was noted that the SL approach seems promising in that it tries to incorporate the wider socio-political realities often ignored under previous strategies.

These latter approaches tend still to be the preserve of NGO and smaller-scale development programmes, while government and inter-governmental policies still emphasise market adjustment through regulatory and taxation tools. Governmental and inter-governmental initiatives have also helped to create a greater level of corporate environmental responsibility which, in due course, may lead to commercial practices which are less environmentally damaging in the long term. For instance, realistic ways of incorporating sustainability into traditional neoclassical economic strategies are being sought through environmental economics, and this has been making itself felt from the global level of inter-governmental negotiations on issues such as climate change and utilisation of fish stocks to the local level, through measures such as the Climate Change Levy and actions by individual companies. The need to manage the world’s natural assets more sustainably seems now to be accepted all over the world, as shown by the participation of a majority of countries in global conferences on the environment and by the ways that sustainability principles are being incorporated into government policies in so many places.

These moves in themselves give some grounds for optimism, while there is further scope for this in the fact that international agreements on environmental matters have been negotiated, with their regulatory and monitoring frameworks, and in that there is a continuing desire to find new and better ways of addressing inequality and injustice. This seems to show a willingness for human society to act as a unit to conserve the Earth’s resources and distribute them more fairly. To some extent, it could be argued that these moves have come about through self-interest, since a failure to achieve progress on curbing pollution or tackling the obvious international and inter-generational injustices perpetrated by the current economic system would, manifestly, result in dire consequences for the entire human race, but it can be argued too that a current of higher
motives also has an influence. In particular, pressure groups which focus on environmental and human rights issues and some policy-makers are motivated by an altruistic desire to address injustices for reasons of morality and fairness, and to preserve the world's natural ecosystems for the sake of biodiversity as well as for human needs. This has particular resonance in Indonesia, where the move towards a more democratic and open system of government since 1998 may yet result in better management of environmental resources.

On the other hand, many observers find overwhelming grounds for pessimism in the evidence of the past, in that trying to find measures to regulate development so that it becomes sustainable "is almost certainly beyond the scope of human agency, for it would require the management of what is in practice the unmanageable" (Drummond and Marsden, 1995). What is referred to here is the impossibility of understanding and regulating day-to-day decisions over the use of available resources, whether at the level of government departments or an individual farmer, when each decision is taken in a different socio-cultural or political context. An awareness of the importance of context has often been missing from economic policy in the past: under neoclassical economics, a rather uniform approach was taken to planning in market-driven economies, whereby strategies developed in the very different political, cultural and social circumstances of the industrialised North were applied in developing nations, where very different circumstances prevail. This was one reason for their failure, and a good illustration of why this happened will be seen in the discussion of protected areas management in Chapter 3. In the light of contextual awareness, then, the question can be asked as to whether the principles of sustainability, however rational they seem from a Northern standpoint, will seem as obvious to people to whom even a guaranteed supply of clean water and primary health care are not available.

When reading the literature on development theories and strategies it is easy to form the impression that all societies in developing countries are affected by some kind of planned policy, but in fact large portions of the world's people will never have heard
of sustainability, while vast swathes of humanity lie outside the reach of any kind of ‘scheme’ or ‘project’ other than the broadest or most basic economic processes. This is certainly the case with the Tenggerese who form part of the study of tourism and conservation around Bromo Tengger Semeru. It would be interesting to see whether an awareness of global attitudes to resource use had penetrated their remote, hill-top villages, and if so, what effect this has on their utilisation of the natural resources around them.

It has already been said that the shortcomings of a theory may only become apparent when it is tried out in practice, and in the next two chapters the constraints and opportunities thrown up by efforts to achieve sustainability in developing countries in the commercial context of tourism and the non-commercial one of protected areas management will be examined.
Chapter 2 - Tourism and Sustainability

The previous chapter examined the dominance over global trading and economic growth patterns of neoclassical economics and its derivatives and the emergence of sustainability. It was shown that there has been a shift in the focus of development from primarily economic matters to a more inclusive range of considerations such as social and environmental ones. Policies and practices devised by development academics and practitioners were outlined, including recent attempts at operationalising sustainability through the sustainable livelihoods approach and the ecological modernisation of industry. Illustrations from Indonesia were used in order to begin to establish the cultural framework for the core question of this thesis. This chapter will now move on to an examination of sustainability in the context of tourism, since this industry will be studied in relation to biodiversity conservation during the field research in Bromo Tengger Semeru National Park. Throughout this chapter, the form of sustainability intended will be the 'softer' form, since the strictures of 'strong' sustainability are considered too limiting to offer any serious possibilities for a viable industry.

Tourism is an important commercial sector globally and a highly diverse and competitive industry. An outline of the significance and dimensions of tourism internationally and in Indonesia will be given in this chapter, followed by an analysis of the tourism experience, including a discussion of the interaction between the tourists and the host community. Techniques for the analysis of tourism's trends and influences will be outlined, as these will be used subsequently in examining tourism to Bromo Tengger Semeru, and this will be followed by a discussion of the principal impacts of tourism. The discussion will then be linked to the previous chapter by considering sustainability in tourism, and challenges arising from the needs of different stakeholders will be examined. It will be asked whether the pressures of achieving commercial success in tourism can be compatible with sustainability and whether any progress has been made towards achieving its objectives.
Of course, as with development generally, it is realised that each ‘real world’ situation is different. A country’s tourism industry is to a great extent shaped by factors external to the country and beyond the control of the national government, because the aspirations and ability to travel of the holiday-taking public depend on economic and social trends in the generating country and on technological advances. At the same time, indigenous economic, social, cultural and political factors also move the industry in particular directions, and illustrations will be given of how socio-political characteristics in Indonesia have influenced the development of the tourism industry there.

Another element of this chapter will be to continue the discussion begun in Chapter 1 of how the imposition of economic models developed in one commercial community (the industrialised North) on another (the developing South) can result in a failure to achieve the planned targets. This was put down to the fact that the socio-cultural context in which the plans are to be applied has not always been taken into account. With international tourism, the necessarily inter-regional features and extremely close contact between producers and consumers mean that any incongruence arising from cross-cultural differences will be more significant than with almost any other industry, with attendant implications for sustainability. Since the challenges to sustainability thrown up by the clash of forces between two (or more) completely different cultures are most clearly highlighted by examples from international tourism, most of the discussion in this chapter will focus on this, leaving the important but often over-looked domestic sector to Chapter 5 when tourism to Bromo Tengger Semeru is discussed, since trends and influences within domestic tourism can be usefully illustrated with reference to Mount Bromo.

The discussion in this chapter will build a stronger cultural context for the examination of protected areas management in Chapter 3 and the specific investigation of tourism in Bromo Tengger Semeru in Chapters 5, 6 and 7.

Significance of Global Tourism

The dimensions of tourism are impressive. By 1990 it was already claimed as the world’s third largest industrial sector in terms of export earnings (WTO, 1993), and by
1999 it was generating around 10 per cent of jobs, directly or indirectly, which meant that it was the world's largest employer (IES, 2000). In 1993 approximately 500 million people travelled abroad, and by 2002 this had increased to 715 million (WTO, 1993 and 2003). These figures indicate the huge growth in international travel which occurred in the last four decades of the 20th century, when a confluence of factors, in particular the introduction of wide-bodied jet aircraft in the 1960s and an increase in holiday entitlement and disposable income in industrialised countries, led to increased demand for overseas holidays (Cooper et al, 1993; Khimire, 1997; Urry, 1990; Young, 1973). A further boost occurred in the mid-1980s, when to counter the down-turn in the market for primary agriculture produce and other commodities (including oil, in the case of Indonesia) many developing countries began to expand their export industries, as described in the last chapter, and during the last few years of the 20th century tourism has expanded still further, fostered by competitiveness and deregulation within the airline industry and facilitated by the Internet.

On an international level, post-war tourism has never experienced a serious decline, even during periods of international instability (the resilience of the travelling public will be discussed later in this chapter). There are however significant variations in the way tourism is developing: for instance over the decade 1981-1990 tourism grew at an annual average rate of 4.5 per cent, with tourism in North America and Europe increasing by an average of 5.6 percent and 4.4 per cent respectively over this period, while Asia and the Pacific experienced a much higher annual growth rate of 14.35 per cent. While growth rates in Asia and the Pacific slowed down during the 1990s, the general trend was still upwards (Polunin, 1991; figures from WTO cited in Latham, 1992; Brohman, 1996; Ceballos-Lascurain, 1996; WTO, 2003; DGT, 1993). The increase of tourism within the Asia-Pacific region has had a considerable effect on the composition of the tourism market to Indonesia and has affected the way in which tourism to sites such as Bromo Tengger Semeru has developed. This point will be returned to in Chapter 5.
Although the significance of tourism is now well recognised, for many years its huge size and importance somehow went unrecognised by economists and academics. This may have been because it is a fragmented industry which touches on many spheres of human activity. For example, as Wall (1997) points out, it was not even mentioned in the influential 1987 WCED report *Our Common Future* (mentioned in the last chapter) which introduced the concept of sustainable development to a wider world, and even though by the early 1990s it was one of the largest foreign exchange earners in Indonesia (to say nothing of the distribution of wealth through domestic tourism), it could still be ignored in whole books devoted to analyses of economics and politics in Indonesia (Schwarz, 1994; Barlow and Hardjono, 1996). This is partly because tourism income is scattered across several different sectors and partly because its breadth is such that in academic terms it is highly multidisciplinary, which may be why it was little studied - and therefore inadequately understood - until the late 1970s. Then, a new epistemic community of academics emerged from a range of backgrounds in the social sciences to study tourism and its impacts, and its key features were analysed and codified. The characteristics of tourism described in the next section are gleaned largely from the work of leading academics in the field.

**The Experience of Tourism**

The central focus of tourism is a range of sensory and intellectual situations which combine to form the holiday experience. In order to provide this experience a huge network of services and products has evolved or been adapted. These include the development of a complex regulatory and legislative framework, sophisticated and varied transportation, food and accommodation sectors, and a huge souvenir and handicraft industry. The tangible, though, is only a part of tourist consumption: of equal (or greater) importance is the intangible, the subjective attributes of beauty, knowledge, companionship, fashionability, spiritual satisfaction or excitement, all of which contribute to fulfilling the aspirations of the tourist. Although the mix of expectations differs for different segments of the tourism market, there is considerable overlap between the needs
and aspirations of people travelling for overtly different reasons such as leisure, business, or for religious purposes. Areas of overlap mainly concern the contractual or quasi-contractual obligations understood when travellers undertake purchase or embark on a journey: i.e. that they should meet with efficient service from providers, that the facilities should meet their expectations in terms of comfort or palatability, and that the goal of travelling should be accomplished.

In order to satisfy these aspirations it is important for tourism managers to understand people’s reasons for travelling. Cooper et al. (1993) present a useful summary of the concept of motivation, which points out that initial motivation to travel rests on perceived needs, and that this perception is culturally, sociologically, and psychologically derived – as indeed are perceptions of what constitutes sustainability (described in the last chapter) and wilderness (described in the next). Tourists themselves express their reasons for travelling in less abstract terms, with commonly-cited objectives being the desire for new experiences and adventures, to discover different cultures, enjoy nature, and relax (Aderhold, 1996).

Tourism analysts point out that the ways in which people try to achieve their holiday objectives are becoming increasingly diverse and sophisticated. In particular, there is an increasing propensity for tourists to travel long distances, take more frequent holidays and seek more authentic or ‘back to nature’ experiences – while at the same time demanding better transport, accommodation and the guarantee of safety (Edwards, 1990; Cohen, 1995; Dann, 1997, Robinson, 1997; Swarbrooke, 1997). The search for authenticity is an important one in the context of tourism to national parks, and this will be discussed briefly. In the 1980s much was made of the search for authenticity through tourism, but experience suggests that while a truly authentic experience of a host culture may be possible to attain when the cultural gap between visitor and visited is not great, when there are vast differences between material provisions and expectations on the two sides, the tourist is more likely to accept a degree of staging than have to endure the reality of, for instance, the sanitation arrangements (or absence of these) in rural India.
(Henry, 1996; Woodley, 1993). The issue of authenticity in tourism will be returned to later in this chapter when the impacts of tourism are discussed, and also when tourism to Bromo Tengger Semeru is considered.

Returning to trends in tourism, a further one identified in the late 1980s and early 1990s was in responsible tourism (The Tourism Society, 1991; Kiernan, 1992). Interest in this was stimulated by popular books and newspaper articles on tourism such as Death By Tourism (The Independent, 1990), Crisis on the Crumbling Costas (The Observer, 1990), The Good Tourist (Wood and House, 1991) and Holidays that Don’t Cost the Earth (Elkington and Hailes, 1992). A decade later, tourism and development analysts were still pointing to a stronger demand for more responsible tourism and an answering increase in moves towards corporate social responsibility (The Independent, 2001; Baldwin, 2002; Tearfund, 2002) – although by then, and on closer inspection, some of this concern could be seen as more superficial than real, as will be shown below. The potential conflict between some of these trends – for instance the difficulty of reconciling a desire for more authenticity with the demand for better facilities - can already be glimpsed and, as will be seen later in this chapter, some of the trends may conflict with the quest for sustainability in tourism, while others support it.

As a further trend, Nuryanti (1996a) and Pigram and Wahab (1997) have pointed to the possibilities offered by technological developments such as the Internet and virtual reality for collapsing time and space in order to achieve the interweaving of fantasy and reality tourists seek – but although by the time of writing in 2003, the Internet had clearly expanded the ease of finding out about possibilities for actual travel, virtual travel itself seemed to have little appeal (Kerr, 2001).

For the purposes of this study, trend analyses discovered during the literature review were limited in that they focussed generally on tourists from industrialised countries. This made them less useful for understanding the growing intra-regional and domestic markets of East and South-East Asia, where for historical, economic and cultural reasons tourism may be developing along different lines to the North. This is
important in the context of Bromo Tengger Semeru and of tourist consumption of wilderness, to be discussed in the next chapter. Before this, other processes within tourism and their relevance to sustainability will be examined. An important aspect of this is that the expansion of tourism means that its impacts are also increasing. These will be outlined below after the discussion of a useful model for the analysis of tourism development and expansion.

The Tourist Area Life-Cycle

A very influential model which has been used both as a planning tool and as a means of analysing tourism development is the Tourist Area Life-Cycle (TALC), developed by Butler in 1980 (the summary of the model here is mainly from Cooper et al, 1993). This six stage model (Figure 1, overleaf) demonstrates how tourism to an area begins with a few explorers “discovering” it and sharing the local people’s facilities. After some word-of-mouth promotion a more regular flow of visitors arrives, to be catered to in a fairly basic way by local people. As more and more tourists arrive, outside entrepreneurs see the commercial possibilities and move in to provide more sophisticated services, marginalising the local people. The authenticity of the local culture or the natural attractions, which may have been what attracted the early visitors, may become increasingly subject to interpretation or staging, either substantively as visits to local events or panoramas are adapted to the tourist’s schedule or attention span, or through communicative staging offered by guides who interpret local life to the tourists in an idealised form (Cohen, 1989). As the market consolidates, the rate of increase in visitors slows down, although numbers are large and a range of services is provided. In the next stage the destination may lose its appeal, often partly as a result of the effects of environmental or socio-cultural stress, and as tourist numbers decrease the resort enters a decline.
This model has achieved broad acceptance because it takes into account both quantitative and qualitative aspects of tourism. There have been some modifications: for instance de Kadt (1992) has suggested that a more stable, permanently small-scale type of tourism can exist alongside mass tourism, while others have pointed out that rejuvenation efforts can prevent the inevitability of the downward phase (Cooper, 1997; Baum, 1998). The different stages may also be affected by factors extraneous to the resort or even the country concerned: environmental damage such as an oil spill, or political instability can cause a sudden decline in numbers, as in the case of Bali after the bomb attack in October 2002 (IHTH, 2002; BBC Radio 4, 2003) or North Africa and the Middle East during the 2003 Gulf War (Jardine, 2003). The basic model does, however, have significant implications for the sustainability of tourism and it is relevant for Indonesia, where the different stages can be seen in operation throughout the archipelago, including around Bromo Tengger Semeru, as will be discussed in Chapter 7. For now, the history of tourism to Indonesia generally will be outlined.

**Indonesian Tourism to the mid-1990s**

As with all externally-focussed tourism, the growth of the industry in Indonesia has been subject both to exogenous and endogenous influences. Before the Second World War, leisure tourism in Indonesia essentially consisted of holiday trips by Dutch colonial settlers around the archipelago, including overland tours of Java, and visits by cruise ship passengers (mainly Americans) to Bali, which began to become known to the outside world in the 1930s after foreign writers and artists settled there and wrote of its beauty and artistic expressions (Koke, 1987; Picard, 1996). During the 1940s the War and struggle for
Indonesian independence effectively put a stop to any tourism for a decade, and amidst the economic and political uncertainty of the first 15 years of the newly independent Republic of Indonesia (referred to in the previous chapter) tourism was not a priority — although institutional structures for it did exist as it was deemed useful to boost foreign exchange, reduce the balance of payments deficit, and increase international understanding of the new country (Esmark, 1957). But the number of leisure tourists was tiny and they were outnumbered by foreigners arriving for business or other purposes: for instance of 9,112 foreign visitors in 1955, only 1,562 had tourist visas (Spillane, 1987). The low numbers were perhaps not surprising given the experience offered, according to a UN tourism advisor: "it should be possible to handle tourists with greater judgement and elasticity than is being shown in Indonesia today ... nowhere have I met so many difficulties and so much control of tourists" (Esmark, 1957:33). A lukewarm reception and limited facilities notwithstanding, arrivals did increase to 40,900 visitors in 1962, and in the early 1960s the construction of four international-class hotels funded by Japanese war reparations helped to create a modern tourism infrastructure.

But in the mid-1960s Indonesia was in no position to take advantage of the increase in global tourism because of the continuing instability and civil strife of the later Sukarno years. Once Suharto's hold on the presidency seemed secure by the late 1960s, however, moves were made to encourage foreign tourism as part of a general opening up of the country to the outside world. In 1969 Bali's international airport was modernised, a Directorate General of Tourism was established as part of the Ministry of Communications, and in the same year ministerial decrees were issued which established guidelines for the development of tourism and facilitated the construction of more hotels of an international standard (Spillane, 1987). Here, it is worth noting that the sectoralisation of tourism to within a specific ministry was inimical to later attempts to encourage nature tourism because the vertical and hierarchical structures of the Indonesian bureaucracy (discussed in the last chapter) meant that horizontal co-operation with the department responsible for managing national parks would be difficult.
Another very significant step in Indonesian tourism was the formulation of a master plan for the development of tourism in Bali (SCETO, 1971), and in 1974 a tourism study covering a wider area of Indonesia predicted that by 1979-80 there would be 1.1 million tourists per year (Kienbaum, 1974). However, events did not bear this forecast out, with only half the projected total - 561,200 visitors - reached by 1980 (see Appendix 1 for table of tourism arrivals). Even though there was a big discrepancy between the projected and actual numbers, this figure still represented a steep rise from the 129,319 visitors in 1970. The increase was due partly to the healthy business traffic to Indonesia as the economy opened up, and partly to the rapid global expansion of tourism during this period, as mentioned above.

Tourism was still only a minor industry in Indonesia since strong oil prices meant that the country had no need of tourism revenue in the 1970s, but the way the foundations for the industry were laid in Bali illustrates some of the themes of this thesis. As a prime example of the 'top-down' approach to development planning, the 1971 SCETO plan was very much in keeping with the neoclassical economic paradigm of the times – and, as will be seen in the next chapter, it mirrored the rationale of planning for Indonesian national parks. Even though the study was of key importance in shaping tourism in Bali for the next two decades, the Balinese were not consulted on its terms of reference, none of the consultants involved knew anything about Bali or Indonesia beforehand, and the team included neither an anthropologist nor a sociologist (Picard, 1996). The failure to involve consultants with local knowledge capable of taking a multi-disciplinary approach to development meant – in an illustration of the arguments of Parnwell (1999) concerning the need for area specialists - that tourism in Bali developed with little more than superficial reference to the cultural and social context of the island. Similarly, Wall (1996b) cites the paradox of tourism plans prepared by foreign consultants whose home

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1 Due to over-optimism by the consultants and to the slower-than-planned construction of facilities (Picard, 1996).
countries have economic structures different to those in the countries they are seconded to.

While planned growth in tourism provision in Bali got off to a slow start, spontaneous provision responded to demand in true free market style, as the resort of Kuta became increasingly popular with backpacker tourists travelling through Asia during the 1970s. The local population responded enthusiastically to the visitors and gave them lodging in their homes or built extra rooms for them, generating considerable wealth and sparking off steep speculation in the price of land (Mabbett, 1987). Planned development gradually took off too, with hotels built first in the southern part of the island, as scheduled by the SCETO master plan, and then in other parts of the island, under pressure from Balinese and outside entrepreneurs (Inskeep and Kallenberger, 1992; Cohen, 1994). Development in fact followed the classic pattern of the Tourism Area Life Cycle, with outside entrepreneurs moving into various formal and non-formal sectors of services provision (de Jonge, 1999). Local entrepreneurs continued to prosper alongside these, with their range of enterprise expanded by the interest in Balinese arts and crafts which, often with the help of foreign intermediaries, found a ready market abroad (Gardiner, 1989). The Balinese became so involved in the tourism industry that by the end of the 1980s it was apparently difficult to find local agricultural labourers prepared to work the rice-fields; migrant workers from Java were employed to do the low-paid tasks associated with this (Wirawan, 1992b). It will be seen that this has resonance for the case study because of the involvement of the Tenggerese in tourism.

The rapid expansion of tourism throughout the 1980s was possible both because of Indonesia’s move towards export-oriented growth to compensate for falling oil prices, and because of a change in domestic political attitudes towards tourism. According to Achmad Tahir, then Minister of Tourism, Post and Telecommunications, "the President decided that after three five-year-plans there was enough internal social and political stability that Indonesia could be more open in its contacts with foreigners" (Kaleidoscope, 1984). In the fourth five-year-plan (1983-88) the government expressed its commitment to developing
the tourism industry, and the Upper House of Parliament (MPR) passed a resolution stating that "tourism development must be increased in order to expand employment and business opportunities, to increase foreign exchange earnings, and introduce Indonesia's culture to a wider audience" (Spillane, 1987:80). To facilitate these aims, a Ministry of Tourism, Post and Telecommunications was established in 1983 within which was the Directorate General of Tourism. In the same year visa-free entry and right of stay for two months was introduced for tourists from 24 countries (increased to 46 by 1993), and a series of other measures were taken to encourage tourism, including liberalisation of flight policy, simplification of hotel licensing, permission for foreign tour operators to set up joint ventures, and increased overseas promotion (Hadmoko, 1986).

These measures paid off in a significant increase in tourism arrivals, so that at the end of 1986 Indonesia's main English-language newspaper proclaimed that "Indonesian tourism ... is finally entering golden days" (Jakarta Post, 1986), and in 1987 arrivals exceeded one million for the first time. In an extraordinary period of expansion which was due only in part to global increase over the same period, just three years later arrivals had doubled to over two million and in 1995 there were 4,324,229 tourists, compared to just 825,035 in 1986. Over the decade 1986-1995, tourism increased by an average of 18.7 per cent per year, while the average increase in foreign exchange earnings from tourism over the same period was 26.9 per cent, compared with 12.58 per cent for the world (DGT, 1996). Even by 1990, Indonesia was considered "one of the success stories of international tourism of the last decade" (EIU, 1991:23), and in 1995 earnings from tourism totalled US$5,232.6 million, making it the third largest foreign exchange earner.

In 1996 the figure of 5 million visitors was surpassed for the first time. Few limits to this apparently unstoppable growth were seen: tourism was predicted to become the largest foreign exchange earner by 2005 (Ave, 1996), with 11 million annual arrivals by then (Mather, 1995). This optimism was soon dispelled, however. The crash of a Garuda plane in September 1997, coupled with negative publicity over the burning of the rainforest in Sumatra and Kalimantan (Mawdsley, 1997; Hiebert, 1997) and uncertainty over the political
situation, resulted in a fall in visitor numbers from a high of 5,185,243 in 1997 to 4,606,416 in 1998, which was also the year of greatest recent political and economic instability\(^2\). The decline was also attributed to the regional economic crisis in Asia (Jakarta Post, 1998), which affected the important East Asian market. Numbers climbed back up over the 5 million mark in 2000 but then, as noted briefly above, the bombing of a Bali night-club caused another steep decline and an attendant crisis within the Indonesian travel industry. Despite the decline, in 2002 tourism was still the second-largest foreign exchange earner for the Indonesian economy and employed around 12 million people (Wiradji, 2003), which meant that any major decline in the industry would have an impact on a great many people and, perhaps, on the environment.\(^3\)

The success of tourism in quantitative terms did not, of course, come without its drawbacks. Most obviously, tourism has been allowed to develop almost unchecked in Bali (Cohen, 1994; Warren, 1998). The 1971 SCETO master plan was over-ridden once it was realised that tourism arrivals would exceed the planned targets and the tourism infrastructure was extended to most parts of the island. For the first decade or so of mass tourism in Bali, commentators often remarked on the ability of the Balinese to withstand the possible negative impacts of the tourism influx (Noronha, 1979; McKean, 1977/1989; Mabbett, 1987), but more recently the strain on the social and environmental fabric has become obvious. The anthropologist Michel Picard has summed up the situation thus: "for anyone observing the evolution of the situation over the years, it is hard to banish the impression that the barriers meant to contain the surge of tourism and to control its development are about to crash. Regularly predicted by the prophets of doom since the 1920s, and always held at bay, the fall of the Balinese from the Garden of Eden looks more imminent than ever" (Picard 1996:186). The rapidity and style of development

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\(^2\) These are the official figures of the Directorate General of Tourism in Jakarta, whereas the 2001 Asian Yearbook puts the 1998 figure much lower, at 3,373,090, and the 1999 figure at 3,543,767.

\(^3\) A small illustration of this came during consultancy work in Sumatra in 1998. In a protected area, a man was encountered clearing land to plant a quick-growing crop called nilam (used in the perfume industry). He had worked as a cook in a big hotel in Medan until the end of 1997, but because of the fall in tourism numbers had been forced to revert to earning a living from the land (pers. obs.).
demonstrates the process of the TALC all too clearly and cannot be said to be sustainable, as attempts to restrain development, mitigate environmental impacts or return control to local hands have been weak. By the late 1990s the increasingly large scale of tourism developments in Bali was engendering considerable local opposition, essentially because tourism developments had over-stepped the accepted limits of local interest, raising "questions of balance and control in the use of cultural and environmental resources" (Warren 1998:254). Here is illustrated the central paradox of sustainable development, as discussed in the last chapter: the pressure for economic development versus the long-term desirability of environmental and social sustainability, with the former generally appearing to be in the ascendant.

While the dimensions of tourism to Indonesia are easy enough to quantify, what of the qualitative aspects, such as its style and cultural impacts? As far as the form of international tourism is concerned, planners have been much influenced by a 'beach-with-cultural-overtones' model, in common with other countries enjoying similar attributes of a warm climate, extensive coastline, attractive scenery, and friendly local people offering a diversity of easily-assimilated cultural manifestations. The 'cultural overtones' include popular and important sites such as the temples of Bali with their ceremonies, the villages of Tanah Toraja in South Sulawesi, and the World Heritage monument of Borobudur, in Central Java. The history and culture sector is of undoubted importance (Oxford Analytica, 1995), and some observers have pointed to diversification into ecotourism and more widespread heritage tourism (for instance Cowherd, 1997; Goodwin, 1995; Dahles and van Meijl, 1999), while there is substantial interest from backpackers in a more exploratory form of tourism (Hampton, 1997) and from Dutch visitors in 'nostalgia' tourism (pers. obs.).

However, it is expected that by far the greatest number of visitors will continue to purchase resort and beach-based holidays and that conventional mass tourism will continue to be the mainstay of Indonesian tourism for the foreseeable future (Mather, 1995). One reason for this is the changing market for Indonesia. As mentioned earlier in this chapter,
tourism grew much faster in the Asia-Pacific region in the 1980s than it did globally, and this continued into the first part of the 1990s, with the industrialised (or industrialising) countries of East and Southeast Asia such as Singapore, Japan, Malaysia, Taiwan, South Korea and Hong Kong overtaking the more traditional European markets as a source of tourists to Indonesia in 1988 (DGT, 1991) and forming 60 per cent of arrivals in 1995 (DGT, 1996). As already mentioned, the East Asian market is very significant for tourism to Bromo, both in terms of numbers and in the way tourism there has developed, which is partly because the needs and aspirations of Asian tourists are very different from those of Europeans and North Americans, with neither being particularly close to the culture of the host community. In Chapters 5 and 7 it will be shown that the Tenggerese are aware of these differences, while the implications of the range of attitudes of different groups of tourists towards the national park will also be discussed.

The Impacts of Tourism

We move on now to the environmental and cultural changes which occur as tourism moves through its life-cycle. While more space is normally devoted to the negative externalities (as will also be the case here), there are also important beneficial impacts which should not be ignored, and these will be outlined too.

In the early years of modern tourism, it was often seen as the 'perfect' industry, providing large numbers of jobs, producing short-term profits, and having few disadvantages. As the industry developed, however, it became apparent that the environmental, socio-cultural, economic and political effects of tourism included negative aspects as well as positive ones. These impacts are described below, and an awareness of them will be used in later chapters of this thesis as a framework for examining tourism in Bromo Tengger Semeru National Park.

The changes occurring to the natural and built environments are often the most obvious effects of tourism and have been well-documented, by Cohen (1978), Pigram (1980), Edington and Edington (1986), Buckley and Pannell (1990), O'Grady (1990), Glyptis (1991), Hunter and Green (1995), Roe et al (1997), and Buckley et al (2000).
among others. Environmental impacts include the conversion of formerly agricultural land to use for hotels or other tourist dwellings, traffic congestion, pollution of marine and freshwater ecosystems, disruption of wildlife habitat and consequent effects on animal behaviour, and alteration to hydrological patterns. Some specific examples of the ecological impacts of tourism in protected areas will be mentioned in Chapter 3. However, tourism also has positive effects on the environment, such as the conversion of redundant buildings from industrial to leisure uses, the enhancing of townscapes to provide a more attractive environment, and the preservation of natural ecosystems and traditional agricultural landscapes for tourism purposes. It should also be recognised that environmental impacts will result from almost any kind of commercial development, and that those associated with tourism may be less severe than in other cases.

Although the socio-cultural impacts of tourism are less easy to quantify than the environmental ones, these are also well documented in the literature, in works by de Kadt (1979), Murphy (1985), Rossel (1988), Smith (1989), Ryan (1991), Reynolds (1992), Archer (1996), Faulkner and Tideswell (1997), Gurung and De Coursey (2000) and Wearing (2001), among others. The most notable processes occur through acculturation, with the weaker culture (generally the host one) becoming altered through contact with the stronger (generally that of the tourists). One manifestation of this is the demonstration effect, whereby people from the host community aspire to the material or behavioural attributes of the visitors. In many cases tourism-related acculturation is far more complex than the straightforward demonstration effect. Changes may take place not only in the way traditional dances or other ceremonies are presented to the tourists, but also in the way these traditions are perceived by the host culture. Picard (1993 and 1997a), for instance, suggests that the Balinese now view their culture as a series of artistic expressions valuable for tourism, and that these are becoming homogenised into forms supposedly characteristic of the whole province of Bali rather than showing the nuances of different villages or courts as they formerly did.
Related to the way culture is presented is the degree of authenticity desired by tourists, which was touched upon earlier in this chapter. It is generally agreed that most tourists accept that many attractions are 'staged' in some way rather than being a completely authentic representation of culture or lifestyle. Some commentators ascribe this to a wider societal progression – in industrialised countries, at least - from modernism to postmodernism, in which the symbols of heritage and culture may be more important than the genuine article (Urry, 1990; Fussell, 1990; Butler, 1997). This analysis helps to interpret the tourism experience in national parks, as will be seen in Chapters 3 and 5. Going further, Mowforth and Munt (1998) comment that taking certain types of holiday adds to people's cultural capital, and that tourism itself is therefore symbolic in that the choice of holiday and destination demonstrates certain attributes about the individual.

For the host community, Buck (1977) and Gonseth (1988) suggest that staged events act as a barrier to the over-close scrutiny of the tourist gaze, and that they demonstrate the theory of cultural drift, described by Collins (1978), whereby residents adjust to the needs of the visitors during their presence but return to their ordinary lives after their departure. The actual or communicative staging of the lifestyles of indigenous peoples has particular resonance for this thesis, as national parks are often home to people whose stage of development is very different to the tourists who visit them, and they sometimes constitute as much of an attraction as the animals (especially given the secretive, solitary nature of much Asian wildlife). The form of communicative staging cannot remain static, either: in her study of tourism to traditional Sasak villages on Lombok, Bras (1999) contends that tourists increasingly require a guide who communicates the 'meaning' of everyday lives, and certainly the interaction between visitors and visited may well become more sophisticated as well-travelled, well-educated tourists demand further knowledge. Guides will also have to be able to interpret the changes to the culture of the visited community, which will evolve both because of tourism and because of other influences.
One of these influences concerns a particularly interesting aspect of tourism development. This is the way that Indonesian culture – or at least a limited definition of it – has been managed overtly for tourism purposes and covertly for political ones. In accordance with the national motto 'Unity in Diversity' and in keeping with the Suharto regime's attempt to keep the archipelago united and its drive towards social stability, described in the last chapter, the diverse ethnic groups of Indonesia have been redefined as parts of a coherent entity, varying only in their external appearance. As Wai-teng Leong (1997) also remarks in the context of Singapore, in a process which "obscures the gap between living ethnic traditions and the official versions of those traditions" (Wai-teng Leong, 1997:85), even art forms in Indonesia which originally had a spiritual or ritual significance are "tamed for the entertainment of tourists, and folklorized as tokens of regional identity" (Mulder 1996:155). In presentations of Indonesian 'culture', by the 1990s the different regional forms had taken on a uniform appearance, with young men and women wearing an idealised version of traditional local dress and performing an idealised version of traditional dances, often newly choreographed. The process of reducing the broad range of culture to tourist-orientated arts in order to foster national cohesion (Wood, 1997) was formalised in Indonesia in 1998 with the creation of a new Ministry of Tourism, Arts and Culture, which was greeted by Indonesian intellectuals with protests that culture was broader than those aspects which could be presented for tourism (Budi, 1998).4

The process of commodification of ethnicity is seen at its most obvious in Bali, which has seen close to four decades of packaging of its culture. Here, the responses of the Balinese to tourism have been the subject of considerable study, and research by Picard (1996, 1997b) has shown that the Balinese have reshaped their own culture in terms of its appeal to tourists. Picard also points out that international recognition of their culture has enabled the Balinese to create a position of greater strength for themselves in relation to the

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4 Furthermore, there was no immediate indication of how responsibility for 'culture' would be divided between the new Ministry and the existing Ministry of Education and Culture.
Indonesian polity as a whole – although this has been limited by the fact that control of the industry is vested in the central government. Adams (1997) contends that this has also occurred with the Torajanese in South Sulawesi in their sometimes discordant relations with the politically and numerically dominant Buginese: the colourful Christian/animist rituals and architecture of Tanah Toraja have proved more popular with tourists than the cultural manifestations of the rather dour and strongly Islamic Buginese. These processes are interesting in their implications for the sustainability of tourism, since on one hand, tourism fosters some visual elements of culture and can boost the position of the ethnic group in question in relation to the majority, while on the other it can obscure underlying complexities and the diversity of cultures. There may also be parallels with the response of the Tenggerese to tourism because they are also a minority group surrounded by a larger population of a different religion and with slightly different cultural characteristics. As the Balinese have lost control of the processes of tourism, they have reacted "by closing ranks behind their religion" (Picard, 1997a:206), and it would be interesting to see whether the Tenggerese would use their religion as a cultural marker more vigorously than previously in the face of increasing contact with the outside world.

Although anthropological studies can go a long way towards increasing our understanding of the cultural influences of tourism, it is often very difficult to disaggregate its effects from change due to other influences such as television, government development activities, education of local people outside their home area and the return of migrant workers. As Erb (2000) points out in the context of tourism amongst the Manggarai people on the Indonesian island of Flores, tourism is just one in a number of processes of modernisation and globalisation. Furthermore, interactions between tourists and residents tend to be temporally or spatially limited, and in a multi-cultural country the dominant indigenous culture may be inducing far greater changes than the foreign one introduced by overseas tourists. During the field survey in Bromo Tengger Semeru this will be borne in mind, and an effort will be made to determine the
attitude of residents to tourism and to evaluate any cultural changes which may be due to
tourism rather than to other influences.

Moving on now to the economic impacts of tourism, these are generally the most
positive as far as governments are concerned, and many ways of calculating them have
been developed. The principal methods are outlined in texts such as Mathieson and Wall
(1982) Cooper et al. (1993) and also in Thea Sinclair (1991), Harris and Nelson (1993),
Snowdon, Slee and Farr (2000), and Lindberg (2001). The relative ease and speed with
which overseas investment in tourism can be obtained, the short-term prospects for in-
country foreign exchange spending, and the requirement for relatively unskilled labour
are attractive to governments seeking ways to increase income and employment and
foreign exchange earnings. This is why tourism was often chosen as an element of the
export-oriented industrial policies advocated under the structural adjustment programmes
of the 1980s, as described in Chapter 1, and why it was emphasised so strongly in
Indonesia.

Because of the range of sectors involved in tourism the economic effects are spread
very widely, and the full economic impact can only be assessed by measuring the direct,
indirect and induced expenditure of tourists. This entails gathering data on tourism
expenditure at the destination as well as before departure; the amount spent by hotels and
other providers on purchasing supplies to cater to the tourists; the induced effect of this
expenditure on the local economy as the money circulates within it; and the extent of
leakages. It was beyond the scope of the Bromo Tengger Semeru study to investigate the
regional and international economic aspects of tourism to the national park in detail, but
an overview of this will be given as part of the discussion of whether tourism to the
national park has any impact on biodiversity conservation. On the other hand, the local-
level economic impacts of tourist expenditure at the destination was investigated, as it
was thought that this could have an impact on decisions on resource use, and this will be
discussed in Chapter 7.
An important but often overlooked area of tourism's influences is its political impacts, although notable studies have been made by Richter (1989, 1991 and 1993), Hall (1994) and Richards (1995), while other authors, such as Poirier (1995), Archer (1996) and Wells (1996), have included consideration of these in their work. Tourism is undoubtedly an extremely political activity, from government policy which affects the way the industry develops to the distribution at local level of its benefits (or costs). Tourism can be manipulated by governments to further foreign or domestic policy aims, for instance with the construction of showcase attractions or the staging of keynote events designed to enhance national prestige, or as with the domestically-focussed tourism promotion campaigns which took place within Indonesia in the late 1980s and early 1990s (Hadmoko, 1990), which seemed to be as much about creating a unified nation as about attracting tourists. A government's attitude to tourism may be determined by its overall philosophy: visa restrictions may be applied to nationals from politically hostile countries, and a repressive regime may not wish to open itself up to outside scrutiny. Richter (1989) gives the example of the blatant manipulation of tourism policy by the Marcos regime in the Philippines, with up-market tourism and high profile events encouraged by the regime after martial law was introduced in 1972 to 'prove' to outsiders that a stable regime existed. There are domestic impacts of such a policy, too, in that the presence of tourists confers a type of legitimacy on the regime, proving to dissidents that it is accepted internationally.

Here, an underlying current of reticence of Indonesia towards developing tourism is relevant, with its ambivalent attitude arising in part because of continuing international criticism of social policies such as transmigration (for example Monbiot, 1989a and 1989b), the forced relocation of villages from tourism development sites (Jeffrey, 1990; Cohen, 1994; McCarthy, 1994), the occupation of East Timor from 1975/76 onwards and other human rights and environmental abuses (Hitchings, 1993; Down to Earth, 1991). Yet neither these injustices, or even the shooting of dozens of demonstrators in East Timor in 1991 (Stahl, 1991) put a brake on tourist arrivals, as with
their customary indifference to domestic political and economic problems when these do not affect personal safety, tourists continued to arrive in increasing numbers. As Hall remarks, "authoritarian regimes do not of themselves deter tourists; instead ... it is political instability which drives off tourists and foreign investment in the tourism industry" (Hall, 1994:83-4).

There are other political factors relating to tourism at a more local level. For instance, tourism developments may be used by the local community to increase their standing within the national or regional polity, as discussed in the context of Bali and Tanah Toraja, or to reinforce existing power balances through the process of élite capture. Other local-level political aspects concern the interplay of individual personalities: Romeril (1994) reminds us that local decision-makers are often in a position to ignore national and regional policies when it suits them and, as mentioned in Chapter 1, it has been found that strong leadership at a local level can go a long way towards resolving conflicts over resources. These aspects may be significant for the future sustainability of the industry in a national park – and therefore for the conservation of local biodiversity. Also in the context of conservation, the allocation of revenues earned from tourism to a national park can depend on political decisions – will they be invested in stronger park protection measures, distributed to the communities living around the park, or simply fed into the national coffers for more widespread distribution? These questions will be considered in the case of Bromo Tengger Semeru.

The impacts of tourism are undoubtedly wide-ranging, but there is a temptation to ascribe to the industry a more significant role than it actually warrants because of its high profile. At the same time, greater understanding of the influences of tourism should lead to more appropriate tourism policies where an attempt is made to minimise the negative impacts, and an awareness of the problems created by tourism was a principal factor in the emergence of responsible tourism. This, and its relationship to how sustainability is manifested in the context of tourism, will next be discussed.
Tourism and Sustainability

It was suggested in the last chapter that the principles of sustainable development are subject to inherent conflicts and that much effort has been devoted to finding ways of making the concept workable in practice. Tourism is just one example of an industry which has become pervaded by the ideals of sustainability. This section will examine how sustainability is being incorporated into tourism, look at some of the obstacles to sustainability, and identify signs which offer hope for the future. To begin with, an outline of how the concept of responsible tourism arose will be given.

Tourism has always presented a spectrum of manifestations rather than a clear-cut division between “conventional, mass” on the one hand and “alternative” on the other, and as part of more sophisticated study of the industry since the 1970s, different types of tourism have been codified. Numerous typologies of tourists have been formulated, amongst which the most easily-applied is Cohen’s 1972 classification (cited in Ryan, 1991) into four categories: the Organized Mass and Individual Mass tourists, who patronise the established tourism infrastructure of tour operators and hotels, and the Explorer and Drifter tourists, who avoid contact with such formal institutions. These categories fit neatly in with the TALC model, but while they are helpful for a broad analysis of tourism, they are of less use for understanding tourism at specific types of destination. Accordingly, a modified typology has been developed for the tourists who are likely to visit the Indonesian national parks which form the basis for this case study, and this will be presented in Chapter 4 as part of the methodology.

Cohen’s Explorer and Drifter tourists have existed since the inception of post-war tourism and certainly considered themselves distinct from Mass tourists, although as will be discussed below, they often demonstrate characteristics akin to their Mass counterparts. It was not until the 1980s, however, that a conscious alternative tourism began to emerge, attributable partly to the growing awareness of the negative impacts of conventional tourism. In the late 1980s an organisation dedicated to campaigning for positive tourism, Tourism Concern, was set up in the UK, and by the early 1990s epithets
such as 'responsible travel', 'green', 'soft', 'appropriate', 'sustainable', 'eco' and 'alternative' tourism were being used to describe - in general - forms of leisure travel which did not use the larger formal installations of tourism, had a lighter impact on the destination, and provided the tourist with a more authentic experience (Barnett, 1991; Hailes, 1991; Eber, 1992). In 1993 this specialised field was given academic respectability with the appearance of the Journal of Sustainable Tourism, which intended to foster the debate on what constituted sustainable tourism and to highlight good practice within the industry (Bramwell and Lane, 1993).

From the ensuing debates over sustainable tourism and its allies, the main principle which emerged was that no form of tourism should exceed the capacity of the physical and human environment to withstand it without undergoing serious changes. More detailed principles were that tourism should be small-scale and integrated with other industries or land-use strategies; that it should make careful use of environmental resources and promote conservation; that it should be of long-term economic benefit to the local community, who should be stakeholders in any development and have a decision-making role; that it should not undermine the host society and culture and that the local culture's contribution to the tourism experience should be recognised; and that it should be capable of attracting increasing numbers of tourists and continuing to provide them with a fulfilling experience (de Kadt, 1990; Cater, 1992; Eber, 1992; Gunn, 1994; Jamal and Getz, 1995; Müller, 1994; Hunter, 1995). These principles were much influenced by the concurrent debate on sustainability taking place within development circles, as discussed in the last chapter, and echoed a similar shift away from top-down, large-scale projects towards a more participatory approach. This is particularly important for this thesis, since tourism can only be considered beneficial to protected areas if it is demonstrably sustainable from the point of view of the environment and of the local people.

Commentators on sustainable tourism, including those mentioned above, have generally been aware of the paradoxes and challenges it poses, many of which mirror
those of sustainable development generally. Some observers go further, however, in taking issue with the concept of alternative tourism: Brian Wheeller has been a consistent critic (Tourism's Troubled Times: Responsible Tourism is not the Answer, 1991, and Sustaining the Ego, 1993), while Richard Butler (Alternative Tourism: Pious Hope or Trojan Horse?, 1990) also added his weight to the critical side of the debate. The appropriation of the term 'ecotourism' by what many see as the mainstream industry and its use, figleaf-style, to cover the 'naughty bits' of tourism has come in for particular criticism. Even in the press the concept was questioned: for instance a 1991 article in The Independent asked whether a focus on ecotourism meant that "the few remaining wilderness areas of the world [would be] swarming with people under the misapprehension that they are benefiting the planet simply by virtue of being there" (Hailes, 1991: 39). While not wishing to add further words to this already overladen topic, the question of what constitutes 'ecotourism' will be returned to in the next chapter when tourism to protected areas is considered because it is important as a cultural construct for both tourists and protected areas managers.

To return to the broader issue of sustainable tourism for now, with the exception of one or two more radical views, there was in fact little disagreement that alternative forms of tourism hardly differ from conventional tourism in their practice and impacts, and that what was required was not "a 'new' or 'alternative' form of tourism, but a way of making the conventional more sustainable" (Godfrey, 1993: 67). Again, this ties in with the debate outlined in the last chapter on how to make the market economy function more sustainably. The debate on sustainability in tourism centres on the idea that, with good management, the negative impacts of tourism can be minimised and the positive ones maximised. However, attempts to make the principles of sustainable tourism work in practice are fraught with a number of obstacles, most of which relate to the realities of how the tourism industry operates. The main challenges lie in five areas: with the needs of governments, with the social, cultural and political context, with the nature of the tourism industry and market forces, with the tourists themselves, and with the host
community. Of course, there is considerable overlap between these five areas, as will be shown. This part of the discussion will, again, add to the framework for the specific context of Bromo Tengger Semeru.

The first challenge to sustainable tourism is thrown up by the constraints that governments work under. One of the original tenets of sustainable tourism was that it should be small-scale - but as Wheeller (1991) points out, if tourism is to answer policy aims such as earning foreign exchange, creating employment and promoting regional development, it has to be big - particularly in a country like Indonesia, where the workforce increases by around 2.5 million people per year. It could be argued that a lot of small-scale developments rather than a few large ones would answer both the aims of government and of sustainability - but on the other hand, tourism spread thinly over a large area may have more cultural and environmental impact than if it is concentrated in a smaller one. If governments see that there are relatively quick gains to be made from tourism, especially if these can apparently be made with little investment or because foreign investors are keen to assist, then the pressure to allow rapid expansion of tourism and major developments is hard to resist, as seen above in the case of Bali.

In Indonesia, an additional challenge comes from the socio-political environment. At least until the fall of Suharto in 1998 there was little possibility of questioning the government-led push for economic development. This was exacerbated by a general tendency within Indonesian society to emphasise form rather than substance, and to maintain the status quo at all costs. Often, an elaborate pretence of well-being is maintained, even though beneath the surface there may be disorder or completely different circumstances than are apparent. Thus, under Suharto, the government was able to use its quinquennial general elections to 'prove' to the outside world and to its own people that Indonesia had a fair system of government, while in reality the elections merely legitimised the centralised and oppressive bureaucratic and military control of the state (Vatikiotis, 1993). In a similar vein, development consultants have often been sceptical about the graphs, maps and statistics produced by government officials which purport to show
projects carried out, and yet when the site is visited there is little to see (Rude, 1998), while during tourism consultancy work in Indonesia, the author found that government officials freely admitted to making statistics up in order to obtain a greater slice of whatever budget applied to their department (Brown and Cochrane, 1991).

These are just small examples of the absence of transparency in governance which was not only the result of the suppression of dissent under the Suharto regime but also the outcome of a disapproval of critical appraisal and a different perception of the importance of accurate reporting than prevails in the North. It was explained in the last chapter that in Indonesia criticism is seen as an insult, and there is strong social disapprobation towards creating disharmony through criticism by word or action. This is also seen in day-to-day exchanges, when there is a reluctance to incur, proffer or accept criticism. Consequences of these processes include the easy acceptance of hierarchy and the political inaction which characterised much of the post-Independence period and a general "acceptance of shoddiness" (The Economist, 1987). When viewed from within the Northern paradigm of self-examination and critical review, this is damaging for both tourism and the environment since policy failings cannot be identified or, therefore, remedied. This has implications for sustainability since, as shown in the last chapter, ways of trying to achieve this are constantly under review. Without this review process, no adjustments can be made, and the prospects for achieving sustainability become remote. It should be said that the attributes described are particularly evident in the case of the Javanese, but since this group has dominated the government and bureaucracy of Indonesia since Independence any constraints to sustainability and good governance presented by them loom large. The socio-political characteristics of Java were indeed recognised as a barrier to sustainable practices by Timothy (1998) in a study of the lack of co-operative planning in the tourism sector in Yogyakarta, in that a reliance on a traditional hierarchical model of power structures and a lack of cross-sectoral links resulted in a piecemeal and uncoordinated approach to tourism development.
A third area of challenge to sustainable tourism comes from the tourism industry and market forces. Tourism resorts and companies experience competition on several levels: outbound tour operators compete with each other for market share, while hotels and resorts compete with one another in the destination country, and countries with similar products compete with each other. Except when a deliberate decision is taken to position the tourism industry as exclusive and expensive, as in the case of Dominica and Bhutan (Cater, 1993; Inskeep, 1994; Weaver, 1994) governments are unlikely to take measures which might impede the short-term growth of the most easily-created forms of tourism, which effectively encourages prices to remain low. As discussed in Chapter 1, the interplay of market forces means that, left to their own devices, the most profitable enterprises will predominate, regardless of any negative social and environmental consequences. This situation is exacerbated in countries where countervailing forces to individual or governmental excesses are under-developed and where regulations are widely flouted: it was said in the last chapter that true participation in development is particularly difficult to achieve in such circumstances. A good example of this was shown during a study of tourism to Komodo National Park, where Walpole and Goodwin (2000) found that the remoter communities of the Komodo group of islands already experienced distributional inequality because of the pressure of core-periphery relations, and this limited how far they could take advantage of any form of economic development, including tourism. The conclusion was reached that tourism could not benefit the local communities under the current laissez-faire system of tourism development and that some form of regulation was essential.

A further need for government intervention is because of the environmental consequences of unregulated market forces. As we saw in the previous chapter, one way of ensuring profitability is to treat environmental resources as 'free', but they thus become subject to the 'tragedy of the commons' scenario. Since the consequences of this are now well understood, why have so few measures been taken by the industry to address the environmental costs of tourism? The major issue here seems to be the lack of
assigned responsibility within the tourism industry for the environmental resources consumed. Research by Forsyth (1995) and Gountas and Carey (1996) amongst tour operators showed that although they were aware of the negative impacts of tourism and realised that it was in their long-term interests for the environment to be protected, they saw it as the responsibility of the host government to regulate causatory practices – but if the host government offers weak governance, then there is little likelihood of regulatory measures being introduced.

In the last few years, however, some self-regulatory measures have been taken by the tourism industry, perhaps inspired by the climate of increased corporate social responsibility outlined in the last chapter. For instance, the UK Association of Independent Tour Operators (AITO), which groups around 150 tour operators, has introduced a code of conduct to encourage its members to behave in a more socially and environmentally responsible way (Baldwin, 2002; Hearn, 2002), and in the tourist-popular Balearic islands a tax on tourists was introduced in May 2002. The tax is designed to subsidise other economic sectors such as agriculture and improve facilities for 'green' tourism and, in the longer term, to allow for a lower density of hotels. This move offers disappointment as well as encouragement, however, since the tax was opposed by tour operators, and a subsequent fall in visitor numbers to the Balearics was blamed on it by some commentators - although other industry analysts pointed to other reasons for the decline such as the economic recession in important generating countries (Jefferies, 2003).

It is too early to know whether measures such as these will help to reduce the environmental costs of tourism, but the fact that the industry has embraced such measures with what some might regard as feebleness is not very promising. Yet the reasons for the opposition to the eco-tax and the tardiness with which even well-meaning companies comply with the principles of the AITO code are at the heart of the dilemma over implementing sustainability measures, in that the need for profitability forces individual companies to compete with one another on the grounds of price or other attributes.
considered desirable by the holiday-buying public, for whom the long-term and somewhat abstract ideals of sustainability are of low importance. Adding to these obstacles, Middleton and Hawkins (1998) point out that although legislative frameworks may evolve to reflect increasing public concern on environmental issues, the time-lag for developing these is so slow that the limits of natural resources may be reached before the necessary regulations arise. Despite this, the consensus among tourism analysts seems to be that if there is to be any progress towards mitigating the damage caused by the industry, external regulation has to be introduced in conjunction with a degree of self-regulation (Goodall, 1997). For the purposes of this thesis, however, it is significant that if environmentally sustainable measures cannot be successfully introduced in the generally well-regulated, law-abiding and democratic context of European countries, it seems doubtful whether there are any better prospects for them in Indonesia.

The fourth area of challenge to sustainability comes from the tourists themselves. Most international tourists (and many domestic ones) have well-formed ideas of what to expect on their holiday, their expectations shaped by holidays elsewhere (Urry, 1996) and by promotional materials which, as Selwyn (1993) points out, tend to reinforce the tourists' values rather than those of the host country. Fulfilling these expectations may require expertise which developing countries lack: better-qualified guides and other staff may have to be brought in from abroad or from outside the region, along with foodstuffs and other goods familiar to tourists. This not only increases leakages from the tourism economy but also reduces the possibility for local people to benefit economically, a situation exacerbated as the destination progresses through the stages of the Tourist Area Life-Cycle. Walpole and Goodwin (2000) confirm that at Komodo National Park, in Indonesia, ownership of goods and services has gradually passed out of local ownership as the destination has increased in popularity. This tends to support the need for regulatory intervention in that in response to the demands of the tourists, market forces will tend inevitably to squeeze out the weaker providers (in all probability consisting of
under-capitalised and under-resourced indigenous enterprises) in favour of exogenous ones.

Another way in which the demands of tourists conflict with sustainability principles is that many holiday-makers are determined to enjoy their vacation to the maximum and 'get their money's worth', whether this entails visiting a different night-club every evening or viewing rare wildlife. They thus have a short-term interest in insisting on the 'best' the destination has to offer rather than a long-term stake in helping to maintain its cultural or environmental integrity. Furthermore, in an ideal world, tourism would foster genuine international understanding through meaningful exchanges between hosts and guests and thus enhance cultural tolerance and sustainability. It has long been recognised, though, that "tourists have considerably less desire for intense intercultural encounters than is alleged" (Nettekoven, 1979:136) and, as mentioned above when the impacts of tourism were discussed, a degree of inauthenticity and of separation between tourists and local people is accepted (and even welcomed) by both parties. The author's previous experience as a tour leader certainly bore this out: even on relatively expensive, up-market tours, the ritual of capturing on film an element of local wildlife or culture before retiring to the air-conditioned comfort of minibus or hotel and to the predictable company of the group tended to replace any true interchange with the host culture, and friendships between compatriotic group members were more important and long-lasting than acquaintances made abroad.

As mentioned above in the case of Bali, it is in any case only the most obvious manifestations of the host culture which receive recognition for touristic purposes, and the pressure of schedules and for regular, tourist-accessible performances militates against cultural integrity. The ways in which the cultural attributes of host societies have been amended for presentation to tourists were documented early on in the study of the modern tourism by Nettekoven (1979), Murphy (1985), Gonseth (1988) and Cohen (1989), among others, and have been analysed in terms of a post-modern attachment to symbols (Urry, 1990; MacCannell, 1992) and a nostalgic longing for an idealised past.
The 'nostalgia' element is important in the perception of national parks and will be returned to in the next chapter, and generally, these influences may lead to what MacCannell (1992) describes as 'reconstructed ethnicity' which, as in the case of Singapore described by Wai-teng Leong (1997) or Bali (Picard, various) may even come to be viewed by the host population as a genuine representation of their own past. In many places this formalisation and perhaps ossification of tradition is connived at by all parties involved: the local population, the tourist, and the tour guide. This calls into question the notion of tourism leading to cultural sustainability: if culture changes to accommodate the needs of tourists, can it still be considered valid? But if cultures are anyway subject to evolution, as they certainly are, is a tourist-altered culture any less valid than the one which preceded it? This is particularly true since, as mentioned above, it is in practice impossible to disaggregate the influence of tourism from other influences. In the case of the Tenggerese, it would be interesting to find out whether they were beginning to view their own culture through the lens of tourism.

Returning to tourist perceptions and authenticity, the unconscious desire for a managed, domesticated version of reality affects almost all tourists, even the young Explorers or Drifters who style themselves 'travellers'. This can be seen along the 'Backpackers' route' through Indonesia and other parts of South East Asia, where 'homestays' offering a uniform environment of small, fan-cooled rooms and a menu of fried rice and banana pancakes have sprung up. Here, Backpackers can stay among their own kind - other young people from the North – while swapping stories of avoiding rip-offs by locals and the rigours of public transportation. It has already been said that going to certain places (the 'been there, done that' syndrome) increases people's social capital, and Riley (1988) points out that for Backpackers the ritual communications engaged in are an ego-enhancing activity: their status depends on the degree of hardship undergone and on obtaining the 'best value'. Murphy (2001) confirms that social interaction between Backpackers is an important part of their trip. At least, as Tucker (2001) and others have pointed out, the facilities catering to these people are more likely to be locally owned and
therefore channel a higher proportion of tourist expenditure into the local economy, but whether this kind of tourism is sustainable (even according to a soft interpretation of the concept) is highly debatable, given that developments of this type tend to be spontaneous and uncontrolled and that very often, according to the TALC model, they are paving the way for externally-owned and bigger hotels, which then removes control and ownership of tourism from local hands. If such developments take place in a protected area, the possibility of achieving sustainability will recede further, as will be shown in the next chapter.

Having considered the obstacles to sustainability thrown up by four elements in the tourism industry, we now move on to the final one: the community. Numerous case studies have shown that local involvement is a key factor in whether tourism is accepted by local communities or whether they feel alienated from it (documented in the works of de Kadt, 1979; Cater and Lowman, 1994; Lindberg, Epler Wood and Engeldrum, 1998; and Godde, Price, and Zimmerman, 2000, among others). To be sustainable — and to prevent an acceleration towards the 'decline' stage of the TALC — it is now considered essential to increase local involvement through participation. For instance, a review of tourism amongst poorer communities in Asia concluded that — as predicted by the TALC model - local people gain most in the early stages of tourism development and when they retain control over the elements of service provision (Shah and Gupta, 2000). As with participatory approaches generally, considerable attention has been devoted to what constitutes 'participation' in tourism and to the difficulty of finding mechanisms for genuine community involvement (Murphy, 1985; Hall, 1994; Ceballos-Lascurain, 1998). In the South Pacific, for example, Douglas (1996) found that local people were involved in tourism as entrepreneurs, artisans, attractions, and administrators, but that it was only as artisans that participation was successful in terms both of contemporary social structures and the needs of tourism. The fact that human and capital resources are often lacking, resulting in high leakages, has already been referred to: an example in a remote area of Indonesia comes from Siberut, where it was found that of $125 paid by tourists
for a 10 day trip to the island, only 9 per cent reached the indigenous people whose culture attracted the tourists in the first place (Sproule and Suhandi, 1995).

During the Bromo Tengger Semeru study, it would be interesting to assess the extent of investment and participation in tourism and control over it by the Tenggerese, although global economic interdependencies mean that no significant industry is free of external influences, and tourism is particularly subject to these because the product is consumed at the place of production rather than at a distance. This means that, as Woodley (1993) puts it: "it is naive to think that any community can exert enough control over market forces to maintain an environmentally or economically sustainable level of development … short term economic gain has been the cornerstone of our economic and political systems to date and there is no reason to believe that communities will suddenly overcome this " (Woodley, 1993:138).

While some obstacles to local involvement in tourism concern external forces, then, others are due to indigenous community structures and relationships. In the last chapter it was said that although notions of 'the community' may evoke visions of a harmonious group, in reality rivalries or hierarchies may result in (and from) differential access to resources. In particular, certain families may possess more skills, capital and other resources which allow them to offer services to tourists: Lindberg, in particular, has concluded from several studies that tourism developments are especially subject to élite capture (Lindberg, 1998 and 2001). This is one of the micro-level political realities referred to above in this chapter, and however much these might be deplored from a Northern liberal standpoint, there is no reason to expect people not to use tourism to enrich themselves as a community or as a family; after all, as Taylor (1996) points out, it is individuals who have aspirations, not destinations. This does, though, call into question another of the precepts of sustainable tourism, in that if tourism is subject to these kind of influences it will not necessarily contribute to more equitable distribution of the benefits of development.
In an effort to overcome the barriers to community involvement, various schemes have been tried, although these offer no guarantee of success. For instance, in the cases of tourism to Siberut (mentioned in this chapter) and Central Sulawesi (in the previous chapter), the establishment of a community fund was advocated to provide community-wide benefits. Although this has been tried successfully in a few places, however, as described in a review of community-based tourism, the authors of the review also comment that collective funds can be misused (Ashley et al, 2001). A further proposal to overcome the 'skills gap' is the provision of training. This can be successful, as the tourism training programme established in Bali as part of the 1971 master plan showed (Inskeep and Kallenberger, 1992), but educating people sufficiently to look after tourists can take too long to cope with the rapid tourism growth which sometimes occurs, with a consequent exclusion of local people from tourism developments, and social disruption.

It must also be said that tensions within communities do not always exist and where they do, they can sometimes be resolved by a strong community structure such as the banjar in Bali, which genuinely appear to represent the majority of people in a village (or part of a village) and to have played a role in spreading the benefits of tourism (Noronha, 1979). In another Indonesian context, Nuryanti (1996b) has pointed to the strength of community ties in ensuring that stall-holders around the Buddhist temple of Borobudur, Central Java, repaid loans to a local co-operative. These examples are particularly instructive as they may offer the prospect of a more positive outcome for some, at least, of the tourism developments in Indonesia, in that if there are elements of local culture which facilitate a fairer distribution of benefits, these can perhaps be incorporated into a model of tourism planning which would overcome some of the distributional inequalities.

More broadly, an approach to poverty alleviation through tourism which mirrors the sustainable livelihoods policies discussed in the last chapter offers, perhaps, a more positive approach to development in that it avoids the narrow focus on the community which has sometimes undermined income-generation schemes. The approach has been termed 'Pro-Poor Tourism' (PPT), and its principles have been established by studying
tourism amongst poorer communities in the South to identify factors which appear to be successful in addressing poverty and distributional inequalities. PPT aims not just to increase local involvement in tourism, but to use tourism as a means of enhancing the position of the poor in terms of a wider share in the benefits of resource use; the aim is to achieve this through increased decision-making powers and an improved institutional context, and to apply these elements to other schemes elsewhere (Ashley et al, 2001). The shift in emphasis has been welcomed by the leading tourism economist, Kreg Lindberg, who also notes that by the end of the 1990s development agencies were inclining towards funding small and medium-sized enterprises as well as the more traditional non-profit community development projects (Lindberg et al, 2001) as part of the shift towards creating self-reliance through enterprise identified in the last chapter.

It was said above that the constraining pressures on sustainability in tourism are interlinked, and two examples will be given here to show how these constraints work in practice. Both concern destinations which are primarily nature-oriented; one, the Galapagos Islands of Ecuador, is large in terms of tourism numbers, its international profile and its importance for ecological biodiversity, while the other, Mount Halimun National Park in Java, is of less significance internationally but is of local importance.

First, the Galapagos Islands. A 1973 master plan for tourism development here recommended a maximum of 12,000 visitors per year (Wallace, 1993). However, just as the 1971 SCETO plan for Bali was over-ridden by market forces, this number was regularly exceeded and quotas were continually revised upwards, so that by 1993 there were 46,500 arrivals (McWilliam, 1995) – nearly four times the recommended maximum. Even these official figures are subject to doubt, according to informed observers: Boo (1990b) reports an unofficial estimate of arrivals to the Galapagos in 1987 of 49,000, i.e. 50 per cent higher than the official figure of 32,595. Here, the pressures came from local boat operators keen to maximise their income from tourism and from the

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5 By 2000 numbers exceeded 60,000 (IES, 2000).
eagerness of the Ecuadorian government to maximise foreign exchange earnings (Thomas, 1991). The continuing increase of tourists to the Galapagos Islands again confirms the validity of the TALC process and also has implications for the prospects for sustainability, in that although a development may at a particular stage be small-scale and locally managed and have other attributes of sustainability, it could in fact merely be at an early stage of the TALC curve and thus its apparent fit with the criteria of sustainability may prove ephemeral.

A contrasting example of the effects of market forces concerns a community-based ecotourism project in Mount Halimun National Park, West Java. Here, a consortium of ecologists, entrepreneurs and development agencies established several guesthouses within the park during the 1990s. In 1997 ownership was handed over to local communities, members of which had been trained in tourism services and management. Despite these inputs, by 2001 the project had failed to attract enough visitors to make it economically viable, and local people had returned to other means of earning a living. A combination of circumstances seems to have affected the project, including the construction of a better-quality guesthouse nearby which attracted more visitors; the fact that the locally-run guesthouses lacked modern means of communication so that making reservations was difficult; and difficulties with maintaining the partnership between the funding agency, the project managers, and the local community (Joy, 1997; Travel Indonesia, 1998; Fauzi, 2001; Escap, 2001). An objective analysis of the Mount Halimun venture does not seem to exist, but it appears to have lacked the market orientation which, as McKercher (2001) points out, is essential to any ecotourism project. In particular, an awareness of the categories of tourists most likely to use the facilities was absent: this was hardly surprising, since nature tourism was still little understood in Indonesia. Added to this, the project was launched just at the time that Indonesia began to suffer from poor publicity and declining tourism numbers due to the forest fires and instability of the late 1990s.
Other than having insufficient market understanding, the Mount Halimun project did not, at least, seem to lack the cross-disciplinary and area specialists identified above as fundamental to a successful planning process. What may have been lacking, however, were contributors able to cross the cultural divide between visitors and visited. In tourism, perhaps more than with any other industry, this is essential if the needs of both market and destination are to be considered. At Halimun, publicity materials seemed to show that the accommodation provided was just too 'authentic' to appeal to the categories of people most likely to be attracted to the destination, while prices were higher than the least demanding tourists were prepared to pay.

In general, it is questionable whether the people who host tourism are always the best equipped to take decisions about it. They may lack the skills to evaluate a particular development (especially its long-term impacts), and may also be unable to take an objective view of their destination compared to similar attractions elsewhere, especially when (as mentioned above) tourists base their discriminations on international experience. This is not only the case in developing countries: in Alberta, Canada, tourism plans produced by town councils after public consultation were unsuccessful because they did not take into account commercial factors such as competition, promotion, and quality of service provision (Taylor, 1996). It can be argued that, particularly where the tourists' culture and aspirations are very different from those of the hosts, there is a strong case for the involvement of outsiders to find ways of bridging the gap. This was confirmed by Wall (1996a) and Cole (1996), both of whom have researched tourism in Indonesia and have concluded that it is preferable for sympathetic outsiders with knowledge of the tourism industry to help guide developments, while Epler Wood (1998), similarly, found that ecotourism enterprises which successfully involved local people often depended on the presence of an intermediary who understood the cultural circumstances and needs of both the host community and the tourists.
Moving Forward

It is easier to identify obstacles to sustainability than to find solutions but, as mentioned in the last chapter, efforts to achieve a genuinely progressive form of development which satisfies current needs while not destroying resources for the future are continuing. The identification of better mechanisms for participation and for distributing the benefits of tourism more widely should contribute to this, and here the approach offered by PPT seems promising.

Another positive way of improving local control over tourism may lie in making greater efforts to ensure that resources should be locally owned and managed – which of course is a principle of sustainability. While the difficulty of achieving this because of a shortage of locally-available skills and capital has been identified, a study by Steele (1995) has shown that resources are most likely to be used sensibly when they are under community or private ownership. This concurs with the point made in Chapter 1 concerning the over-use of resources without assigned ownership or responsibility. Community ownership has been tried with some success in the Annapurna Conservation Area Project (ACAP) of Nepal, where a good awareness of the advantages of a long-term approach to tourism has been developed amongst lodge owners and others and, in a move which confirms the need for judicious government intervention, the government has discouraged foreign ownership of tourism ventures through legislation (Gurung and de Coursey 1994; MacLellan et al, 2000).

While it would be interesting to see how far control of the tourism product at Bromo Tengger Semeru had remained within the grasp of the Tenggerese, local ownership alone is not always the answer as, again, demonstrated by the Mount Halimun example. The complexity and nature of the tourism industry means that some form of external input is almost certain to be needed, whether in the form of government regulation, product development or marketing advice, or even capital investment. It is not even always the case that exogenous ownership *per se* is bad, since employment and associated benefits can be generated through this. It seems, then, that a balance has to be
found between local ownership and participation and external inputs: in the case of ACAP, for instance, there were considerable advisory and funding contributions, as well as government backing for regulating tourism. It remains to be seen whether anything approaching this balance exists in the case of Bromo Tengger Semeru.

In this chapter, the interface between sustainability and tourism has been discussed and some obstacles to sustainable tourism have been identified, along with some positive steps towards overcoming these. It has been shown that, as with development generally, genuine involvement in tourism by the people most directly affected by it is one of the factors likely to lead to long-term benefits, but it has also been seen that is often hard to involve 'the community' in a significant decision-making or participatory role. In any case, it is a reflection of global social and political structures that decisions made at local level cannot necessarily affect the core factor of tourism, which is whether tourists actually decide to visit an area or not: product development unleavened by market awareness is unlikely to create a viable tourist destination. By the same token, when the thousands of individual decisions which constitute market forces are made in favour of a destination, local people have little choice but to react to them. This raises a question relevant to Bromo Tengger Semeru: is it actually necessary for local people to have a strong decision-making role in tourism? Can the benefits of tourism be fairly distributed without this? In practice, there may be other elements which are more important in ensuring tourism sustainability.

Returning to the example of Mount Halimun, despite the commercial failure of this scheme (which of course means that it cannot be held to be sustainable), it is nevertheless of interest in considering approaches to sustainable tourism. The principal lesson, as already said, is that a market orientation is essential. As with protected areas management (discussed in the next chapter), the absence of this 'real world' consideration will undermine any idealistic or assumed values of a project. More broadly, the fact that the Mount Halimun scheme was set up at all was due to a shift in the priorities of development agencies identified in the last chapter. In this case, the Japan International Cooperation Agency (JICA) was involved in funding the project through the
administrative body of the national park (PHPA). Another indication of this realignment was that in the mid- to late 1990s, at about the time of the Halimun project, a significant study funded by DfID examined the relationship between the tourism industry and the local communities in national parks in three developing countries, including Komodo in Indonesia (Goodwin et al, 1997). This, again, demonstrated the increased commitment of funding agencies to a strategy aligned more closely to the needs of the indigenous, often poor people affected by tourism. In turn, the findings of this study informed an evolved approach to tourism by DfID, which stated its intention of using it more explicitly as a vehicle for poverty reduction (DfID, 1998).

It has been shown that attempts to create a more sustainable form of tourism parallel moves towards sustainable development generally. It was pointed out in the last chapter, though, that the doctrine of sustainability originated in the industrialised societies of the North, just as previous economic doctrines have done, and this is also true of sustainable tourism. Mowforth and Munt (1998), in fact, criticise attempts to impose sustainable tourism practices on destination countries as "a kind of eco-structural adjustment where Third World places and people must fall into line with First World thinking" (Mowforth and Munt, 1998:66). It seems likely, however, that under the profit-driven market economic system which dominates world trade and development, the Northern paradigm (however it evolves) will continue to prevail for the foreseeable future, in which case strategies such as SL and PPT, even though they are yet another imposition of Northern values, may represent the most realistic attempt to address poverty in the South.

An attempt has been made in the above discussion to point out some of the pitfalls and inherent conflicts of sustainable tourism. Because of these difficulties, it is sometimes tempting to dismiss sustainable tourism as irrelevant to everyone except a few academics. This, however, would deny the influence sustainability now has on policy-

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6 Direktorat Jendral Perlindungan Hutan dan Pelestarian Alam (Directorate General of Forest Protection and Nature Conservation).
making and public opinion concerning resource utilisation and on how the people of our own and other nations should be treated. Rather than dismissing sustainability, it should be possible to amend its principles in order to incorporate commercial realities and make it workable. The modified approach to sustainability represented by PPT is important in this respect in that it takes socio-political factors into account: it accepts that tourism "cannot succeed without the successful development of the entire tourism destination in question" (Ashley et al, 2001:2). This means that the inevitable processes of the TALC model are not ignored and that the growth of tourism does not necessarily constitute a failure in terms of sustainability. In this light, the 'answer' to sustainable tourism is not to aim for the highest ideals of strong sustainability, since that would deter most parties from making the attempt, but to seek less unsustainable models of tourism, in other words models at the softer end of the sustainability spectrum.

It is easy when discussing alternative or sustainable tourism to become carried away with the excellence of ideas which show a better way forward: but prescriptive scenarios which are not rooted in political, social and economic realities are unlikely to succeed. In this context, it must be said that some of the small-scale developments advocated by proponents of alternative tourism can only ever be a minor part of the tourism industry. As stated above in relation to tourism in Indonesia, conventional, mass tourism will remain the dominant industry paradigm for the foreseeable future because it is demanded by the majority of holiday-makers, it is often desirable for economic reasons, and in many cases causes no more environmental and social disruption than would the same number of tourists spread out over a wider region or than alternative economic activities. At the same time, it should be possible to create more sustainable models through applying existing policy levers to the mechanisms of commerce in the accepted method of adjusting the market economy through a combination of government intervention and self-regulation, and the PPT approach may offer a framework within which this can be done.
Throughout this chapter some of the principal themes of this thesis have been discussed in relation to tourism, including the conflicts inherent within the concept of sustainable development and some of the attempts to overcome these. Several illustrations from Indonesia have been used, since it is the particular characteristics of tourism there which will affect tourism at Bromo Tengger Semeru. It has been seen that there are substantial barriers to increasing the role of local communities in tourism, and it seems likely that as a small group on the fringes of mainstream Indonesian society, the Tenggerese who live around Bromo Tengger Semeru may be subject to similar disadvantages. It will also be interesting to see whether any channels for involvement have been found which make the prospects for sustainable tourism there at all promising. A further theme of this chapter has been the inescapability of commercial pressures resulting from the market economy, a system established according to cultural and political norms which often have little in common with those of the many countries where it has now also become the dominant trading paradigm. Another manifestation of the incongruence between policy norms and their application will form an important part of the next chapter, which will examine the history and philosophy of protected areas management in Indonesia and other developing countries.
In the previous two chapters, sustainability and its application to tourism were examined, along with some of the challenges of sustainability and attempts to resolve them. A related question is whether a strategy for economic management devised for one set of cultural and economic circumstances can be successfully applied in another, and it was suggested that local characteristics may prevent strategies designed to achieve sustainable development from being successful. Having said this, the sustainability discourse is too important to abandon: it is becoming increasingly prominent and techniques to implement it are continually being refined due to growing concern that the world's natural assets are becoming irreversibly degraded. The resources affected include goods in common or public ownership such as minerals, the atmosphere, fresh water, fish stocks and forests, and the genetic, species and ecosystem diversity of flora and fauna, or biodiversity. Steps to tackle over-exploitation of these resources are being taken all over the world at global, national and regional levels, and one measure used to protect biodiversity is the establishment of protected areas.

Areas of land free from human exploitation have been set aside since the late 19th century, and the importance of this in biodiversity protection was accepted internationally at the 1992 Earth Summit (UNCED), where the Convention on Biological Diversity was signed by 150 nations (Glasbergen and Corvers, 1995). Despite this apparent commitment, however, loss of species is continuing faster than at almost any other time in the Earth's history, due to habitat change, pollution and the increase in human numbers (Brookes, 1998; Blench, 1998). And although the number of protected areas has increased sharply in recent years, many exist in name only, with considerable human interference but little in the way of positive management (Dixon and Sherman, 1991; Evans, 1992; Brandon et al, 1998). This calls into question the nature of the pledge made at the Earth Summit: did the convenient signing of a convention mask a lack of genuine commitment to prioritising the resources needed to maintain biodiversity? In the discussion below this possibility will be considered, along with the question of whether the desire to conserve biodiversity (or more broadly,
'nature') is culturally determined. What are our reasons for wanting to preserve biodiversity, and according to whose norms are decisions about it being made? The rationale for establishing national parks and other protected areas will be examined in this chapter in the light of these questions.

In the first place, it must be said that there are extremely few parts of the globe where nature is unaffected by the activities of humankind; even in the strictest category of protected areas there is some degree of management, and in many parks there is considerable interaction between humans and wildlife, including illegal forms such as hunting and timber extraction. One of the most obvious legal forms of interaction is tourism, and this chapter will look at the most significant of efforts to ensure that tourism has a minimal impact (and even a positive one) on the protected areas where it takes place.

Any debate on protected areas is certain to be informed by the conflict over how far they should be subject to any form of exploitation: it is reiterated here that the conservation efforts discussed will be viewed in the light of soft sustainability, since it is hoped that this study will make a practical contribution to the debate on biodiversity conservation through protected areas management. Having said this, the viewpoint of strong sustainability cannot be dismissed, as policy-making for protected areas has been much affected by this stance, which has given rise to some peculiarly disjointed attempts at protected areas management, particularly in the middle decades of the 20th century.

In particular, it will be argued that a specific perception of wilderness in industrialised countries – particularly America – has had a substantial (and not always beneficial) influence on protected areas policy throughout the world. Other influences have arisen from a more general discourse of development policy-making, as described in Chapter 1, in that there has been a shift from the top-down, neoclassical approach to more participatory techniques. These broad approaches are, of course, just that: in reality, as already discussed, any development situation is affected by its political, economic and cultural context – to the extent that some anthropologists argue that development projects are simply not replicable, as in Vayda et al (1985). It is more generally accepted, however, that certain common
elements may be identified from a range of development situations within one country or region which could be used elsewhere to forecast the potential success or failure of a biodiversity conservation scheme. Accordingly, examples of protected areas management in Indonesia and elsewhere will be examined to illustrate changing approaches to biodiversity conservation and to see whether they demonstrate opportunities for sustainable management elsewhere.

Tourism represents an especially apt field of investigation because of the spatial juxtaposition of local, national and international influences and the contrast between cultures and aspirations. So, for instance, tourism in protected areas tends to occur in marginal regions of a country with high poverty levels, where it is particularly difficult to ensure that tourism-generated income accrues to the people most affected by the protected area because of the skills gap mentioned in the last chapter. On another level, tourism is an export consumed at the point of production by people drawn by cultural signs which represent the experience they desire, and any discrepancies between the promise and reality of the experience – the expectation of which is itself culturally determined – will result in disappointment unless sophisticated management techniques are used, which may mean obscuring problem areas with other signs. There is likely to be an experiential gap between the visitors, who may aspire to connect with wilderness on a spiritual level, and the host community, who may simply aspire to improve their earnings. To some extent this may be bridged by product manipulation and communicative staging, but no amount of semiotic manoeuvring will be able to hide serious failings in destination management, which will be magnified by the inexorable processes of the Tourist Area Life-Cycle.

To address these issues, this chapter will begin with a historical account of the establishment of national parks and other protected areas, including the cultural and social circumstances from which the principles of conservation arose. The application of protected areas guidelines to parts of the world which are distant geographically, culturally and economically from the places where the guidelines were established, and the resulting tensions, will be considered. Major policy shifts concerning protected areas management
will be examined, including attempts to integrate conservation and development through the use of participatory and sustainable livelihoods techniques, and to internalise the costs of conservation into the market economy. The role and economic significance of tourism in national parks will also be discussed. As with the previous chapter on tourism, this chapter will bring to the fore another aspect of the sustainability debate in highlighting some of the difficulties of applying sustainability principles in a real-world context, and it will build on the previous two chapters to continue to establish a theoretical framework for the investigation which follows into tourism and protected areas management in Bromo Tengger Semeru.

Tourism or Ecotourism?

Before commencing the discussion, some space will be devoted to the topic of what tourism in national parks should properly be called, since the labels attached to this combine elements of a market orientation with a sometimes obfuscatory communicative staging.

According to Orams (2001), the term 'ecotourism' first appeared in the mid-1980s, and since then definitions of what constitutes ecotourism have undergone considerable discussion, refinement, and criticism (as mentioned briefly in the last chapter). Later definitions tend to emphasise the benefits to local communities as well as to the environment, for example the one used by The Ecotourism Society¹: "responsible travel to natural areas which conserves the environment and improves the welfare of local people" (Western, 1997:8). Brandon (1996) makes a distinction between ecotourism and nature-based tourism in that ecotourism is small-scale and more proactive in focussing on conservation, while nature-based tourism is generally on a larger scale and tends to support development aims rather than conservation ones. As with sustainable tourism, different commentators and organisations have produced guidelines and principles which aim to confine ecotourism to an accepted set of practices, including Ceballos-Lascurain (1996), Drumm (1998) and Eagles et al., (2002).

¹ This is a US-based organisation.
Blamey (1997 and 2001) has gone further and used the different definitions and principles of ecotourism to analyse whether they can be operationalised and to evaluate different examples of ecotourism practice, concluding that different definitions are useful according to different circumstances and different perspectives. The concept of ecotourism is certainly understood in different ways by conservation planners, theoreticians, and tourism practitioners: for the last group it appears often to be more of a marketing construct than a management philosophy, in that sometimes little attempt is made by eco-tour operators to contribute to conservation (Woodward, 1997), while in Thailand the burgeoning of holidays termed ‘ecotourism’ has been criticised as a justification for subverting the purpose of the country’s protected areas from primarily conservation ends to commercial ones (Pholpoke, 1998).² Often, the term ‘ecotourism’ seems to be used as a convenient shorthand for a form of tourism apparently believed by practitioners and participants to be environmentally beneficial, while in fact it can be an example of communicative staging which masks the environmental damage caused by tourism.

Actually, the discussion of whether tourism should strictly be termed ‘ecotourism’ or not is of little consequence to the people and wildlife living in and around protected areas. Whether referred to as ‘ecotourism’, ‘nature tourism’, or ‘nature-based tourism’, it is part of the rest of the tourism continuum, and as such encounters the same barriers to perfect practice (in particular market forces) as sustainability in tourism generally, discussed in Chapter 2. The terms are therefore used more-or-less interchangeably in this thesis.

Cultural Influences on Conservation

If the debate over the nomenclature of tourism in protected areas already illustrates the different ways in which these are perceived, the history of their establishment highlights many more. During the last three decades of the 20th century there was a rapid expansion in the number and extent of places where the natural ecosystem was officially protected, particularly in developing countries, so that by 1997 just under 9 per cent of the Earth’s land

² The term is certainly not universally understood: a study of Taiwanese tour operators revealed that they thought ‘ecotourism’ was short for ‘economic’ (i.e. budget) tourism, rather than ‘ecological tourism’ (Hashimoto, 1997).
area was protected (Green and Paine, 1997). The IUCN has condensed the definition of protected areas into six categories, of which we will concern ourselves primarily with just the national park, since this is the only one whose designation includes the specific purpose of combining conservation and recreation. As will be seen below, this dual function has been present since the early days of national parks, although the focus and interpretation of conservation methods has changed over the intervening years.

The first national parks were designated in the United States of America in 1872, in Australia in 1879 and in Canada in 1886 (MacEwen and MacEwen, 1982; NPWS-NSW, 2003; MacNamee, 1993). Their establishment came after a century of massive change in Europe and North America, from a time when most communities were largely rural through the scientific and ideological inventions of the Renaissance, the Enlightenment and the Industrial Revolution (Hobsbawm, 1962; Nash, 1967). There was an increasing concentration of large populations in towns and a corresponding shift in the way people viewed nature. Before the 18th century, the natural environment was known and used by Europeans in much the same way that forest-dwelling tribal groups currently use the rainforest: as a source of food and living materials. Oelschlager (1991) remarks that Palaeolithic people had no concept of wilderness as distinct from any other kind of environment. At the same time, it seems likely - and religious historians confirm - that as with modern forest-dwellers such as the various peoples of Borneo, Palaeolithic people respected the forest and evolved a system of beliefs and magic to formalise and minimise the dangers (MacKinnon, 1975; Smart, 1989).

Later, for settled agriculturalists and village dwellers, living at one remove from the wilderness, it became a dangerous place where wild beasts and demons roamed (Nash,

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3 The IUCN is the world body responsible for setting policy guidelines for the management of protected areas (among other things).

4 The IUCN defines a national park as a “natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.” This set of guidelines was published in 1994. (World Conservation Monitoring Centre website, 24th April 2003)
In medieval times the Alps, for instance, were thought to be "densely infested with dragons" (Schama, 1995:412), and for the early pioneers in America "the forest had been represented in the popular imagination as the enemy ... beauty lay in clearance; danger and horror lurked in the pagan woods" (Schama, 1995:191-193). Short (1991) points out that fear of the wilderness is a rational response to something people are unable to control and do not understand. By the same token, in an echo of earlier religious systems which domesticated the dangers of the forest, fear of wilderness has long since been rationalised out of existence in industrialised countries by our increasing understanding of the mechanisms of nature and ability to control it.

Uncertainty about the supernatural forces of nature is still felt by many urban and rural Indonesians, however, for whom the forest is an unknown place containing creatures which may or may not be dangerous (or indeed real). This aspect will be further explored in later chapters when the attitudes of tourists and the Tenggerese to the Bromo Tengger Semeru National Park will be discussed, but for the moment a useful illustration of what appears (to a Northern mind) to be irrational belief can be derived from a comment by a Tenggerese farmer interviewed in Bromo Tengger Semeru. When asked what contact he had with wildlife from the national park, he commented that “in the past our crops were disturbed by wild pigs, but that rarely happens now” and in the same matter-of-fact tone that “people sometimes see a white tiger in the forest, and they faint if they meet one” (Mistuo, 1996). This belief in ‘white tigers’ was not uncommon, even though the Javan tiger is known to have gone extinct around 1980 (Whitten et al, 1996) (and they were in any case the usual colour). Without wishing to pre-empt discussion of the field research, it is worth noting in this context that the Tenggerese farmers were in an interesting ‘half-way’ position, in that although their primary livelihood focus was on their farmlands, they also depended on the forests for supplementing their household income. Although they were therefore familiar with the forest and its denizens, their understanding of it was rooted in their own cultural paradigm rather than in facts known to be ‘true’ by the empirical evidence of Northern science.
Returning to the changing perception of nature in industrialised countries, while people's understanding of their environment grew throughout the 18th century, a reaction to the increasingly mechanistic view of the natural world came in the form of the Romantic movement, which looked back to a supposedly more innocent, more natural and purer past. As already mentioned in Chapter 1, the 18th century philosopher Jean-Jacques Rousseau eulogised the mountains and peasantry of his native Switzerland - although, like most other Romantic thinkers, he was an urban dweller and did not actually have to face the harshness of the peasant or hunter-gatherer's lifestyle (Schama, 1995). In Britain, the early poems of William Wordsworth (1770-1850) similarly created in the public consciousness an awareness of the beauty of wild places, notably the Lake District. Even though the Romantics' view was an idealised one of a medievalist, rural idyll which had never really existed, they influenced a large section of the European educated classes to consider the natural and agricultural world in a more positive light (Plumb, 1950; MacEwen and MacEwen, 1982; Short, 1991).

In North America, too, the Romantic movement took hold. Whereas in Europe intellectual life centred on art, history and culture, however, in America Romantics seized as a source of inspiration the wilderness of which they had a superior endowment in comparison with Europe (Nash, 1967; Smith, 1984). As in Europe, attitudes amongst the increasingly settled population gradually changed, so that by the middle of the 18th century "wilderness was associated with the beauty and godliness that previously had defined it by their absence" (Nash, 1967:47). As the natural world became better understood and therefore less frightening, by the early 19th century there was fertile ground for the ideas of Henry David Thoreau (1817-62), who did much to change attitudes to wilderness in America. In effect, he domesticated it by suggesting that it could be brought within the sphere of urban civilisation, and also that humans are part of nature, instead of the purpose of nature being manipulation by humankind (Oelschlager, 1991). This appreciation of
wilderness was taken up by landscape artists, to whom the American scenery offered boundless opportunities for celebrating the grandeur of nature.\(^5\)

The favourable climate thus engendered towards the wilderness meant that apologists for landscape preservation were well placed to win popular support. By the 1860s, presaging sustainability arguments by at least a century, George Perkins Marsh was deploiring indiscriminate logging as destroying the Earth's capacity for sustaining humankind (Nash, 1967), and in 1864 ten acres of Yosemite Valley were turned into a park by the State Government of California. More importantly, over 2 million acres were designated as the Yellowstone National Park in 1872. Meanwhile in Canada, civil servants stressed the economic value of national parks for recreation and tourism in order to gain political support for them (McNamee, 1993). In these cases, preservation was for utilitarian reasons to prevent private exploitation of impressive landscape features rather than to preserve wilderness for its own sake. Hunting and fishing were allowed, and the emphasis was on human enjoyment and inspiration rather than biological conservation (Nash, 1967; Schama, 1995). There was not yet any attempt to understand or preserve a balanced ecosystem, and animals seen as unpleasant, such as carnivores, were exterminated (Dasmann, 1984; Hales, 1989; Caughley and Sinclair, 1994).

This new appreciation of wilderness allowed a separation of people and nature which could not exist when humans were forced to grapple with their natural environment on a daily basis in order to survive. Neumann (1995) calls this a 'landscape way of seeing', which allowed a more self-conscious awareness of nature and had a strong influence on early park designation (Hall and Higham, 2000). In pre-Independence Indonesia, for example, the Dutch applied their European sensibilities to the preservation of 'nature monuments' in Java and elsewhere (Jepson and Whittaker, 2002). The earliest parts of Bromo Tengger Semeru to be accorded protected status (in 1919) were chosen because of this consciousness and it was important in early tourism here, with Dutch tours to Mount

\(^5\) In an interesting early link between nature and tourism, the paintings of one of these artists, Thomas Moran (1837-1926) were used by the newly-expanding railroad companies of the late 19th century to promote travel to the wildlands of America (Tate Britain, 2002).
Bromo in the 1920s and 30s coming "to see the wonders of volcanic activity and the scenery, not to view wildlife or vegetation" (Cribb, 1995:200). Present-day Indonesian authorities are also influenced by this 'view'. For instance, recent proposals for national parks in Indonesia have often centred on outstanding natural features with cultural and landscape significance but little ecological value such as the coloured lakes of Kelimutu, on Flores (Monk et al, 1997), and Mount Merapi, a volcano in Central Java (Kompas, 2002).

Returning to North America, since the evolution of national parks management there has had a huge impact on protected areas globally, it was evident that by the early 20th century a paradigm shift in attitudes to nature was occurring, away from the anthropocentric and towards the biocentric (Oelschlaeger, 1991). This was partly because the frontier way of life had largely disappeared, so that "the average citizen could approach wilderness with the viewpoint of the vacationer rather than the conqueror" (Nash, 1967:143), and partly because of the growing awareness that hunting and the conversion of forest lands to agriculture was affecting the balance of nature (Jepson and Whittaker, 2002). A leading figure in the change in attitude was John Muir (1838-1914), who popularised the concept of wilderness, stressing the interconnectedness of everything in nature and moving it from a purely aesthetic and somewhat esoteric ideal to a policy embedded in the public consciousness (Oelschlaeger, 1991). John Muir's long campaign coincided with the increasing availability of transportation, first the railways and then the motorcar, which encouraged people to explore the landscapes writers and artists enthused about, and by the early 20th century camping in the wilderness - promoted also by American President Theodore Roosevelt – was becoming popular (Nash, 1967). As a result, large areas of uninhabited land, which still existed in large quantities in North America, were set aside to be free of human exploitation, and it was this concept of national parks which came to predominate in other parts of the world.

In Britain and other parts of Europe a similar movement was taking place, prompted by a similar combination of factors. The study of natural history had become popular as part of the general thirst for scientific knowledge exhibited by the Victorians, with wealthy
people purchasing specimens of animals and plants from all over the world. Coupled with the greater appreciation of nature prompted by the Romantics and the increasing possibilities for rapid travel and greater holiday entitlement, this laid the foundations for the preservation of landscapes and the demand for greater access to the countryside (MacEwen and MacEwen, 1982; Sheail, 1995). The call to protect nature from commercial exploitation came later in Britain than in America, perhaps because Europeans had lived for longer with a 'tamed' landscape than Americans and fewer unaltered areas remained, but by the 1920s town-dwellers had greater access to the countryside and were nostalgic for the intimacy with nature which their pre-Industrial Revolution forebears had known (Lowe et al, 1986). During the inter-war period there was considerable lobbying for national parks to be established, culminating in 1949 in the National Parks and Access to the Countryside Act under which ten national parks in England and Wales were designated (Lowe et al, 1986; Colthurst, 1991; Evans, 1992).

The selection of national parks was based on an appreciation for a certain type of countryside: rugged hills and moorland. As Shoard (1982) says, while seen as "bleak, dull, forbidding wastelands" by some, the most influential policy-makers saw these places "as a refuge ... from the man-made environment in which they spend most of their lives" (Shoard, 1982:57). Another reason for the selection was economic, in that the uplands were less productive than the intensively farmed lowlands. This meant that the typical agricultural landscape of small fields and meadows interspersed with hedgerows and woodland, which contains more species than moorland, has never been preserved on a large scale; the result was that by the end of the 20th century much of it had suffered a drastic decline in biodiversity (Smart, 1997; Clover, 1999). This was despite the fact that many British people idealise the countryside and display a Rousseau-ist longing for a sanitised version of it. The notion of wilderness and countryside is thus culturally constructed in two ways: there is an awed admiration for untrammelled nature on the one

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6 The travels in South America and the Malay Archipelago of the great naturalist and explorer, Alfred Russell Wallace (1823-1913), were funded by selling the specimens he collected there.
hand, and a nostalgic, cosy appreciation of it on the other. This contrasts with views in
other parts of the world, for instance Latin America, where the closest translation of the
word ‘countryside’ is el campo, which conjures up images of poverty and repression rather
than the pastoral idyll it evokes for the British (Newby, 1980, cited in Redclift, 1984).

The fact that it was the hills and moorland in Britain and the uninhabited forests and
mountains in North America which were seen as positive, inspirational places was highly
significant for the designation of national parks in industrialised countries and in the South.
For even though the Romantic ‘wilderness myth’ of the American and European
interpretation was soon tempered with more pragmatism, the aesthetic and nostalgic
tendency in Northern conservation thinking has never really disappeared. It has contributed
to the discourse of sustainability (particularly strong sustainability), and has been an
important influence in the management and utilisation of protected areas. In the next section,
the significance of this will be examined, along with other influences which have informed
protected areas policy and the way in which this has evolved up to the present day.

The Changing Rationale of National Parks

As with economic management, sustainable development and other discourses, the
rationale for nature conservation has changed over time, and during the three or four decades
before and after the Second World War the inspirational, ‘landscape’ focus of national park
establishment was overlaid with a more species-orientated view, due to the increasing
realisation that the larger animals were under threat from over-hunting and habitat loss
(Caughley and Sinclair, 1995; Jepson and Whittaker, 2002). By this time many protected
areas had already been created in European colonies. The application of conservation
policies here was in the context of Neumann’s ‘landscape way of seeing’, and in its
implication of the separation of the observer from the land and its sense of ownership and
control, it was very much an American and Eurocentric view; Africans, at least, did not
regard the land they inhabited in this way (Deihl, 1985; Yale, 1997). This view would

7 Symptomatic of the concern for over-hunting and the preservation of individual species was the
formation in 1956 of the IUCN (Adams, 1990) and the more high-profile World Wildlife Fund in 1961
(WWF-UK, 2003).
also lead, in the postmodern interpretation of tourism discussed in the last chapter, to the commodification of national parks for tourism purposes. A more immediate outcome was that the colonial powers created large reserves for hunting along the lines of the medieval Royal Parks in Britain (Neave, 1991; Caughley and Sinclair, 1994). Many of these game reserves formed the nucleus of later national parks. For instance Kruger National Park, the first in Africa, was created in South Africa on the territory of a game reserve proclaimed in 1898 (Caughley and Sinclair, 1994), and many Indonesian national parks - including Bromo Tengger Semeru – include game reserves created by the Dutch (Jepson and Whittaker, 2002).

Another element in the establishment of African national parks, in particular, was the transference of the idealised, Romantic view of Man and Nature to the African context, casting the traditional inhabitants of the landscape in the role of the pre-colonial 'noble savage'. Neumann (1995) recounts that when the Serengeti National Park was created in Kenya in 1948 a bill of rights was drawn up for the native inhabitants, the Maasai, according to which they were supposed to sustain the myth of wilderness by remaining 'primitive', a part of the native fauna of the park. The Maasai were not consulted about the park, and their introduction into it of guns, cars and other forms of modern technology was greeted with shock and disappointment by parks managers (expressed in excessively robust terms, to 21st century sensibilities, by the German zoologist Grzimek in his 1960 book Serengeti Shall Not Die). This is just one example of how the imposition of a Northern cultural construct of national parks on Southern countries has given rise to dissatisfaction. Indeed, Gomez-Pompa and Kaus (1992) go so far as to say that conservation ethics and solutions are based on Western assumptions that "we" are right, and that "a belief in an untouched and untouchable wilderness has permeated global policies and politics in resource management for the tropics and deserts, causing serious environmental problems" (Gomez-Pompa and Kaus, 1992:273). The imposition of conservation management practices generated by one society on the cultural framework of another has meant that protected areas in some parts of the world are resented by the surrounding populations and
inadequately supported even by those charged with responsibility for them, as will be seen in the context of Indonesia. This leads on to the important point of conservation awareness.

In the early years of protected areas establishment in the South, the managers were Europeans from the colonial powers influenced by 150 years or so of evolving attitudes to wilderness. As African and Asian countries gradually obtained independence, administration of the protected areas was transferred into local hands with the apparent assumption that the new managers would be imbued with the same consciousness of wilderness and a similar sense of responsibility towards it; but this was by no means necessarily the case. In Indonesia, for example, no influential movement akin to the Romantic view of a rural past and the inspirational attributes of wilderness had taken place by the late 20th century (although, as will be seen below, there are some signs that this is occurring now). Parks policy-makers and managers therefore lack the deep-seated consciousness of nature's importance which, bolstered by evidence of the finitude and fragility of natural resources, Northerners now take for granted. As will be seen below in this chapter and in the more specific context of Bromo Tengger Semeru later on, this lack of a shared conservation awareness has been very significant in how national parks management policies are applied in Indonesia.

In terms of the potential success of protected areas policies, the lack of conservation awareness in Indonesia and other developing countries has been exacerbated by the continuing influence of the American model of wilderness preservation over the international construct of national parks: in other words that they should be state-owned and uninhabited by people (Roe, 2001). In Britain, on the other hand, because so much of the land had been in productive use for centuries, the national parks necessarily included artificial landscapes and cultural features in a way that North American parks did not, and they are largely in private ownership, with rights of public access and agreements on agricultural and commercial exploitation achieved by negotiation with tenants and landowners. In retrospect, this model would have been far more suitable for national parks in developing countries, where uninhabited wilderness zones rarely exist (particularly in the
tropics) than the American type. Even in Britain, though, the inspirational, preservationist view which had been so influential in establishing national parks in the first place continued to hold sway amongst parks managers and policy-makers, resulting in conflicts between conservation and utilisation which continue today: some of these conflicts will be explored in more detail below.

Returning to the underlying rationale of parks designation, just as the landscape focus of protected areas was gradually overlaid with a species focus, this in turn gradually became an ecosystem focus, so that by the 1960s the tendency was to aim for conservation of a park in its physical and biological state at some arbitrary date, which in the case of Europe's colonies was taken to be the arrival of the Europeans (Caughley and Sinclair, 1995). It now seems surprising that the fact that people had often been living in the forests or savannas for centuries was not taken into account, and that it was not realised that ecological units are subject to natural pressures as well as to anthropogenic ones. By choosing to apply the more prescriptive American model rather than the more inclusionary British one, conservationists not only created problems at the time of designation under the colonial government, as with the Serengeti example given above, but sowed the seeds of further tension after independence. The question which arises here is that if the different historical and geographical circumstances of America and Britain already gave rise to different outcomes, how much more divergence would arise in the case of nations which have extremely different cultural and industrial traditions? The perception of the world through the lens of particular cultural or social constructs is no less common in environmental conservation than in economic and social development, and this, again, returns to one of the core questions of this thesis: whether development models created in one part of the world can be successfully applied in another. This question is particularly apt in the context of Indonesia, as we shall see, and a brief description of the way the national parks network was established there will set a framework for how the blanket application of such plans was not successful in achieving conservation aims.
In Indonesia, a network of protected areas was established during Suharto’s New Order regime (1967-1998) under a development aid programme which ran from the late 1970s to the early 1980s. According to the 1969 IUCN definition of national parks and the slightly modified version adopted by the Indonesian advisors on protected areas, the parks should have “high recreation potential” and be “of easy access to visitors” (FAO, 1982:6), but despite this important criteria the foreign advisors and their Indonesian counterparts were all biologists with no tourism expertise. Furthermore, despite the fact that all the national parks they were to designate at that stage had people living in and around them, neither did they have any anthropological expertise. This was, of course, very much in line with the prevailing neoclassical planning paradigm: these early national park management plans were produced at around the same period as the 1971 SCETO Tourism Master Plan for Bali, the shortcomings of which were noted in the last chapter. In addition, the foreigners carried with them two centuries or so the culturally-constructed view of nature described above. As Schama (1995) says, "whether we scramble the slopes or ramble the woods, our Western sensibilities carry a bulging backpack of myth and recollection" (Schama, 1995:574), and the selection of parks and recommendations for management systems could not help but be informed by this cultural ‘backpack’.

The brief of the advisors on Indonesian protected areas was to designate a representative sample of habitat types and plant and animal associations, according to the ecosystem ethos of national parks design and management which held sway by then. In this process, much useful work on inventorising Indonesia’s natural riches was carried out. However, the management plans for the national parks were flawed in that they were written according to a formula: the flora, fauna and habitat of the proposed national park were assessed, with a brief evaluation of the threats to the area (mostly centring on resource-use by local people) and finally the number of rangers, equipment and budget needed were listed (WWF-IP, various). While they are useful as a basic ecological inventory of the protected areas, the plans failed to recognise either the livelihood needs of the people living in and around them or the wider development needs of the region where they were located. A neat
boundary was drawn round each new park and when villages were inconveniently located within it, a line was simply drawn round them to create an enclave. It was hoped that the villagers would remain inside this enclave for their income-generating activities and no longer go into the forest, even though they may have used this as a source of food, fuelwood, medicine or other necessities for centuries – or that they would eventually be moved, as suggested in the case of some settlements at Komodo National Park (Hitchcock, 1993). It was evident throughout that the Northern wilderness concept of parks as uninhabited areas predominated.

Even as these plans were being produced, however, a sea-change in international approaches to national park management was afoot, and here the point made in Chapter 2 concerning the time-lag between the changed awareness of a situation and its regulatory framework was demonstrated: it was becoming obvious by the late 1970s that the pressures on national parks were evolving in ways which the narrowly-focussed structures of national park management could not cope with. This was recognised at the Third World Congress on National Parks, held in Bali in 1982. The conference, whose theme was ‘Parks for Life’, made – for the first time in the international arena - an overt link between conservation, development and sustainability. The opening declaration stated that “people are a part of nature ... development needed for the betterment of the human condition requires conservation of living resources for it to be sustainable” (McNeely and Miller, 1984:xi), and the delegates grappled with ways of linking protected areas with sustainable development.

Placing this shift in emphasis in a wider context, it was shown in Chapter 1 that by the early 1980s the discourse of sustainable development was taking an increasingly prominent place in global public consciousness, and it was clear that the issues surrounding conservation were being viewed in the same perspective. The Bali Congress, in fact, proved to be a watershed in national park management, with a new emphasis on flexible approaches and on finding pragmatic solutions to resource conflicts (Hales, 1989). It was at last recognised that protected areas are a cultural concept and that national parks could not be managed in isolation from the land around them (Garratt, 1984). The emphasis was no
longer on 'eliminating exploitation' of natural resources to protect them from change and interference, but on stressing the interdependence of economic development and conservation (Kundaeli, 1983; McNeely and MacKinnon, 1990). Through this change in emphasis, the broader needs of industrialising societies began to be recognised.

By the late 1980s the evolution towards the current paradigm of protected areas management was complete. The focus was still on preserving biodiversity, but on doing so within the discourse of sustainable development, recognising that people living around protected areas often bear substantial costs while receiving few benefits. Protected areas were viewed so differently by policy-makers that the terms 'national park' and 'nature reserve' no longer seemed appropriate. New terms such as Integrated Protected Areas Systems (IPAS), Community-based Natural Resource Management (CBNRM) and, more commonly, Integrated Conservation and Development Projects (ICDPs) were coined to express the idea that protected areas could not be isolated from their hinterland of human activity and to codify the 'benign' principles of people-oriented conservation (Wells and Brandon, 1992; IIED, 1994a; Hughes and Flintan, 2001) – although, at the same time, the original terms have by no means been abandoned. ICDPs were designed to involve local people and win their co-operation in nature conservation by providing them with alternative sources of income to exploiting the plants and animals: in other words, social equity and economic development were specifically linked to conservation. In some cases the names of protected areas were even changed to reflect this. In northern Sumatra, for instance, the Gunung Leuser National Park, one of the few Asian parks large enough to support viable populations of large species such as elephants and orang-utans and also highly important for the protection of watersheds and other essential ecological functions (Whitten et al, 1987; Cochrane, 2000) was re-named 'the Leuser Ecosystem' to stress its interconnectedness with broader development issues (Griffiths, 1998).

The techniques used to put ICDP policies into practice were very much those pertaining to development generally, particularly in that participatory techniques were tried out. This was demonstrated by some of the planning documents produced for national parks...
in Indonesia and other places in the early 1990s (Cochrane, 1991; ADB, 1992; Young, 1992; Bergin, 1994; Sproule and Suhandi, 1994), which in contrast to earlier management plans stressed the importance of involving as many stakeholders as possible in decisions over the natural resources. Papers presented at the Fourth World Congress on National Parks and Protected Areas in Caracas, Venezuela, in 1992, reflected this shift in focus in that they recognised the centrality of social, cultural, economic and political issues to protected areas management and stressed that protected areas should be considered an integral part of wider regional development (Young, 1992; Ceballos-Lascurain, 1996; IUCN website, 2003). Yet this new awareness did not mean that the problems of protected areas were solved: despite the goodwill evident at policy level, there has often been a failure to translate this into a change in management techniques, which is why - as mentioned in the introduction to this chapter – the true level of commitment to establishing good protected areas is questionable, and why many national parks exist in name only. There have, of course, been cases where the change in focus has resulted in a successful integration of the economic and social needs of indigenous populations with the needs of wildlife, and some of the tourism-related schemes which have brought this about will be outlined in the next section of this chapter. It requires considerable resources and political will to apply any change in technique on the ground, however, and if these elements are lacking and conservation is given a low priority, the threats to the integrity of ecosystems or survival of species within the protected areas will not be countered.

In fact, by the late 1980s, even as the more liberal and holistic approach of ICDPs and their ilk was being propounded, doubts were being raised as to their effectiveness. An analysis of ICDPs in fourteen countries found that "while many projects received a great deal of attention from international donors and conservation organisations eager to claim 'success', few projects could in fact match the claims put forward about them or had met their stated goals of linking development to protected area management" (Brandon and Wells, 1992:561). The two main problems were that local people tended to see income-generating projects linked to the ICDP as an additional source of income to exploiting the
resources of the protected area rather than as an alternative, since most of them were very poor anyway; and secondly, that the projects acted as a 'magnet', drawing people in from a wider area, so that pressures on the protected area were actually increased rather than reduced. One of the authors of the 1992 report, Michael Wells, went on to investigate ICDPs in Indonesia and concluded that not only were they ineffectual in protecting biodiversity, but that the whole emphasis of the approach was misconceived: too much investment went into planning rather than implementation, and the threats to protected areas were often wrongly identified as coming primarily from local people, whereas in fact far greater dangers lay in the infrastructural and other developments taking place in the vicinity of the ICDPs (Wells et al., 1999). Another advisor on the same project commented that the emphasis of many ICDP projects was misguided: placed on villages, whereas it was the Bupati and other leaders who should have been approached since they held considerable influence under the hierarchical system described in Chapter 1 (Khan, 1996). The narrow, biological focus of many of the original advisors on national parks (as identified above by this author) was also commented upon as contributing to the failure of ICDPs (Wells et al, 1999).

To redress the balance slightly in favour of ICDPs, it should be said that the studies mentioned in the preceding paragraph were carried out in the early to mid-1990s after the new approach had only been in operation for, at most, a decade, and it was thus a little premature to write the ICDP experiment off as a failure. The problem here was partly one of time-scales: funding bodies may demand tangible results within a short funding period (perhaps two to three years), particularly under the neoclassical approach (Hein, 1983), while it takes a great deal longer than this to change attitudes to resource exploitation. Furthermore, as Barber et al (1995) pointed out, an approach focussing only on 'projects' was always likely to fail unless supported by an institutional and policy framework. Later studies (Hughes and Flintan, 2001; Roe and Jack, 2001) concluded that some projects did show grounds for optimism, although they also said that more refinement of techniques was needed. An interesting finding of the Hughes and Flintan review, that some ICDPs "base their implementation on social units that are inappropriate to local and traditional forms of
social organisation” (Hughes and Flintan, 2001:9), confirms one of the arguments of this thesis, in that although the ICDP strategy was devised in response to the criticisms of earlier, exclusionary approaches to protected areas management, it remained a strategy which originated in the North and may still suffer from the flaws which undermined earlier policies.

One of the difficulties lies in the area of designing projects which truly achieve a high level of stakeholder participation, as decreed by the principles of sustainable development described in Chapter 1. In their guidelines on ICDPs, Brown and Wyckoff-Baird (1992) said that "establishing equitable partnerships so that all stakeholders feel comfortable with their roles in the project design process is a first, necessary step in working toward ... empowerment of resource user groups" (Brown and Wyckoff-Baird, 1992:15). The 'stakeholders' intended by this are generally the indigenous people whose lives are most directly affected by the protected area - but this excludes the much wider range of people with an interest in the area who include urban dwellers dependent on the forest for recreation, water supplies or climate regulation, and the government which may require the area for major resource exploitation or infrastructural development. As Wells pointed out in his 1999 report on ICDPs, it is these elements which are often the principal threat to biodiversity conservation rather than the indigenous people who are so often blamed. Some more far-reaching protected areas schemes do encompass these wider sectors, such as the Leuser Ecosystem mentioned above, where considerable effort has gone into involving the military and government departments affected in the planning and implementation process (Griffiths, 1998). Even with the indigenous groups of stakeholders there are difficulties in arranging a genuine level of participation, as discussed in Chapter 1, since protected areas are often in economically marginal areas of the country and the people affected frequently have low educational levels and weak representation within the local polity (Colchester, 1992) and because traditional hierarchical structures may militate against this.

8 In the resource-rich and politically troubled province of Nanggroe Aceh Darussalam within which 90 per cent of the Leuser Ecosystem lies, the military is a powerful force which cannot be ignored.
The role of indigenous people should not be over-minimised by portraying them as passively accepting the forces around them, however: in fact, many are quite capable of reacting with vigour to their circumstances. This, and the tensions engendered by national park establishment, is illustrated by recent examples from Indonesia. The first concerns Mount Merapi, the volcano in Central Java mentioned above in the context of the 'landscape way of seeing'. A national park was to be declared here in 2002 by the government of President Megawati Soekarnoputri, but the communities living around Merapi, who felt that they had been excluded from the decision-making process and that their livelihood opportunities would be curtailed by the national park, protested so energetically that the plans had to be shelved (Down To Earth, 2002b; Sarono, 2002). This is an interesting demonstration of how an indigenous government has sought to impose an unpopular arrangement on its people without due consultation, of the empowerment of ordinary people since the fall of the Suharto regime (the protests would never have been countenanced prior to 1998), and of the dislike which the concept of national parks has given rise to amongst certain groups. Indeed, it supports the view of Pretty and Pimbert (1995), who describe as counter-productive the influence of the 'wilderness myth' on protected areas policy throughout the world.

This was further confirmed by an article in the influential Jakarta daily Sinar Harapan which outlined several conflicts over national parks, including one over Komodo National Park which has received considerable media coverage (Daya, 2003; Sinar Harapan, 2003). Here, an American NGO, The Nature Conservancy, has funded improved patrolling and other protection measures to counter threats to the rich marine life from ever-greater numbers of fishing-boats (KNP website, 2003). Critics claim that local people were not involved in the management of the park and have suffered through tougher enforcement of national park regulations – in other words that they are having to bear the costs of the national park while the society of Indonesia and the world at large enjoy the benefits. In the Kayan Mentarang National Park of East Kalimantan, on the other hand, the national park is seen as a positive entity by local people, who won the right to participate in its collaborative
management after repeated representations to government bodies and to the WWF (Jessup et al., 1990; Cochrane, 1999; Jakarta Post, 2003b); this, again, demonstrates the increasing confidence of local groups to take responsibility for the management of the natural resources around them.

The question of rights to resource utilisation is significant, since it is likely that another reason for the weakness of protected areas policies is that use levels by local people have been underestimated. Recent studies have concluded that poor people in developing countries depend to a significant and previously unremarked extent on forests and wildlife, particularly for food and fuelwood (DFID, 2002; Grimble and Laidlaw, 2002; Arnold et al, 2003), while in Bromo Tengger Semeru, the findings of the field research similarly contradicted prior information on dependence on the national park, as will be seen in later chapters. Conflicts over protected areas are by no means limited to developing countries, either: in fact, public and private economic priorities frequently over-ride concern for biodiversity. In a study of conservation and development in Greece, Valaoras (2000) remarks that “protected areas are usually seen as a problem, an intrusion on the lives of local people and irrelevant to their daily needs” (Valaoras, 2000:76). Even in Britain, acknowledged to have a high level of conservation awareness, there are several well-documented cases of farmers ploughing up Sites of Special Scientific Interest (SSSIs) to plant productive (and subsidised) crops such as flax (King, 1997), while biodiversity in UK national parks has been impaired by higher livestock density and increased use of fertilisers (Thom and Court, 2000). Similarly, when a new Chief Executive was chosen for the Yorkshire Dales National Park in 1997, the indigenous people took the opportunity to detail the “deep resentment of the [parks] authority by the people who live there” (Burnham, 1997). Here, the conflict over resource use between park inhabitants and others is demonstrated, as are conflicts of interest between different groups of people within the national park, in that although some residents benefit from tourism income, others find their lives constrained by restrictions on planning and other developments. If conservation ideals can be defeated by economics or conflicts of interest
in the industrialised countries whose nationals are broadly supportive of conservation and whose representatives advocate conservation-orientated policies in developing countries, it must be open to question whether these ideals will succeed any better in countries where economic pressures are greater and conservation awareness is lower.

While this is one indication of the skewed relationship concerning protected areas in industrialised countries and the developing world, another is that even as protected areas policy based on species or ecosystem models was being applied in the South, a more flexible and holistic approach was being applied in Europe, where (as mentioned above) there were simply no large wilderness areas devoid of human occupation. The management objectives for some protected areas, such as the Pollino National Park in Italy (declared in 1993) explicitly stress the need to maintain the balance between the natural and cultural heritage and to foster the contribution the parks make to the social and economic development of the area (WCMC, 2003; Pollino National Park, n/d). It is ironic that while in developing countries efforts are being made to reduce the numbers of people dependent on protected areas, in parts of Europe the reverse is true: the aim is to stem rural out-migration by providing job opportunities within the parks. This further supports the suggestion that a universal model of protected areas is not practicable: each country and even - in a large country such as Indonesia - each region, is bound to have specific characteristics which make it imperative to create a locally-tailored framework for park management. Having said this, there are almost certain to be cultural similarities between the people of adjacent or compatriotic parks which may make it possible to generalise features which make for the success (or failure) of one protected area. In the case of Bromo Tengger Semeru, an effort will be made to identify aspects of the way in which local people use the park and organise themselves which might be replicable.

Before moving on to examine tourism in protected areas, it remains to outline the most recent suggestions for achieving biodiversity conservation in developing countries. These, broadly, attempt to integrate the costs of conservation into the market economy by assigning a value to them and by encouraging corporate responsibility, which is very much
in keeping with the rationale of ecological economics discussed in Chapter 1. They also depend on a greater degree of enforcement than is currently the case. A suggestion made by Wells et al (1999) and Ferraro and Kiss (2002) is that rather than attempting further refinements of the indirect approach, whereby money is invested in the institutions which should administer the parks and in income-generating schemes which, so far, have not proved to reduce pressure on natural resources, it may be more effective (and almost certainly cheaper) simply to pay the people living around the parks in return for staying out of them and not using their resources. This would go a long way towards answering the challenge of developing country nationals, as expressed by Olindo (1989), that it is unjust and unrealistic to expect developing countries to set aside land for conservation without considerable support from the North - and it would certainly test the commitment of the North to conservation in the South. In reality there are likely to be several flaws in this direct approach too, for instance the fact that it has already been hard to persuade major aid donors to commit themselves to the UN target of giving 0.7 per cent of GNP to the South, as mentioned in Chapter 1. However, this is not the place to discuss these schemes in detail since they are at a very early stage.

An example of the 'corporate responsibility' approach comes from Indonesia, where in keeping with the realisation that conservation cannot succeed in isolation from the economic and political context, the WWF and local NGOs persuaded one of the largest paper-pulp companies to alleviate pressure on the rainforest by planting the fast-growing acacia needed for its mills on land which was already degraded and, at the same time, to provide protection for an area of original forest: "at last, an alliance of the private sector with the government and NGOs was working to benefit conservation, a rarity in Indonesia today" (Jarvie, 2002). However, the effort encountered serious opposition at an early stage from local councillors and entrepreneurs who had benefited from illegal log extraction from the area, yet again confirming the entrenched system of making private profit from natural resources in common ownership.
Another commercial approach is to privatise reserves by purchasing or leasing important areas from the government or from the community (or indeed by the community), and this has been shown to have some success (Bredin, 2001; Roe and Jack, 2001; Eagles et al, 2002; Ferraro and Kiss, 2002). Related to this is the suggestion that protected areas should become self-financing (for example Dharmaratne et al, 2000). Although this can only apply to a very small number of parks where sufficient income can be generated, it could offer some hope for success. For instance, at the Komodo National Park, the NGO The Nature Conservancy (already referred to) works closely with the PHPA and has formed a joint venture company to apply for a concession to manage the park. It argues that the government has insufficient means to protect the park’s resources (especially the fish spawning-grounds), which are currently being destroyed for individual gain, while the potentially lucrative tourism resources could be successfully exploited both for conservation and the government treasury (Jakarta Post, 2003a). Linked to this approach is stronger enforcement of regulations: in addition to measures designed to counter illegal fishing, a public ferry has been banned from calling at Komodo Island because deer-poachers were using it to make discreet visits to hunt deer, the decline in which is thought to be one reason for falling numbers of the Komodo dragons (Tempo, 2003).

Another attempt to address North-South inequity and alleviate the pressure on tropical rainforest or other natural habitats is the ‘debt-for-nature swaps’, under which international debt owed by the government of a Southern country is written off by the lender agency in exchange for a sum of money (usually much less than the debt) paid by an NGO to the agency. As part of the deal, the government concerned agrees to set aside an agreed area of natural habitat from exploitation (Elliott, 1994). The main flaw in this attempt to apply the principles of the market economy to conservation is that if the framework for enforcing protection of conservation areas is not already in place for existing reserves, then it is unlikely that it will suddenly be created for the new ones.

In practice, it is likely that the direct funding and regulatory approaches will be tested alongside the techniques of sustainable livelihoods and conflict resolution which, despite
their drawbacks, have seen some successes. Indeed, one of the most successful strategies for reducing pressure on protected areas and of generating income from them is tourism, and this aspect of national park management will now be discussed.

Tourism in National Parks - the Wilderness Myth Revisited

It has already been said that national parks have always had a recreational purpose. The national parks in Britain were in part established so that "the leisure to enjoy [the landscape] and the freedom of the open spaces would maintain the nation in physical and mental health after the black horrors of war" (Evans, 1992:64). It is interesting, though, that in a fore-runner of the situation with the Indonesian protected areas programme discussed in the previous section, apologists for the recreational merits of national parks were different individuals from the natural scientists who generally administered them and by whom visitors were given a low priority (MacEwen and MacEwen, 1982; Payne and Graham, 1993; Gunn, 1994). In any case, even those who advocated leisure in national parks did not predict their vast popularity, with arrivals in some places reaching millions per year. For instance, there were 40,000 visitors to the Serengeti National Park in Kenya in 1991 (WCMC website), around 3 million per year to Yellowstone in every year from 1991 to 2002 (Yellowstone website, 2003), and 22 million visitors to the Peak District National Park in 1996 (Peak District website)9.

There have been numerous publications on the dichotomy between conservation of the environment and tourism, for instance Budowski (1976), Ziffer (1989) and Cater and Lowman (1994), and the fears of natural scientists that the ecology of national parks is damaged by tourism has been confirmed by many studies, for instance Edington and Edington (1977), Edwards (1987), Glyptis (1991), Hunter and Green (1995), Ceballos-Lascurain (1996), and Roe et al (1997). Some of the problems are because many basic tourism resources (for instance the landscape and the sea) have little effective management due to the lack of assigned responsibility for common resources, as

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9 Unfortunately the basis on which these different figures were calculated was not clear, except in the case of the Peak District National Park, which counted each visitor-day spent in the park.
discussed in the last chapter. To mention some specific forms of damage, the ecological integrity of protected areas can be threatened by trampling of vegetation, soil erosion due to over-use of paths or carelessly-sited facilities, pollution or damage to coral reefs by pleasure-boats (and even dive-boats), and disturbance to wildlife through excessive visitation. For instance, cheetahs in the Masai Mara game reserve suffer considerable disruption from the intrusion of tourist safari buses, and their survival rate is apparently lower inside the reserve than outside it (Leakey, 1995). A considerable amount of work has been done on techniques of assessing the environmental carrying capacity of different sites, taking damage abatement measures, and on managing visitor flows so that impacts are minimised; these techniques are summarised in various places, including a guide produced by the Global Environment Facility on supporting biodiversity through tourism (GEF, 2001). As these are in general well-understood technical solutions to practical problems they will not be discussed in detail here, since we are more concerned with the social, political and economic context which underlies tourism in national parks.

It is generally recognised now that any adverse environmental impacts of nature-based tourism have to be weighed against the economic and overall conservation benefits, and some work has been done on quantifying these, although Fennell (2001) remarks on the shortage of good empirical data on ecotourism. One of the earliest studies was a 1979 report which showed that charismatic megafauna such as lions and elephants in a Kenyan national park were worth far more to the national economy as live visitor attractions than dead (Western and Henry, 1979, cited in MacKinnon et al., 1986). Since then, the economist Kreg Lindberg has been particularly active in investigating the economic aspects of ecotourism in developing countries and ways of improving the benefits (Lindberg, 1991, 1998 and 2001), with additional contributions by others, including Michael Wells (Wells, 1997) and Katrina Brandon (Brandon, 1996). Most of these studies have focused on how nature tourism benefits the economy through visitor expenditure, job creation and taxes, and benefits conservation through reducing more damaging forms of resource exploitation and in improving local attitudes towards conservation. However, many of the studies conclude
that leakages are high, that mechanisms for channelling tourism revenues to local communities are limited (as discussed in Chapter 2), and that in general ecotourism projects fail to meet expectations in generating conservation benefits – which was one of the findings of critiques of ICDPs discussed above. This lack of success is despite the fact that some tourism projects have received considerable investment, such as the Mount Halimun scheme described in the last chapter, and the CAMPFIRE programme in Zimbabwe. This ran throughout the 1980s and 1990s and took an innovative approach to resolving conflicts over resource utilisation by ensuring that income from tourism and wildlife culls was distributed to local communities, but it is now considered to have had a limited conservation impact, due partly to unsatisfactory revenue-sharing arrangements (The Zimbabwe Trust, 1994; Child, 1996; DfID, 2002). ¹⁰

On the other hand, some good, well-managed projects with a market orientation do exist. A well-studied example is the Annapurna Conservation Area Project, in Nepal, which as mentioned in the last chapter has successfully tackled problems caused by too many tourists such as over-cutting of fuelwood for fires and over-development of tourist lodges (Gurung and de Coursey, 1994; Gurung, 1998). Here, success seems to have come about through a combination of external expertise and the extension to tourism of pre-existing local institutional structures. More recently, community-based wildlife tourism initiatives in Namibia run according to both the participatory and context-wide techniques of PPT and the property-rights approach of privately-owned reserves appear to be having some success in generating income from wildlife and resolving disputes (Jones, 1999; Schalken, 1999; Ashley, 2000). Both the successes and failures of examples such as these will be borne in mind in the context of Bromo Tengger Semeru to see if there are any parallels.

Another aspect of tourism to national parks is the kind of tourism which takes place there. It was mentioned above that the popularity of some parks was not originally foreseen. Protected areas policy-makers and managers have had to consider the basis on which

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¹⁰ The problems of the Zimbabwe programme are exacerbated by the drastic decline in tourism caused by domestic political problems (Eagles et al, 2002).
tourism to national parks takes place, and there is range of opinions as to what form tourism should take. In Britain, the Council for National Parks recommended only in 1990 that "the National Parks are places for contemplative withdrawal, in which people can draw inspiration from and explore their relationship with nature and regain a sense of perspective" (Council for National Parks, 1990:26), but the occurrence of mass tourism within the national parks shows that not all visitors share this rather introspective experience of them. In any case, there has never been any serious attempt to stem the flow of visitors to British parks as the recreational demand was simply too great, and because of the economic advantages conferred on local residents by tourism; in the Yorkshire Dales National Park, for instance, visitor expenditure "provides a substantial source of revenue to the Dales economy" (Thom and Court, 2000:A9), and in the North York Moors National Park it was estimated by the mid-1990s that tourism brought more economic benefit to the area than agriculture (Breakell, 1996).

Equally, tourism was part of the rationale for establishing national parks in developing countries, and in Indonesia it was hoped that they would foster public awareness of conservation as well as providing opportunities to enjoy leisure in natural surroundings (FAO, 1982). However, mass tourism was again not foreseen. As with the "contemplative withdrawal" type of recreation envisaged for British parks, tourism in Indonesian parks was expected to take place according to the preferences of the Northern consultants who compiled the National Conservation Plan for Indonesia. This states that one of the socio-philosophical arguments for conservation concerns the quality of life: "we ... like to get away from the crowds and the dirt to sense the freedom of walking in wild unpeopled places" (FAO, 1982:3): but this sentiment was more a reflection of the conservation advisors, who carried with them Schama's "bulging backpack" of Rousseau-ist ideals tempered with conservation science, than of the realities of Indonesian society, which was increasingly urbanised and industrialised and valued family or community togetherness rather than individualism. Moreover, the concept of 'getting away from the crowds' into
‘unpeopled places’ is considered by many Indonesians as a sign of a disturbed mind, while taking holidays in large groups of extended family, friends or work colleagues is the norm.

Further analysis of the Indonesian tourism market and the significance of this for tourism in national parks will be given in Chapter 5, but in preferring to take holidays in larger groups, Indonesians are not as different from Europeans as might be supposed: the perceived differences stem more from the preferences of parks managers than from those of the tourists. For example, a 1989 British study compared attitudes to the countryside of a middle-class group of people, two working-class groups, and a group of Asian women. While some values were shared, such as the appeal of nature to the senses and the opportunity for adventure, differences were that the Asian and working-class groups preferred to enjoy the countryside in the company of others and placed a higher value on amenities such as guided walks, historic sites and pubs, while the middle-class group had a more self-conscious encounter with nature, preferring solitude (or the company of sympathetic others) and the absence of facilities (Harrison et al., 1989). Similarly, a study of visitors to the North York Moors National Park found that the majority of visitors were from the better-off and better-educated classes (Breakell, 1996), while studies of wilderness users in the USA have shown that people of a higher educational background are more frequent visitors than manual or unskilled workers (Walker and Kiecolt, 1995). These findings add to the suspicion that tourism in national parks in Indonesia may originally have been very narrowly conceived, given that the conservation advisors belonged to a well-paid and well-educated group of foreigners – and that, as stated earlier, none of them had any tourism expertise.

This lack of expertise also showed in the absence of any attempt at market segmentation not only between domestic and foreign tourists, but between different groups of foreigners and different groups of Indonesians. This was not entirely surprising, since techniques for analysing tourist motivations and defining visitor profiles were not well-established even within the mainstream tourism industry at the time the Indonesian parks management plans were written. Even more recently, though, there seems to have been
insufficient analysis of motivation for visits to national parks and people's behaviour while there or on the requirements of different groups, although studies by Higham (1997, inter alia), Kearsley (2000, inter alia) and Backhaus (2001) have contributed greatly to the field. In his analysis of tourist motivation for visiting wilderness areas in New Zealand, for instance, Kearsley (2000) translates the awareness that the concept of wilderness means different things to different people into policy recommendations for national park management, in that some people demand a pristine wilderness with no anthropogenic changes, while others are more tolerant of visitor facilities such as overnight cabins. Interestingly, he points to exactly the same people-exclusionary ecological emphasis in New Zealand parks as identified in relation to Indonesian parks, recommending that "the traditional wildlife focus of forest management must now be joined by a much stronger social scientific perspective" (Kearsley, 2000:88).

Higham (1997) takes this analysis further in identifying differences in requirements between international and domestic visitors to New Zealand parks. The visitor-motivations he cites are not always mutually exclusive, except that some visitor groups clearly prefer a higher degree of solitude than others. Meanwhile, in a comparative study of foreign and domestic users of Malaysian national parks, Backhaus (2001) points to the very great difference between the foreigners on the one hand, who are looking for a 'special authenticity' in parks, since they believe that "a Borneo jungle ... is one of the most authentic places in the world" (Backhaus, 2001:5), and Malaysian tourists on the other, who are looking for somewhere they can carry out normal leisure activities such as fishing or enjoying an outing with friends and family. Here, again, the cultural construction of wilderness is important: the foreign tourists' quest for authenticity stems from the same historical well of consciousness concerning wilderness as the policies and plans of the overseas advisors on Indonesian national parks, and like them, they carry a Romantic and inspirational perception of the wilderness.

In the case of the British, at least, this view is enhanced by the many high-profile TV documentaries on natural history, which have enhanced general knowledge of ecological
processes and threats. Many people therefore approach their wilderness experience with considerable pre-existing knowledge, and desire to gain more. In part, their needs can be fulfilled by communicative staging of the kind described in the last chapter, such as visitor centres and well-trained guides. Backhaus highlights this process by applying a postmodern interpretation to his study, in that tourists to national parks rely on 'signs' (for instance the value-laden words of 'Borneo' and 'jungle') to confirm that they are in a wilderness area where nature holds sway. King and Stewart (1996) contend that the mere use of terms such as 'national park' and 'virgin forest' are in themselves a form of communicative staging. The danger of this, of course, is that an over-reliance on symbols may mean that the apparent existence of the national park and indications that it is well-run may form a perceptual screen which obliterates the reality of management failings. This is a particular danger in Indonesia where, as shown in the previous chapter, there is a tendency to emphasise form over substance, and in the case of national parks, where tourists in their 'holiday mind-set' are predisposed to enjoy their experience and accept what they are told or shown at face value.

It can already be seen that tourism in national parks is anything but a homogeneous phenomenon, from the angle both of supply (the tourism product) and of demand (the tourists). In order to help analyse user-groups in Bromo Tengger Semeru, a typology of tourists to Indonesian national parks will be suggested in the next chapter. For now, we will return to focus briefly on the problems the lack of market awareness has caused in Indonesian national parks.

It has already been mentioned that the foreign advisors on Indonesian national parks lacked tourism expertise, and so too did Indonesian parks managers, since the parks are under the jurisdiction of the Ministry of Forestry, where there was little expertise in tourism. The lack of cross-sectoral communication between government departments in Indonesia - in this case the Directorates General in charge, respectively, of national parks and tourism - was already identified in Chapter 2 as one reason for the difficulty of developing nature tourism, and the absence of a market orientation was suspected of being one reason for the
failure of ICDP-type schemes such as the one in Mount Halimun. At the other extreme, however, into the vacuum left by a weak regulatory and enforcement structure, and in place of a planned approach to market and product development, has surged a strong entrepreneurial response to the demand for tourism in certain Indonesian national parks. To put it more plainly, there has been a spontaneous free-for-all in grabbing tourism-related wealth.

As described in the preceding chapter, both tourists and members of the host community wish to gain from their participation in tourism. The drive for self-actualisation or simply for riches (spiritual or material) helps fuel the Tourist Area Life-Cycle, which at the top of its curve can mean far higher numbers of tourists - and therefore far greater impacts - than envisaged by planners. There are many examples of natural areas, particularly those with a unique selling point, which are undergoing considerable tourism-related stress. Tourism to the Galapagos Islands was cited in the last chapter as an illustration of the overwhelming pressures on conservation and sustainability, and a parallel Indonesian example concerns the orang-utan centre of Bohorok, on the edge of the Leuser Ecosystem in Sumatra. What is happening here illustrates a number of the themes of this thesis, in particular the obstacles to sustainability created by private interests and the market economy (Chapter 1); the inexorable processes of the TALC and the obstacles to sustainable tourism represented by governments, the tourism industry, tourists and the local community (Chapter 2); the different perceptions and expectations of parks managers and tourists from different cultural backgrounds (this chapter); and the dislocation that occurs when systems devised under one cultural discourse are imposed upon another (throughout).

At Bohorok, a centre for reintroducing formerly captive orang-utans to the wild was set up in the early 1970s. It was in a peaceful rainforest location on the edge of a river several hours' drive from the nearest city, Medan. For many years it received very few visitors, and those who did come were prepared to put up with primitive facilities and to trek into the forest to see the orang-utans. By 1989 three guest-houses had appeared to cater to the trickle of tourists, and four years later, in 1993, there were fourteen, by which time road
communications from Medan had improved so that the journey took less than three hours. Just two years later, the tourism infrastructure had swelled to 32 hotels and guest-houses with 268 stalls selling food, clothing and souvenirs, and by 1998 there were too many hotels and stalls to count in a three-day visit – and as almost all of them were unlicensed the authorities also had no idea how many there were. Because of over-development and overcrowding, Bohorok was fast acquiring a bad reputation amongst foreign tourists. Whereas for about a decade it had been a popular stopover point on the standard backpackers’ route through South-East Asia, those ‘in the know’ were now shunning the place.  

Tourism had been allowed to grow here in a spontaneous, unplanned manner, in a classic example of the TALC. Despite the fact that the attraction was on the edge of a national park, no constraints had been placed on developments, with more and bigger ones even planned. Local entrepreneurs were already aware of the decline in visitor numbers (even before the forest fires of 1997 and 1998 and concurrent political and economic instability), and at least two of the bigger hotel-owners were in financial difficulty or trying to sell up. An analysis of the stakeholders in tourism at Bohorok revealed that there were at least seven groups, namely:

1. The local government, which collected substantial tourism-related taxes from Bohorok and therefore had no interest in checking developments.
2. The police and army, as the hotels paid fees to register guests with the police, and because most businesses gave a ‘present’ to both at Idul Fitri.
3. The national park administration, which received significant entry fees, while individual rangers earned money from guiding and from running the Visitors’ Centre.
4. The tourism entrepreneurs, including guides, raft-trip organisers, and owners of hotels, restaurants, stalls and shops. Most were local people, while a few had been attracted to

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11 The information in this section was gained from six extended visits to Bohorok between 1985 and 1998, including four trips as a tour-leader for nature tours and two periods of consultancy work for the Leuser Ecosystem, with data from local government bodies, hotel owners, foreign consultants and newsletters of the Bohorok Sustainable Development Project, an NGO which attempts to mitigate some of the worst environmental and social excesses at Bohorok.
Bohorok from other areas of Sumatra by the entrepreneurial opportunities in a
demonstration of the ‘magnet effect’ observed by Brandon and Wells (1992) in their
analysis of ICDPs.

5. A sub-category of tourism entrepreneurs best described as miscellaneous gangsters who
made money from touting for hotels, drug-dealing, intimidating tourists and
protectionism. The biggest cause of complaint (35 per cent) from foreign tourists was
against this group.

6. The tourists, who were the source of all the wealth generated at Bohorok but were not
treated accordingly, with inadequate services and facilities. There was little
differentiation in facilities for the domestic tourists, who came principally to bathe in the
river and relax in family groups, with enjoyment of the clean air and (semi-)natural
environment an important part of this, and foreign tourists, who according to a survey
carried out in May 1997 said their main reason for visiting Bohorok was to see the
orang-utans (91 per cent), while 19 per cent cited the national park and 20 per cent cited
jungle trekking.12 By contrast, only around 4 per cent of the domestic visitors went to
see the orang-utans, according to staff of the national park office.

7. The natural environment, in the form of the orang-utans, the surrounding forest and the
river. These were the central focus of tourism but were inadequately managed and
represented. The forest was being cleared for hotel development and fire-wood, the river
was used for waste disposal, and there was no longer any serious attempt at encouraging
the orang-utans to return to the wild – the rehabilitation centre had become a sort of open
zoo. And despite the early hope that encouraging visitors would help to engender a
conservation consciousness amongst Indonesians which would translate into
conservation policies (Frey, 1981), the orang-utan remains in serious decline (Chan,
2001), mainly because of rapid habitat loss through deforestation (Pearce, 2002). The
tourists were generally unaware of the absence of genuine conservation, partly because

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12 Respondents could tick more than one category. The survey was carried out by the Bohorok Sustainable
Development Project – unfortunately no information was available on the methodology used.
of the reassuring 'signs' communicated to them, one of which was a documentary film still shown at the Visitors' Centre in 1998 which depicted the rehabilitation of orang-utans at Bohorok – but the film was made in 1976 and no longer portrayed accurately what was happening.  

The variety of participants in tourism at Bohorok has been described in order to show that well-meant management plans are meaningless if there is inadequate implementation and if the pressures to expand tourism are stronger than the forces controlling it, which at Bohorok was the case since all the stakeholders (except the orang-utans) had an interest in allowing as many tourists as possible to arrive. The messy reality of tourism at Bohorok, with its inadequate waste and sewage disposal facilities, unchecked building and commercial development, loud music, hustlers and poor environmental and species management is at the other end of the scale from the example of Mount Halimun given in the last chapter, where too few tourists had come to make the project viable, and it is an all-too-real illustration of why income-generating projects in and around protected areas do not necessarily succeed in reducing pressure on the natural environment. It also renders slightly pointless the academic niceties of the debate over exactly what constitutes ecotourism as opposed to other types of tourism, and it is an effective demonstration of how the attempted imposition of management plans which ignore social science aspects is almost certainly doomed to failure.  

Towards a Conservation Consciousness?  

This chapter has examined the historical development of conservation awareness in the North and the changing rationale of protected areas policy, and has shown how attempts to apply this rationale to national parks in Indonesia has had limited success in terms of biodiversity conservation. There has not been space to examine all the threats to the integrity of protected areas, but the tourist-related examples are an indication of how the commitment

13 Orphans of the Forest, Survival Anglia, 1976  
14 A devastating flood in November 2003 swept away many of the riverside shops, hotels and housing at Bohorok, with the loss of around 200 lives. It is thought that the flood was caused by illegal logging upstream of the site.
on paper to their designation is failing to translate into a sustainable situation on the ground.

As far as this study is concerned, the significance of all this is fourfold. The first point concerns the lack of conservation awareness in Indonesia and the effects of this; the second concerns the pattern of tourism development in Indonesian national parks and the consequences for biodiversity conservation; the third concerns current international thinking on protected areas management; and the final point concerns the inability of foreign-generated policies to achieve conservation objectives in Indonesia. These points are inter-related, but an attempt will be made to draw out their individual significance.

The first point, and one which strikes at the heart of the conservation edifice in Indonesia, is that whereas the Northern view of wilderness (including rainforest) is informed by two hundred years or so of poetic, artistic, philosophical and empirical influences, these same influences have not (other than peripherally) affected the people of Indonesia. This means that an innate understanding of the aesthetic, ethical and scientific reasons for the conservation of natural resources taken for granted in the North barely exists here. The underlying lack of conservation awareness of the Indonesian public was noted by Michael Wells in his 1999 study of ICDPs as a broader reason for the inadequate support for resource conservation, and this takes several forms. An important one is that while the government department charged with administration of the parks undoubtedly contains sincere and committed staff, their task is rendered harder by their own lack of conservation consciousness (one might even say subconsciousness). This translates into poor policy formulation and enforcement, exacerbated by a more generalised lack of good governance. Further consequences of the low level of conservation awareness amongst the general public are that few people have inhibitions about indulging in damaging exploitation of resources, there is a fairly blatant disregard for any regulations that do exist, and there is limited public outcry against any infractions. This is another manifestation of the tacit approval of private gain at the expense of the public interest noted in Chapter 1. (There are many Indonesian NGOs which focus on environmental issues, but they tend to campaign more on the human rights aspects of environmental injustices than on the preservation of species or ecosystems.
— although there are some signs that this may now be changing, which will be mentioned below.)

Another aspect of the lack of conservation awareness is that there is low appreciation of national parks and their purpose — and when this does exist, there are sometimes negative connotations, as in the examples given above of Mount Merapi and Komodo. In the North, national parks generally have positive associations, partly because the public has had over a century to become familiar with the idea that a ‘national park’ is something very different to urban parks, and partly because the concept of national parks germinated and took root in the culture and society of North America, Europe and the Antipodes where they were first established. One factor in the failure of a positive concept of national parks to become established in Indonesia is perhaps because of the translation of the English term ‘national park’ into the Indonesian taman nasional. The word taman normally means 'garden', and for most people conjures up a heavily managed environment, as in a Taman Hiburan Rakyat ('People's Amusement Park'), or a Taman Wisata, a carefully manicured park created round a tourist attraction. There are thus associations of artificiality rather than of natural wildness, and no public awareness campaign has ever taken place to alter this view. In his study of tourism to Gede Pangrango National Park, in West Java, Sensudi (1997) confirmed that "visitors to the National Park can be seen to lack awareness of the significant differences between national parks and other parks which are not national parks … some problems have arisen in the field as a result of the poor level of concern and awareness of visitors about the purpose of national parks" (Sensudi, 1997:161).

It is possible, of course, that there will be a growth of conservation awareness in due course once people’s immediate concerns over their political and economic welfare have been answered, and there are already some signs of this. For instance, the designation of Mount Merapi as a national park in 2002 indicates that the Indonesian government has developed its own ‘landscape view’ through justifiable pride in the physical features of the country, and suggests that an appreciation of natural landscapes may be a precursor to a desire to preserve nature for its own sake. (It will be seen later on that the scenery at Bromo
is an important aspect of touristic consumption of the park.) The fact that a progression may occur ties in with a point made by Western (1989), that wildlife is more at threat in transitional societies (which is arguably the situation in Indonesia) because of uncertainty over ownership and rights to resources, and that once the transition to a society with stable ownership and legislation has been achieved, remnant populations of wildlife can be more easily protected. Further indications of a nascent species-oriented focus are that there has been a substantial increase in indigenous bird-watching groups over the last couple of decades, according to an Indonesia-experienced ornithologist and the NGO Birdlife International (Shannaz, 2003; van Balen, 2003), while in July 2003 members of Profauna, a local NGO, badgered the Jakarta police and government conservation officers into raiding a house where animals were being held for the illegal trade in protected species (Media Indonesia, 2003). The increased sense of empowerment by local people was mentioned in Chapter 1, in the context of the greater ability of some groups to establish rights over their natural resources. Of course, it is by no means a foregone conclusion that such actions by a minority will coalesce into a similar progression of support for conservation as has occurred in industrialised countries.

The second point to come out of the discussion in this chapter is that the tourist popularity of Indonesian national parks was not foreseen or planned for, so that measures to combat the resulting environmental and social disruption were not in place. The huge growth in spontaneous tourism to some parks has been discussed in the example of Bohorok (which is not an isolated case, although perhaps an extreme one). Visitation to Indonesian national parks is however very uneven, with those nearest large centres of population most popular with domestic tourists and those with the strongest unique selling point, coupled with relative accessibility, most popular with foreigners. This means that parts of some national parks have been over-visited, as at Bohorok, while others have received insufficient

\[15\] The pro-animal activists were beaten up by a crowd of bystanders for being police informants, but at least the case received media coverage.
tourists, as at Mount Halimun. In both instances, unregulated market forces have been the driving factor in the success or failure of the tourism enterprises.

The dimensions of mass ecotourism in national parks in Indonesia and elsewhere could never have been envisaged by philosophers such as Rousseau and Thoreau, who were instrumental in changing public perceptions of wilderness in the North, or by the early exponents of protected areas. Despite attempts by tourism and ecology professionals to establish the carrying capacity of sensitive cultural and ecological sites, and warnings from biologists of the negative impacts of tourism, market pressure has been acceded to by governments and local people because of the economic benefits and because regulation would be more difficult than a laissez-faire attitude. Meanwhile, the convenient term 'ecotourism' has in many cases become a semiotic label indicating a beneficial and sustainable form of tourism, whereas in fact it has costs and benefits just as any other type of tourism. And as with other forms of tourism, there is considerable variation between the aspirations of individual tourists, a diversity which, in Indonesia at least, is largely unrecognised.

This poses a number of dilemmas for development policy-makers and parks managers. How should the short-term economic needs of the resident human population be weighed against the long-term needs of plants and animals and the ecosystems they form? How can the expectations of people who wish to have a more individual, self-conscious or knowledge-seeking encounter with nature be accommodated alongside those who wish to enjoy a more companionable relaxation with groups of friends or family against an attractive natural back-drop? The answer is definitely not to hope that tourism will go away or even that it will stabilise at current levels. In the absence of a major collapse of the world economic order, it is futile to expect this; rather, given the increasing sophistication and segmentation of markets, it is certain that national parks and other natural environments will continue to be the focus of increasing visitor pressure.

This leads on to the third major point arising from this chapter, which is the evolution in protected areas policy over the 130 years or so that national parks have been in existence.
From the early desire to preserve outstanding natural monuments, through the wish to increase access to natural areas in order to improve the spiritual health of urban populations and a recognition of the need to preserve species and ecosystems against over-exploitation of wildlife and loss of habitat, policy on national parks by the late 20th century came to focus on satisfying the needs of both human and animal populations. Approaches to doing this have centred on helping people to make a living from natural resources without damaging them – in other words to ensure that utilisation is at sustainable levels. Unfortunately, as with tourism, economic pressures and weak governance often combine to undermine any planned schemes.

The principal reason for this – and this is also the final point to emerge from this chapter, and indeed one of the principal themes of this thesis – is that development plans drawn up according to one set of norms may be inappropriate because they do not incorporate the cultural and political realities of where they are to be applied. In this case, the national conservation strategy for Indonesia and individual national park management plans were drawn up by advisors whose views were shaped under a different cultural paradigm from the one where the plans were to be applied, and they failed to contextualise them within the circumstances of Indonesia. At the time, of course, they could have done little else: their brief was to formulate conservation policies for Indonesia, and they did so according to contemporary norms of conservation and neoclassical economics.

It has been seen that even attempts to adjust the original concept of national parks to the context of developing countries, such as the ICDP and sustainable livelihoods approaches, have had limited success. The principal flaw in these seems to be that, as with the earlier rationale of national parks, an idealistic belief in the desire and ability of individuals to manage their environment in an appropriate long-term way seems to have taken precedence over the reality of life in developing countries, which is that in most cases people are forced to exploit any available resource in order to survive (or to improve their standard of living). Since the late 1990s other proposals for protected areas management are based more firmly within the paradigm of the market economy, and these may offer a more
optimistic prospect for successful future management in that they attempt to marry the wider demands of development with the narrower ones of biodiversity conservation. It is possible to criticise some of these approaches in that they represent a rather weak form of sustainability, while other recent recommendations for a return to more exclusionary, protectionist policies are anchored much more firmly within a framework of strong sustainability. It is too early to judge whether these approaches will be any more successful than previous ones in conserving biodiversity through protected areas management, but in either case it seems likely that they will only succeed if they receive support for conservation from both government and public.

The way that market forces have expressed themselves through nature-based tourism at one Indonesian national park, at Bohorok, has been outlined in this chapter. It was clear from this example that tourism was not contributing to biodiversity conservation and that the common resources of the park were being damaged. The question which presents itself is whether the scenario here, of rampant over-development and lack of concern for the environment or social sustainability, is inevitable. If so, is a similar outcome bound to occur in other popular parks, such as Bromo Tengger Semeru? Before moving on to examine this question, the way the investigation was undertaken will be outlined in the next chapter.
Chapter 4 - Rationale and Methodology

In the first three chapters of this thesis, a framework for the investigation into tourism in a national park in Indonesia has been established through a discussion of the broad principles of economic management and their application in the South, an examination of the tourism industry, and an assessment of the history and practice of protected areas management. The application of sustainability to each field has been examined, and illustrations from Indonesia and other countries have been used to bring out the challenges thrown up by the translation of theory into practice. It has also been shown that although advances have been made in resolving the mismanagement of environmental resources, there remain many barriers to their sound and long-term utilisation.

In the first part of this chapter, these themes will be drawn together to focus more closely on Indonesia in order to set the context of the case study. The process of identifying the research questions and the way these were operationalised will be shown, after which the research perspectives will be discussed. The reasons for selecting the study location will be given and its principal characteristics outlined. A typology of tourists specific to Indonesian national parks was devised as one of the research tools and this will be presented along with the other methods used. Areas of difficulty in implementing the field study will be discussed, along with ways in which these problems were resolved (or at least tackled).

Ecotourism and Sustainability: High Expectations, Low Outcomes

One of the barriers to sustainability identified in previous chapters is that some of the social and economic development strategies used in the South evolved in the very different political and cultural environment of the North, which has resulted in lower achievements than expected. For instance, the hierarchical nature of Javanese society is a barrier to participatory techniques in community development, while the imposition of a Northern model of national parks in Indonesia has caused conflicts over resource use and antagonism towards the parks. This is partly because the appreciation of nature which
informs the philosophy of protected areas management in the North exists to a lesser
degree in Indonesia. The result is that well-meant development initiatives and efforts to
make economic progress compatible with biodiversity conservation have not always been
successful. For example, at about the time that the ICDP approach to protected areas
came to the forefront, there was great optimism about the potential for ecotourism to
support conservation, as shown by the following quotations:

"Ecotourism can generate badly needed revenue for local and regional
economies, heightened local awareness of the importance of conservation,
and new incentives for governments and the dwellers in and around appealing
natural areas to preserve them." (Boo, 1990a:xii)

"the management and protection strategy of an IPAS [Integrated Protected
Area System] allows local communities the selected use of the protected area
or its buffer zones ... to carry out ecologically benign activities and/or
agricultural activities, and provides for the protected area to generate tourism,
research and other values ... The protected areas become catalysts and net
contributors to regional economic growth and in the process gain recognition
and improved security for their biological wealth." (Deutsche Forst Consult,
1992:xii-xiii, on several protected areas in Indonesia)

While these assertions may have reflected some achievements in nature tourism,
they expected too much of tourism (and other income-generating activities) in protected
areas in most developing countries. One reason for this, as shown in the previous chapter,
was that many conservation consultants did not understand tourism, while another was
that the same few examples of ecotourism tended to be used as case studies. On closer
examination, it was apparent that these examples had specific features which prevented
them from being replicable, that they were disproportionately tiny compared to the
economic or conservation problems they were supposed to address, or that they were
reviewed at too early a stage for sound conclusions to be drawn regarding their long-term
viability. Still other examples indicated that it was extremely difficult to maintain
ecological and cultural integrity once ecotourism developments became popular or large-
scale.

Typical studies were of the Tavoro Forest Park and Reserve in Fiji, which
employed three full-time staff in 1991 and gave benefits to other members of a village of
150 people (Young, 1992); of the ecotourism industry in Dominica and Belize (Lindberg and Enriquez, 1994; Cater, 1995), where the conclusion was that a symbiotic relationship between tourism and the environment “remains something of an ideal rather than a reality” (Cater, 1993:13); of the New Zealand heritage trails programme, which found difficulty in involving Maori people, despite their avowed importance as stakeholders (Hall et al., 1993); of the Annapurna Conservation Area Project in Nepal, designed to “mitigate the negative effects of tourism and highlight the positive” (Gurung and De Coursey, 1994:21); and of the Papagallo resort in Costa Rica, where from the mid-1980s “one of the primary efforts of tourism promotion [was] to encourage ‘soft’ nature tourism” (Boo, 1990b:28), and which was at one time considered the “green mecca of the southern hemisphere” (Castillo, 1994:59) but which by the mid-1990s was beginning to show signs of crisis (Place, 1998).

Even by the early 1990s it was beginning to appear that ecotourism was another unwieldy vessel in the same flotilla as sustainability and participatory techniques, in that all had an elaborate superstructure but insubstantial anchors. For instance, an American report on guidelines for investment in tourism in Africa found that “the literature on ecotourism is characterized by a cautious but generally favorable bias and a serious deficiency in quantitative evidence and analysis” (IRG, 1992:iii), and that it was “descriptive and theoretical” (IRG, 1992:88). In other words, insufficient evidence had been collected to show whether ecotourism really did benefit conservation, and to determine whether the concepts used in proposing or initiating tourism projects in protected areas had external validity in that they were applicable to other situations. By the mid-1990s the hope that ecotourism would contribute to sustainable development and conservation began to seem like wishful thinking. For instance, it was found by the WWF Indonesia programme that efforts over several years to encourage ecotourism had “fail[ed] to attract enough visitors to generate significant revenues for local communities,

1 The ACAP later proved to be effective in achieving its objectives, but at the time of the review cited it was at a very early stage.
and therefore fail[ed] in their ultimate objective of making the protected areas more worthy of protection in the eyes of the communities" (WWF-IP, 1997), while a study of the Royal Chitwan National Park in Nepal found that ecotourism had fewer economic benefits than even the community concerned believed (Bookbinder et al, 1998, cited in Fennell, 2001). Taking an overview, a World Bank report on the economics of nature tourism concluded that although substantial contributions to national revenues were made, the contribution to sustainable development and conservation was less clear (Wells, 1997).

These and other studies were part of a reappraisal of community-orientated tourism and protected areas management which tried to find ways of making tourism more beneficial to poorer communities and more sustainable. Out of this reappraisal have come the strategies of Pro-Poor Tourism and Community-Based Wildlife Tourism, discussed in previous chapters as expressions of the paradigm of sustainable livelihoods and identified as a positive way forward. It has to be said, however, that the potential success of these approaches still tends to be over-emphasised because of the appealing nature of ecotourism projects, which present an attractively non-destructive way of utilising natural resources, because of the time-lag in information on existing projects appearing in the public domain, and because of the dearth of detailed studies of the mechanisms and effects of ecotourism. It was because of this shortage that the idea was conceived of carrying out a study into the links between tourism and conservation.

Indonesia and personal motivation for the research

Once an outline for the research project had been conceived, Indonesia was selected as the study country. This was for several reasons. First, it has an important tourism industry which, because of its rich cultural and natural heritage, has already diversified into forms other than the conventional beach-resort model. Secondly, it has an extensive protected areas system, and it is one of the world's most biodiverse countries (Goodland, 1981; Murphy, 1988; Whitten and Whitten, 1992; Stone, 1994). It has huge assets which could be exploited for nature tourism development – but at the same time there are many
threats to these assets through non-sustainable exploitation, as shown in previous chapters. A third reason was that studying tourism in a national park might help to illustrate whether Indonesians have a different perception of national parks from people in industrialised countries, which has a bearing on the suitability of applying a Northern model of protected areas in another context. It could also perhaps suggest why well-intentioned policies are unable to address the realities of resource exploitation and tourism development. And finally, there was a strong personal reason for wishing to study nature tourism in Indonesia: as outlined in the General Introduction, I had already spent several years there working in development, tourism and conservation.

This previous experience, inevitably, shaped the research project and central research question. For instance, several periods of ecotourism consultancy took place during the early 1990s, after completion of a Masters degree in Tourism Studies, and the work was carried out with reasonably good awareness of how tourism works. During the earlier consultancies, the prevailing wisdom of the time was that conventional mass tourism was being rejected by the market in favour of more low-impact, culturally and environmentally aware forms of tourism. As time went on, however, it became apparent that nature tourism and other 'alternative' forms of tourism were not replacing conventional tourism but were developing alongside it. To some extent, as discussed in the last chapter, the label 'ecotourism' was being stretched to cover a range of tourism manifestations, which helped blur the dividing line between the different forms, and in any case the two categories were never – except in their purest forms – diametrically opposed. In reality, what exists is a spectrum of tourism and tourists. It also became clear that whatever their self-expressed motivation, visitors to national parks share many characteristics with other tourists.

As previously held views regarding tourism trends began to give way in the face of observed reality, received wisdom concerning the effectiveness of ecotourism as a conservation tool also began to seem less wise as further studies of ecotourism emerged (as discussed above). Doubts also surfaced about the effectiveness of some of the
consultancy work undertaken, partly because of the way this is carried out. More attention is generally paid to the feasibility and planning stages of a project than to implementation, while monitoring and evaluation are sometimes not carried out at all - or the findings are not well publicised. When information is obtained it is often clear that the original proposals were only carried out in a partial way. This may be because the proposals were based on unrealistic premises, perhaps due to cultural aspects of which the consultants were unaware, for example with the 1971 Tourism Master Plan for Bali cited in Chapter 2. The selection of consultants is weighted in favour of subject skills rather than area specialisation, even though cultural awareness is extremely important in complex countries such as Indonesia, where the style of approach and understanding of local capacities can affect a project more than detailed knowledge of the overt field in question. Even a consultant who has some understanding of the local culture, however, is often in the happy position of being able to make blithe assumptions about market conditions, local enthusiasm and capabilities and potential output without having to worry about actually managing the project within the confines of a real-world situation.

This study was, then, conceived from an awareness of the shortcomings of what was then the normative, rationalist approach to development planning. It was hoped that a detailed study of tourism in a national park in Indonesia might provide some information which could be of use in refining the debate on the relationship between tourism and conservation, and it was with this objective that the study was designed.

Identification and Operationalisation of Research Questions

The central question of this thesis is whether ecotourism can be conducive to conservation of the natural environment in protected areas. The conceptual background to this question is formed by the principles of sustainable development, tourism and protected areas management. In order to operationalise the concept, it was decided to address four research questions in a field context. The three principal (and interlinked) questions were:
whether, how and to what extent tourism in the national park has a direct or indirect impact on the environment of the protected area;

whether the economic effects of tourism had any influence on conservation, and if so by what mechanism; and

whether tourism in the national park played a part in encouraging the government and local people to take conservation measures.

As the underlying attitudes of local people and domestic tourists to the national park were an important aspect of protected area conservation, it was also decided to ask:

how the concept of national parks was viewed locally.

In order to address these questions, it was decided to investigate the three-way relationship between the principal stake-holders in tourism and the environment in an Indonesian national park: the local people, the tourists, and the environment. Although these three elements can be seen as a triangle, the three apexes are by no means equal in that the tourists are the independent variable, with their numbers fluctuating in response to factors largely exogenous to the attraction and its hinterland, while the local people and the environment of the park are dependent variables in that factors such as income and employment levels in tourism and tourism-related environmental impacts are directly related to the number of visitors to the park. It would also be interesting to try and establish the extent of any relationship between the two local apexes external to tourism, since especially in the case of the environment there could be a number of confounding variables, in that the general economic situation or the price of agricultural products could affect exploitation of the park's resources by local people. This could potentially lead to the fallacy of affirming the consequent, a pitfall pointed out by Sayer (1992), in that the conclusions reached could lack internal validity and a false causal relationship could be made between tourism and negative or positive impacts on the environment.

Since the investigation was to be carried out within the framework of a social science approach rather than a biological one, the 'environment' apex would be treated as including not only the ecological manifestations of the park, but also the human
representatives of the park in the shape of the government department responsible for it, the PHPA (Directorate General of Forest Protection and Nature Conservation).

Ideally, the kind of causal question being asked would be best addressed by a longitudinal study, examples of which are lacking in tourism, according to Dann et al. (1988) and Butler (1993). Within the confines of the current research, however, this was not possible – although recall of past circumstances by older people might be used to build up a picture of historical conditions. In the main, though, it was decided to try and check inferences and ensure the internal validity of any conclusions reached by triangulation, using several different methods to cross-check findings and seek possible omissions. This is the approach recommended by post-positivists, for whom all measurement is fallible in one way or another (Trochim, 2000). Another area of potential difficulty was in the field of tourism investigation per se: as mentioned in Chapter 2, tourism has only been a respectable subject for academic research for the last quarter century or so. One reason for this is the multidisciplinary nature of the subject, while another is the “dynamic and complex relationship [of tourism] that cannot be fully understood by conventional empirically based studies” (Ryan, 1995:11). However, it was believed that social science research techniques had been sufficiently adapted for use in tourism for these to be safely used in the current study.

The choice of techniques is described below, but first, the way in which a suitable study area was identified will be outlined.

The opportunity to carry out field research was created in 1996-1997. During previous work in Indonesia, over half of the 30 Indonesian national parks designated by 1992 had been visited. Based on this knowledge, a short-list of three national parks was considered. One was Lore Lindu National Park, in Central Sulawesi, where there was some nascent ecotourism (principally bird-watching); one was Komodo National Park, one of the few Indonesian parks known to international tourism and which generated the highest revenues of any national park in Indonesia; and the third was Bromo Tengger Semeru, in East Java, again one of the best-known parks internationally. After some
deliberation, Lore Lindu and Komodo were rejected: the former because tourism there was still on a very small scale and it might be impossible to discern any tourism-related impacts, and the latter because it was already the focus of a major study of tourism and conservation (mentioned in Chapter 2). Furthermore, both these parks were rather remote, which was important as I would be accompanied by my two-year-old son and because the research was self-funded, so it was hoped to find a location which was not too expensive to work in.

Bromo Tengger Semeru, which had interesting touristic characteristics and was within easy reach of the city of Surabaya with its good communications and medical services, was therefore chosen. The principal focus of tourism, Mount Bromo, was one of the most famous natural features in Indonesia. This, together with the park's accessibility, meant that in 1990 it received more foreign visitors than any other Indonesian national park and the second highest number of domestic tourists (DepHut, 1992/93b). Of course, it was not possible to say whether Bromo was 'typical' of Indonesian national parks, since all are very different from one another, but the high levels of visitation did mean that the impacts of tourism should be at discernible levels. At the same time, it was already known from previous experience that the national parks administration, under the then centralised bureaucracy of Indonesia, was likely to present very similar characteristics in Bromo as in other parks, so to this extent a degree of typicality was expected. (See Map 1, showing location of Bromo Tengger Semeru, in Appendix 2.)

Although the national park had been visited on half a dozen occasions in the 15 years or so before the research period, this had only been for short visits and in the capacity of tourist (or tour leader). It was not known at the time of selecting the study location whether the national park had been designated on the grounds of having a fragile and unique ecosystem or whether there were other reasons for its designation, such as watershed protection, or indeed tourism. On the other hand, it was known that the local ethnic group, the Tenggerese, had some different cultural characteristics from the Javanese who occupy most of central and eastern Java, and it would be interesting to try
and ascertain whether Tenggerese culture had any strengths or weaknesses which shaped their involvement in tourism and which might affect the sustainability (or otherwise) of tourism in the national park.

**Design of the Study**

Once the research questions and study location had been decided, the methodology needed to be established. The broad methods of carrying out the research were to be through:

- A desk study of reports and other texts relating to the national park.
- Collection of empirical data (qualitative and quantitative) on the livelihood strategies of people living around Bromo Tengger Semeru.
- A study of the processes of tourism in the national park, including an assessment of the tourism infrastructure and an examination of the activities, attitudes and expenditure of tourists and their impacts on the environment and local people.
- Assessment of management of the protected area by the government department responsible.

It was important that any conclusions reached should be founded on adequate amounts of data, and also that - if they existed - deterministic relationships between tourism and conservation and between tourism and local prosperity should be discovered rather than probabilistic ones, i.e. that the ecology of the national park had definitely been affected by tourism in one way or another, or that the people's individual or collective prosperity could be attributed to tourism rather than to other causes. It was realised that it would almost certainly be difficult to separate out the different causes of a particular effect. As Sayer (1992) says, "processes of change usually involve several causal mechanisms which may be only contingently related to one another. Not surprisingly then, depending on the conditions, the operation of the same mechanism can produce quite different results and, alternatively, different mechanisms may produce the same empirical result" (Sayer 1992:108).
Before explaining the choice and design of research tools, the broader perspective within which the study took place will be examined. Although the researcher's principal areas of expertise were in tourism and in Indonesia generally rather than in the biological sciences, considerable knowledge of the Indonesian natural environment and agriculture had been accumulated during earlier work in Indonesia. It was expected that observation of key parts of the national park, particularly those most intensively used by tourists and the areas bordering the villages, together with ecological studies (of which some were known to exist), would provide information on whether tourism was having a significant negative effect on the environment. Using this ecological information as supporting material, the mechanisms and processes of tourism in the park would be the central focus of the investigation, covering tourists' activities and motivation and the involvement of the local people.

It would be necessary to collect data on the wider livelihood strategies of the Tenggerese to assess how far tourism had penetrated their culture and income-earning strategies and on their attitudes towards the national park and utilisation of its resources. The extensive background reading on sustainable development, tourism and protected areas management had already given the theoretical context to the research, and more targetted reading would be carried out during the course of the study on Javanese and Tenggerese culture, the politics, culture and economy of Indonesia, the administrative system as it applied to villages and the organisation of tourism and to national parks, and on the ecology of Bromo Tengger Semeru. This reading was supplemented by the researcher's pre-existing knowledge of the Indonesian language and culture.

This pre-existing knowledge was seen to have both strengths and weaknesses. On the one hand, it should provide a greater understanding of the context of the study and eventual findings since, as already noted, shortcomings in research and policy-making can sometimes be attributed to lack of area specialisation. A degree of cross-cultural awareness should also allow the host community to be presented as real people, rather than the "shadowy figures" (Dann, 1988:22) which sometimes make somewhat blurred
appearances in the background of tourism studies. On the other hand, it would be difficult not to carry previously-formed judgements forward to the current study. It was important that the research should be done with an open mind in order to avoid value-bias, but this was going to be particularly hard in the case of the -PHPA, since the department is a by-word for inefficiency, corruption and general feebleness when it comes to enforcing protected areas regulations (to the extent that conservationists have been known to refer to Indonesia's national parks as "notional" parks). A UK government report said of the agency, more diplomatically, that "other constraints include the lack of strategic planning and priority-setting within PHPA ... and inadequate direction, supervision and support to field staff from more senior levels" (IIED, 1994b:8). Experiences during consultancy work had confirmed the general impression of indolence and poor motivation at all levels in the PHPA, and it would be difficult not to expect these impressions to be confirmed rather than refuted.

As far as other elements of the array of actors to be studied was concerned, it would be less difficult to approach them without preconceived values, although it would of course be impossible not to apply some kind of analysis arising from my own frame of reference – but nor would this be desirable. As Sayer (1992) says, "our own frame of meaning is an indispensable tool or resource for understanding" (Sayer 1992:36). There would of course be the danger pointed out by Backman and Morais (2001) of becoming attached to the research destination, but as this was likely to take the form initially of an interest in the wider aspects of people's lives than just the touristic ones, and in the longer-term of a continuing interest in (and affection for) the area, it was not thought that this would be a particular handicap to the research – although it might affect the writing up process in that it would be tempting to include irrelevant but interesting information.

Reactivity, Positionality and Ethics

While bringing along one's own cultural furniture to a study of this kind is inevitable, there are other dangers too. Not only is there the possibility of insensitivity in interpreting the findings, but reactivity is also likely, in that foreignness in terms of
appearance and body language could influence the information respondents were willing to provide. It was nonetheless felt that efforts could be made to circumvent this issue, and that it could even be turned to advantage. One way of trying to surmount the barriers of cultural differences was to engage a field assistant. With great good luck an excellent candidate was found: Agus Wiyono, a Javanese in his mid-twenties who worked for an environmental education centre. As Agus’ first language is Javanese he was able to talk to the Tenggerese in their native language, while he and I were able to communicate in our common second language of Indonesian. The fact that he was male made it easier for him to participate in the all-male discussions around the hearth at night, and he was able to contribute many insights through this and by advising on aspects of Javanese behaviour with which I was unfamiliar since I had, until then, spent little time in the heartland of Javanese culture. (For instance, standing in an open doorway in Java is considered impolite.) In general, Agus’ calmness, good humour, hard work and interest in the research were of enormous value.

Although Agus’ presence was invaluable, there were two areas which needed to be addressed to avoid negating his inputs. First was the question of his own possible value-bias. He is from Blitar, an East Javan town close to the border with Central Java, where the Javanese culture and language are at their most refined. The Javanese language has several levels, with different levels used between people of different social status. Agus took pride in his understanding of the intricate niceties of Javanese hierarchy, and found the more straightforward, democratic style of communication of the Tenggerese – who generally use only the lowest level of Javanese – a little unsettling. The second area of importance was the need to retain control of the research process, particularly when investigations were made in Javanese. Every effort was made to counter this by discussing the research methods at the beginning of periods spent in the field and by continuing to discuss them as time went on, by ensuring that interviews carried out in Javanese were translated as soon as possible, and by conducting some of the interviews together to ensure standardisation. It was recognised that there would be different
interviewer effects on respondents between interviews carried out by a male Javanese and by a female European. However, it was stressed to Agus that the element of statistical information sought was important, so that this at least should be consistent, and it was also expected that the possible disadvantages of any different response to the interviewers would be counteracted by the greater range of insights gained by the two parties.

If the team of Agus and myself worked well with the villagers, it was also successful in tackling another of the three principal stake-holders in the study: the tourists. Here, being European was a considerable advantage when it came to talking to foreign tourists, as they seemed to feel more open about communicating with a researcher from a similar cultural background, and for the same reason, it was felt appropriate that much of the work of interviewing domestic tourists – most of whom were Javanese – was done by Agus. Having said that, I also interviewed many Indonesian visitors to the national park; these tended to be students or middle-class Indonesians with whom communication in Indonesian was no barrier.

As for turning the lack of unobtrusiveness to advantage, the principal gain was that most people in the Tenggerese villages had never before come across a European able to speak good Indonesian, and indeed had rarely perceived them as anything other than short-stay tourists. Local curiosity was intensified by the presence of my son, Robert, who had his third birthday during the course of the research. Even in places used to tourists, the advent of a small, blond European child was unusual, while people in the more remote villages had never before seen one. Apart from the visual interest he excited, his presence made an easy way to break the ice with the generally reserved people of the hill villages (a reserve confirmed by other non-Tenggerese informants). Several respondents made comments to the effect that: "we are pleased that you are married and have a child; it means that you are like us". It was pleasing from an ethical point of view that Robert was often the catalyst for a bi-directional exchange of information with the villagers rather than the flow of data being in one direction only. For instance, it was not uncommon for women to ask questions such as what people feed their children on in
Britain, and even how long pregnancy lasted for European women and whether it was painful to give birth. Villagers were delighted with Robert's increasing ability to speak both Indonesian and Javanese (and to drink large quantities of the extremely sweet tea offered as part of traditional hospitality) (see Photos 1 and 2, Appendix 3).

Another aspect of positionality was the importance of being aware of my own values in relation to the respondents so as to try not to allow pre-conceived notions to interfere with the evaluation of the findings. There were two aspects to this. First was the fact of my European background, which formed my cultural perception of conservation. As discussed in Chapter 3, the aesthetic and philosophical awareness of protected areas is different in Northern countries from the South, including Indonesia, and it was important to avoid taking the 'moral high ground' approach identified by Gomez-Pompa and Kaus (1992) - the 'we are right' attitude of Northerners towards protected areas. It is admitted that it was difficult to subdue this attitude, particularly as my own personal inclination had always been to enjoy and respect wild and natural places. On the other hand, the second area of pre-conceived attitudes tempered this, since previous experience of working in conservation in Indonesia had by then engendered a sense of fatalism towards the exploitation of environmental resources.

The question of research ethics was a preoccupation both before setting out and while in the study area. During previous consultancy work, it had often seemed intrusive to enter a village - sometimes as part of a fairly large team - and ask a lot of questions about people's daily lives. (It was extremely hard to imagine the reverse situation, for instance, with a group of Indonesians appearing unannounced in an English village and asking about local livelihood strategies - or that they would be accepted with the courteousness and hospitality with which Europeans are almost unfailingly treated in villages all over the archipelago.) The 'consultancy' approach, however, seemed justified at the time in that the work was generally part of project planning which should, in the best cases, result in substantial developmental inputs to the area which might eventually result in an improved standard of living. Also, having lived in Indonesia, it was possible
to try and behave with sensitivity towards local cultural mores. In the case of the research for the Bromo study, on the other hand, informants were offered nothing other than the doubtful pleasure of encountering a European at close quarters.

This concern was the main reason why a participatory approach was not applied to the research, as it was felt that these techniques might raise expectations which there was no possibility of fulfilling. As it was, there were several occasions when villagers expressed the hope that the research might be the precursor to more tourists arriving, or that I might be able to intercede in getting help to overcome the agricultural problems being experienced. There were unfortunately only small services which could be rendered in this direction.2

A further ethical issue was whether the anonymity of respondents should be preserved. The research was planned and carried out while the Suharto regime was still in place in Indonesia. Under this (as previously described) there was little freedom of speech, and criticism of anyone in authority was seen as an insult and a possible sign of rebellion. Some of the contributory elements to the repressive climate were deep-seated cultural factors rather than the outcome of a oppressive political system. The years spent in Indonesia prior to the research period had created strong awareness of this and of the need to ensure that respondents would not experience any harmful consequences as a result of the research, and the names of village respondents have thus been changed. It was also expected that the lack of free speech might make people reluctant to express their views. In the event, however, many respondents were found to be only too willing to pour into a sympathetic ear – particular that of an outsider – their opinions (often none too flattering) of their fellow-villagers, village leaders and even of the Presidential family. The extent of the criticism confirmed one of the points made earlier in this thesis, that apparently homogeneous communities are often fraught with dislikes and rivalries.

2 For instance information was obtained for villagers on a leaf-miner fly which had recently extended its altitudinal range and was one of the causes of declining potato yields, and informal discussions on basic ecological matters such as the reasons for and consequences of erosion were held. Agus had a particular talent for putting this information across in an accessible and non-didactic manner.
Research Perspective and Tools

An explanation will now be given of the research perspective and the choice of methodological tools used. In researching the processes leading to change, it was realised that the interpretative paradigm would be the most appropriate major perspective. This perspective began to prevail in the late 1970s in social science research as it became accepted that the social world could not be understood in the positivist terms of unchangeable and observable natural laws (Norton and Allinson, 1994). With the shift towards acknowledgement of a reality which exists in people's minds rather than just in the real world, termed post-positivist because it rejected the principles of positivism (Trochim, 2000), came an acceptance of qualitative methods of data collection rather than the previous insistence on quantitative ones. An analysis of tourism research papers showed that, increasingly, academic studies were carried out within this qualitative paradigm rather than a quantitative one (Riley and Love, 2000), and in the Bromo Tengger Semeru study, too, it was felt that collecting quantitative data using rigidly structured survey methods would be inappropriate and ineffectual amongst people likely to have had little formal education, while qualitative methods, which stress the importance of openness and flexibility in data collection and seek to "interpret meaningful human behaviour and to capture the true feelings and experiences of people" (Norton and Allinson, 1994:39) would be more appropriate.

It was realised that there was an overlap here with the more flexible techniques of data collection for development projects which became popular throughout the 1990s. As described in Chapter 1, the techniques of Rapid Rural Appraisal and Participatory Rural Appraisal emerged in response to the superficiality and biases of more formal methods (Chambers, 1993), and their techniques include many of the qualitative methods used in interpretative research such as seeking key informants, carrying out semi-structured interviews and group interviews, observational indicators, transects, and local histories and trend analysis, while the accuracy of findings is cross-checked by using several methods (Grandstaff and Grandstaff, 1985). At the same time, as explained in the
preceding section, it was felt inappropriate to proceed too far along the PRA path because of the academic rather than practical slant required and because of the danger of raising unrealistic expectations.

Once the approach had been decided upon, ways of operationalising the research methods were sought. These included the design of question schedules which could be used with two of the main groups of informants: the local people and the tourists, and the development of a typology of tourists to Indonesian national parks.

Residents and Visitors Surveys

As far as the two principal groups of informants were concerned, these clearly required different techniques because of their different cultural background and probable educational levels, and the different information required. For the first group of respondents, the Tenggerese villagers, it was decided that semi-structured interviews would be more effective than a more rigid questionnaire in order to allow maximum flexibility and the wide-ranging information which could be elicited from open-ended questions. Nevertheless, an outline for the interviews had to be decided upon, and a schedule of questions was formulated. This is shown in Figure 2 below, followed by the rationale for the questions.

Figure 2 - Schedule of questions for household surveys

<p>| | |</p>
<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Place of birth and ethnicity</td>
</tr>
<tr>
<td>2</td>
<td>Family structure and involvement in education</td>
</tr>
<tr>
<td>3</td>
<td>Religion and participation in cultural manifestations</td>
</tr>
<tr>
<td>4</td>
<td>Type of cooking and heating fuel used</td>
</tr>
<tr>
<td>5</td>
<td>Principal and subsidiary occupations</td>
</tr>
<tr>
<td>6</td>
<td>Ownership of land and other agricultural assets</td>
</tr>
<tr>
<td>7</td>
<td>Type of agriculture engaged in and historical changes, and success or failure of farming</td>
</tr>
<tr>
<td>8</td>
<td>Opinion of and involvement in tourism</td>
</tr>
<tr>
<td>9</td>
<td>Attitude to the national park</td>
</tr>
</tbody>
</table>

The rationale behind each of these topics was as follows:

1. The place of birth and ethnicity would indicate whether the respondent was native to the village, an incomer from another Tenggerese village, or from elsewhere. This
might colour attitudes and was considered useful to build a picture of people’s lives as background information. The age of the respondent was not asked on a regular basis because many Indonesians, particularly older people, do not know their age.

2. As with the previous point, the question on family structure added to the general picture of people’s lives by covering information such as the number of children and the number of generations living in one household. It was also useful to assess the family’s propensity for education, particularly to the extent that this might facilitate involvement in tourism.

3. The religion people professed was, to a degree, a reflection of the strengths and tensions within the communities and of outside influences. Whereas formerly nearly all the Tenggerese belonged to a local form of Hinduism, there were conversions to Islam, Christianity, or a slightly different form of the local religion. Although it was not directly relevant to the research question, some efforts were made to understand why people had converted because, again, it might provide insights into the lives of the Tenggerese and the way they related to the world around them. The question about participation in cultural manifestations was asked to find out whether involvement in these was increasing or diminishing, and to find out whether tourism was having any influence on the retention (or otherwise) of cultural traditions.

4. People were asked about the type of cooking or heating fuel used because it was important to find out to what extent wood was being taken from the national park in order to try and assess whether these resources were being used sustainably. Householders were also asked why they used the fuel they did, and in the case of wood and charcoal, they were asked where it came from. It was anticipated that asking whether the fuelwood came from the national park might not be successful as people would know that this was illegal and would be tempted not to be open about it, but it was hoped to cross-check the extent of wood-cutting by observation. In fact, it turned out that wood-cutting within the park was much more extensive than people
admitted to, but asking the question was anyway a useful exercise as some interesting comments and perspectives were volunteered.

5. People were asked about the amount of time devoted to different economic activities in order to assess their involvement in agriculture, tourism or other work and the importance of each to the family economy. Involvement in tourism would provide some idea of whether a shift in occupation patterns was taking place.

6. Questions about ownership of land and other assets such as livestock were asked to determine the relative wealth of the family. It also helped to back up (or refute) people's comments on where their fuelwood came from: if only small parcels of land were owned, it was unlikely that these would furnish sufficient wood for the family's needs. The responses also indicated people's sense of attachment to their land, which was important since background research into the sustainability of tourism had indicated that ownership of facilities was significant in preventing marginalisation of the host community.

7. The type of agriculture engaged in and the history of local agricultural practices indicated whether and how villagers' lives had changed over the last few years, how the village economy was linked with the wider regional economy, and awareness (formal or informal) of agricultural science. This might help to answer the research question about whether the economic impact of tourism was affecting conservation of the park. People were asked questions about crop-yields and how these compared with former years, and if it was found that the potato harvest had failed, they were asked how they replaced the lost income. Of course, any apparent correlation between a weak agricultural sector and deforestation of the surrounding hills could not be taken as a causal relationship, since there may well have been confounding variables which affected the situation, so not too much emphasis would be placed on the answers to this question without cross-checking the findings.

8. Villagers' opinion of tourism and involvement in it would obviously vary considerably between the villages where tourism occurred and where it did not, but in
all the villages, people were asked about their contacts with tourists and their expectations of tourism. The responses were expected to indicate how important tourism was economically and whether the industry was welcomed or merely tolerated by residents. In villages where tourism was important, people were asked in more detail about their involvement, for instance about its importance to the household economy. (While this aspect of the interviews may seem to have received a disproportionately small amount of attention compared to other questions, in practice the relative importance of the topics discussed varied considerably from village to village, depending on the local prominence of the industry.)

9. It was considered useful to try and ascertain awareness of the national park to assess how deeply rooted in the community’s consciousness the protected area had become, and whether its official purposes were understood by the communities surrounding it.

In the case of the tourists, it was realised that there are particular difficulties in carrying out research because of the nature of what is being consumed. As noted in Chapter 2, tourists do not consume reality itself but the representations and symbols of reality, and because of the elements of escapism and the combination of new experiences and the internalisation of these, it is difficult to assess what tourists want and feel within the confines of a structured questionnaire. At the same time, certain types of information, such as nationality, age and expenditure could be best gained in this way. Accordingly, it was decided to use a structured questionnaire backed up by more informal interviews. Using a more formal questionnaire than with the villagers was felt to be acceptable because both domestic and foreign tourists were likely to be better-educated than the Tenggerese villagers, and would be better able to cope with a more structured interview. The English and Indonesian questionnaires are shown in Appendices 4 and 5, while a summary of the questions is given in Figure 3, followed by an explanation of the rationale for the questions.

Although the questions used for domestic and foreign tourists covered the same general topics, some questions were phrased differently to account for the different
situation of the two groups and for expected differences in cultural perceptions. (For instance, the question on length of stay in Indonesia clearly only relates to foreigners.) The questionnaires were designed to gather a profile of visitors such as their country or town of residence, mode of transport, occupation, age, and expenditure at the park, and to find out about their activities and perceptions while at the park and their interaction with the local community and environment.

**Figure 3 – Summary of Questions in Visitors Survey**

<table>
<thead>
<tr>
<th></th>
<th>Country or town of residence.</th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>Whether travelling independently or an organised tour, mode of transportation, total number of people in the group, age group, and gender.</td>
</tr>
<tr>
<td>3</td>
<td>Occupation.</td>
</tr>
<tr>
<td>4</td>
<td>Length of stay at Bromo and in Indonesia, other places visited during this journey.</td>
</tr>
<tr>
<td>5</td>
<td>Number of previous visits to Bromo and changes since previous visit.</td>
</tr>
<tr>
<td>6</td>
<td>Reason for visiting Bromo, activities while here.</td>
</tr>
<tr>
<td>7</td>
<td>Opinions of Bromo as a tourist attraction and of the facilities.</td>
</tr>
<tr>
<td>8</td>
<td>Opinion of their own impact on local environment and culture.</td>
</tr>
<tr>
<td>9</td>
<td>Extent of interaction with local people, perceived attitudes of local people towards tourists.</td>
</tr>
<tr>
<td>10</td>
<td>Awareness of local culture.</td>
</tr>
<tr>
<td>11</td>
<td>Place of stay and expenditure while at Bromo Tengger Semeru.</td>
</tr>
<tr>
<td>12</td>
<td>Cost of entry to Bromo and willingness to pay more.</td>
</tr>
<tr>
<td>13</td>
<td>Awareness of Bromo as a national park, perception of what a national park is.</td>
</tr>
<tr>
<td>14</td>
<td>Visits to other Indonesian national parks.</td>
</tr>
</tbody>
</table>

The rationale for each question (or group of questions) was as follows:

Points 1, 2, 3, 4 and 5 were designed to obtain quantitative data on visitors, for instance how far they were prepared to travel and how long they spent at the destination. These 'profile' questions were asked in order to compile a picture of the foreign and domestic tourists to Bromo. Ideally, of course, this survey would be part of a longitudinal study which would indicate whether visitation patterns were changing as the destination moved along the TALC curve, but in this cross-sectional study it was felt that this information would at least help establish the touristic user-groups of the park according to the typology of tourists presented below. It would also help determine the importance of Bromo as a local leisure amenity for residents of East Java. The question about changes was asked to see if it elicited any interesting information on alterations to the park's
environment (although in the event the answer tended to be ‘yes’ or ‘no’, which was not very enlightening).

Points 6 and 7 covered people’s motivation for choosing Bromo as a destination, their activities while there, and their opinion of it. The answers built up a more rounded picture of the tourists by helping to determine specific perceptions of Mount Bromo (and the national park in general) and ways in which it was used. Prior to the field study, no specific information on visitor motivation and activities had been found for Bromo (or other Indonesian national parks). It was important to collect this because many ecotourism studies are rather nebulous in their description of what tourists actually do and there is little differentiation between different types of tourists (although recent work has improved the state of knowledge here, as mentioned in Chapter 3). The aim of this kind of information was to help assess the impacts of tourism and, in the case of the domestic tourists, help to answer the fourth research question about the significance and perception of national parks in Indonesia.

Point 8 was asked to assess whether the tourists had much awareness of their own impact on the environment and culture. Tourism academics are clearly aware of such impacts, but it was felt that it might have been interesting to find out how widespread such awareness was amongst the general public, and whether there was any difference between foreign and domestic tourists. The aim of this question was to add to the picture of conservation awareness amongst local tourists, but in the event the answers to this question were not particularly helpful and were not felt to add much to the analysis.

Points 9 and 10 were intended to find out what interaction tourists had with local people, what perceptions were held of them, and how far they were interested in Tenggerese culture. This was intended as a way of determining the relationships between tourists and local people and to assess whether local cultural manifestations could be used to extend the length of stay at Bromo, which might increase economic and other impacts (either positive or negative). However, in the pilot study the question on interaction with the local people was interpreted in an unexpected way in that many foreign tourists did
not distinguish between the Tenggerese and domestic tourists, and the findings on this point were therefore treated with caution.

Questions about expenditure (Point 11) were asked to get an idea of how much people spent during their time at Bromo, while it was also of interest to find out where people stayed. An addition to this was Point 12, asked to try and ascertain people's willingness to pay more for the attraction. (It was also found, in the event, that this point provided interesting information on how much people were charged for entry and whether they were given an entry ticket.)

Points 13 and 14 were intended to find out the extent of awareness of Bromo as a national park and awareness of other national parks in Indonesia, both amongst foreign and domestic tourists, in order to compare attitudes to national parks between the two groups. As with Points 6-8, it was hoped that this information would help answer the fourth research question.

With both the residents and the tourists, efforts were made to avoid ambiguous language, over-long or leading questions or ones which required a hypothetical answer (Cooper et al., 1993). This was in order to avoid biased responses arising from acquiescence set, when respondents might reply in the affirmative no matter how the question was phrased, and to avoid social desirability set, when people try to present themselves in the way they perceive as most socially acceptable (Norton and Allinson, 1994). The residents' survey schedule and the questionnaires aimed at both Indonesian and foreign tourists were modified after pilot-testing, as recommended by social science researchers (Preece, 1994, Cooper et al., 1993). The pilot-testing was carried out during the first field phase of the study, when the survey villages were selected (as described below).

**Typology of Tourists to National Parks**

As an additional framework to the analysis of tourists in Bromo Tengger Semeru, a typology of tourists to Indonesian national parks formulated during previous experience as a nature tourism consultant and tour leader was used. The typology was originally designed
because other typologies, such as the one developed by Cohen (1972) and mentioned in Chapter 2, were insufficiently detailed and not very relevant to Indonesian national parks. This is presented in Figure 4 overleaf. The categorisation is based on motivation, behaviour, income and requirements. The typology is clearly not exclusive, with individual tourists sometimes showing characteristics of more than one category, especially at different stages of their life - and even at different stages of one holiday. Today's impoverished International Backpacker, for example, may be the high-spending Special Interest or Elite tourist of the future, while Domestic Economy tourists may evolve into Economy Plus or Family & Incentive tourists, and a Backpacker Plus on an extended trip may splash out on a night in a good hotel from time to time. It will be seen in discussing tourism to Bromo in subsequent chapters that the typology meshes well with the TALC model already discussed.
### Figure 4 - Typology of Tourists to Indonesian Protected Areas

<table>
<thead>
<tr>
<th>Category</th>
<th>Typical Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>International</td>
<td></td>
</tr>
<tr>
<td><strong>Explorer</strong></td>
<td>Individualistic, solitary, adventurous, requires no special facilities. May be relatively well-off but prefers not to spend much money. Rejects purpose-built tourism facilities in favour of local ones.</td>
</tr>
<tr>
<td><strong>Backpacker</strong></td>
<td>Travels for as long as possible on limited budget, often taking a year off between school/university and starting work. Hardship of local transport, cheap accommodation, etc. may qualify as travel experience rather than understanding local culture. Enjoys trekking and scenery, but often cannot visit remote areas because of expense. Requires low-cost facilities.</td>
</tr>
<tr>
<td><strong>Backpacker Plus</strong></td>
<td>Often an experienced traveller, may revisit Indonesia on several occasions and speak some Indonesian. Generally in well-paid professional or manual jobs. More demanding in terms of facilities than Backpackers and with a higher daily spend. Genuinely desire to learn about culture, nature, and require good information.</td>
</tr>
<tr>
<td><strong>Mass</strong></td>
<td>Often inexperienced at travelling, prefers to travel in large groups, may be wealthy. Likes superficial aspects of local culture, enjoys natural scenery and wildlife if easy to see, needs good facilities, and will only travel far in comfort. Includes cruise ship passengers.</td>
</tr>
<tr>
<td><strong>General Interest</strong></td>
<td>May travel as FITs on tailor-made itineraries with a tour operator, and often prefers security and company of group tour. Usually has limited time available for holiday. May be relatively wealthy, interested in culture, keen on nature/wildlife when not too hard to see. May be active and enjoy 'soft adventure' such as easy trekking and low-grade white-water rafting. Dislikes travelling long distances without points of interest. Needs good facilities although may accept basic conditions for short periods. Includes some expatriates and Dutch ‘nostalgia’ visitors.</td>
</tr>
<tr>
<td><strong>Special Interest</strong></td>
<td>Dedicated to a particular hobby, fairly adventurous, prepared to pay to indulge hobby and have others take care of logistics. Travel as FITs or groups. May have little interest in culture. Requires special facilities and services, e.g. dive-boats, bird-guides. Accepts discomfort and long travel where necessary to achieve aims. May have active involvement, e.g. environmental research project. Prefers small groups.</td>
</tr>
<tr>
<td><strong>Elite</strong></td>
<td>Rich, may be sports or entertainment star or royalty. Pays a lot of money for exclusive experience. Needs top-class facilities, good communications and quick access.</td>
</tr>
<tr>
<td>Domestic</td>
<td></td>
</tr>
<tr>
<td><strong>Economy</strong></td>
<td>Often students or pencinta alam ('nature lovers'). Usually travels in large groups. Needs large campsites or basic hostels, cooking facilities, cheap eateries, mountain trails. Enjoy natural surroundings, but macho elements of climbing mountains, Search &amp; Rescue are often more important than learning about nature. Tolerant of crowding.</td>
</tr>
<tr>
<td><strong>Economy Plus</strong></td>
<td>Young professionals, better-off students with own transportation. Enjoys natural surroundings and may have hobby such as bird-watching, cycling. Needs good campsites, cheap accommodation, facilities for hobbies. Prefers not too much crowding.</td>
</tr>
<tr>
<td><strong>Mass Budget</strong></td>
<td>Travels in large family or work-related groups, usually with public or chartered transportation. Mostly on day-trips, but occasionally needs cheap guesthouses for overnight stays. Needs picnic and relaxation areas, souvenir shops, playgrounds. Tolerant of crowding.</td>
</tr>
<tr>
<td><strong>Family &amp; Incentive</strong></td>
<td>Travels in nuclear families or small work-related groups, perhaps under company incentive programme. Likes natural surroundings but unlikely to walk far. Needs similar facilities to Mass Budget but with more variety, such as pony-rides, and better quality accommodation and restaurants.</td>
</tr>
</tbody>
</table>

Note: FIT = Free, Independent Tourists (industry definition of a market segment).
Selection of Research Sites

Selection of the research location and preparation of research tools such as the survey questions and the typology of tourists was largely done before departure from the UK (although the questionnaires were refined through field testing, as noted). The exact sites for the study still needed to be identified, however.

On arrival in Indonesia in October 1996, information was sought from various sources before travelling to East Java. In Jakarta, background information on environmental and managerial elements of the park was obtained from the offices of the PHPA and the WWF. In Yogyakarta, two tourism research centres were visited. Once in East Java, further preparations were made for the field trips. The questions for villagers and domestic tourists were translated into Indonesian, and government tourism offices in Surabaya (the provincial capital) and Malang (the major town closest to the park) were visited, along with the Environmental Research Centre at Brawijaya University in Malang and the head office of the Bromo Tengger Semeru National Park. The Director of the National Park was particularly helpful and provided copies of reports compiled by his staff and by university students who had used the park as a case study. This phase of the research produced a number of descriptive studies of the park's ecology and impacts of tourism, of the lifestyles of the people living around it and quantitative descriptions of tourism, but no analysis of tourists' motivation and activity was found, nor any investigation into local involvement in tourism.

In order to try and identify any causal link between tourism and conservation, it was intended to compare involvement in tourism and attitudes to park conservation in several villages bordering the national park. It was felt that selecting villages which were similar (at least superficially) but which hosted different levels of tourism would allow some analysis of whether residents' involvement in tourism related to attitudes to and utilisation of the national park. Of course, it was not expected that villages identical in all respects save for levels of tourism could be found: as Preece remarks, "the problem of selecting similar subject areas for treatment, given the complexity of real-life situations,
is one of the almost insurmountable difficulties of conducting rigorous comparative research in the social sciences" (Preece, 1994:132). Nevertheless, it was hoped that villages with similar underlying cultural and geographical characteristics could be found, and that enough information could be gathered to indicate whether tourism had any effect on attitudes towards conservation of the resources of the protected area. At the same time, the possibility of finding only inconclusive evidence of a link between tourism and conservation and of not being able to establish a deterministic relationship was recognised.

The information gained from the desk research and visits to the park in the past permitted an initial selection to be made of nine possible villages, of which only one seemed a very obvious choice in that it hosted the major part of tourism to Mount Bromo. Accordingly, a field trip was undertaken in November 1996 to these villages. Map 2 in Appendix 2 shows the nine villages visited during this survey. The villages were chosen partly because their population levels and ethnicity seemed similar (according to the materials read), and for their geographical spread around the park and in different administrative divisions. The park lies across four different kabupaten, which is the largest administrative division of a province. A table clarifying the divisions is shown in Figure 5. These are important for understanding the status and location of the sites eventually chosen and because of the way national park revenues are divided up.

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propinsi</td>
<td>Province – the largest administrative division, headed by a Governor. There were 27 in Indonesia at the time of the research.</td>
</tr>
<tr>
<td>Kabupaten</td>
<td>Regency – normally 6-10 in each province, headed by a Bupati. Often abbreviated to 'Kab.'</td>
</tr>
<tr>
<td>Kecamatan</td>
<td>Mayoralty – normally based around a small town and headed by a Camat. Often abbreviated to 'Kec.'</td>
</tr>
<tr>
<td>Desa</td>
<td>Village – headed by a Kepala Desa ('Village Headman').</td>
</tr>
<tr>
<td>Dusun</td>
<td>Smaller division of a village. Some are quite far from the nominal village centre and have an identity in their own right. Headed by a Kepala Dusun.</td>
</tr>
</tbody>
</table>

Sources: Rohdewohld, 1995; pers. obs.

The villages visited were as shown in Figure 6:
### Figure 6 – Villages visited in initial survey

<table>
<thead>
<tr>
<th>Administrative Location</th>
<th>Village</th>
<th>Pop.</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kabupaten Malang (west and south)</td>
<td>Ngadas</td>
<td>1,489</td>
<td>In an enclave in the west-central area of the park. Near the rim of the Tengger caldera.</td>
</tr>
<tr>
<td></td>
<td>Blubuk</td>
<td>n/a</td>
<td>(approx 1,200) On the southern slopes of Mt Semeru, borders the park. Ethnically more diverse than the other villages, with fewer Tenggerese and more lowland Javanese.</td>
</tr>
<tr>
<td>Kabupaten Lumajang (east)</td>
<td>Burno</td>
<td>3,844</td>
<td>Ethnically rather mixed, with many lowland Javanese. Orientation more towards the lowlands than the Tengger region.</td>
</tr>
<tr>
<td></td>
<td>Ranu Pani</td>
<td>1,037</td>
<td>In an enclave in the east-central area of the park. Actually a dusun of a larger village some distance away, but considers itself a distinct entity.</td>
</tr>
<tr>
<td>Kabupaten Probolinggo (north)</td>
<td>Ngadisari</td>
<td>1,443</td>
<td>The host to most tourism to Bromo. Consists of two dusun, one of which (Cemoro Lawang) is on the rim of the Tengger caldera, and both with a long involvement in tourism.</td>
</tr>
<tr>
<td>Kabupaten Pasuruan (north-west)</td>
<td>Tosari</td>
<td>n/a</td>
<td>(approx 2,500) Fairly large village some miles from the park boundary, with a large hotel used by tourists to Bromo.</td>
</tr>
<tr>
<td></td>
<td>Wonokitri</td>
<td>2,649</td>
<td>Fairly large village on the park boundary.</td>
</tr>
<tr>
<td></td>
<td>Mororejo</td>
<td>1,642</td>
<td>The main administrative centre (desa) for the dusun of Kandang Sari (below). Does not adjoin park boundary.</td>
</tr>
<tr>
<td></td>
<td>Kandang Sari</td>
<td>1,177</td>
<td>A dusun of Mororejo. Adjoins park boundary. There are a couple of outlying hamlets nearby.</td>
</tr>
</tbody>
</table>

Source of village population sizes: DepHut, 1992/1993b

In all the villages during this initial stage, visits were made to the village headman or other official, conversations were held with villagers in order to test the semi-structured interviews, and in Ngadisari several tourists were interviewed using the questionnaire. An observational analysis was made of the villages and their hinterland. After this activity, four of the villages were rejected, two (Blubuk and Burno) on the grounds that they were ethnically different from the others and because their orientation was more towards the lowlands than the Tengger highlands, and two (Tosari and Mororejo) because they were too distant from the park boundary. The remaining five villages were chosen for further study on the grounds that they had similar underlying characteristics and varying levels of tourism. Detailed descriptions of the five villages selected will be given in Chapter 6, but briefly, they all had farmlands bordering the national park, lay at an altitude of between 1900 and 2200 metres above sea level, and were relatively small by Javanese standards, with between 240 and 574 households each.
All were principally inhabited by Tenggerese people, who are traditionally Hindu, in contrast to the surrounding Muslim population of the Javanese lowlands. One of the villages (Ngadisari/Cemoro Lawang) was the principal location for tourism within the national park, while two others (Wonokitri and Ranu Pani) had lower levels of tourism, and the remaining two (Ngadas and Kandang Sari) had virtually none. The total population of the five villages was 7,795 people, out of a total population in the buffer zone of 167,255 people living in 51 villages: the sample villages therefore had a population of 4.66 per cent of the total population in the buffer zone (DepHut, 1992/93b).

Implementation, Difficulties Encountered, and Problem Resolution

In this section, the way the study was implemented will be described, together with an analysis of some issues which prevented the study being carried out exactly as planned and an explanation of how these difficulties were tackled.

An initial difficulty was the lack of an Indonesian research permit, despite the fact that the correct procedure had been followed regarding form-filling and the provision of supporting letters, and a considerable length of time (6 months) had been allowed for one to be issued. The fact that the permit was not forthcoming was by no means unusual: the difficulty of obtaining these under the secretive Suharto regime was one reason why “the potential and academic challenges of working in Indonesia are exceptional” (Whitten 1987:246). However the situation was not seen as unduly serious as much can be achieved in Indonesia through personal contacts, and on only three occasions were questions asked about the lack of a permit. In the first two cases (one of which involved the head of the Bromo Tengger Semeru National Park, and one a village headman), the truthful response that the permit was being processed ("sedang dalam proses, Pak") was sufficient to convince my interlocutors of my sincerity. The third case, which occurred in one of the most important villages for the survey, was potentially a larger obstacle. When I attempted to interview the village secretary, my efforts were rebuffed because of the lack of official papers. Luckily, I chanced to meet the village headman at a wedding shortly afterwards and on chatting to him discovered that he would like to experiment
with growing some different crops suitable for a temperate climate, as many of the crops normally grown in lowland Java did not thrive in the cool Tengger uplands. Accordingly, I had some suitable packets of seeds sent out from the UK and on my next visit to the village presented them to him, after which the information-gathering proceeded smoothly.

Returning to the field visits, once the selection of five villages had been made, further reading was done on the national park. After that, from December 1996 to March 1997, several periods of field study were undertaken in the villages, varying from between ten days and three weeks in each place. This may seem relatively short, and in the context of ecotourism research Backman and Morais (2001) counsel against drawing conclusions based on short visits to a destination. However, as the villages were fairly small the length of time spent in each was felt to be adequate, given the pre-existing knowledge of the Indonesian language, culture and political and administrative systems and in view of the help provided by Agus. Rapport with the villagers was greatly facilitated by my son, as described above, as he quickly made friends with local children and (except in the case of one old lady who set down her bundle, took off her hat and tried to kiss him every time she spotted him) did not mind the attention he provoked.

In order to obtain a representative set of the data required, it was decided to survey ten per cent of the households in each village, which it was felt would furnish a representative cross-section of the population when backed up by the other methods used. However, it was recognised that sampling can exaggerate biases within a population through a disproportionate number of a sub-group appearing in the sample by chance, particularly as the sample sizes were not very great, ranging from 24 in the case of the smallest village to 58 in the largest (Figure 7). While the household survey numbers in two cases were slightly lower than the recommended minimum of 30 for a relatively homogeneous group (Kish, 1965, cited in Israel, 1992b; Kapila and Lyon, 1994), no very great diversity of opinion and livelihood strategies was found between the respondents (indeed, there was a high degree of repetition). According to Israel (1992b), this made it
more likely that the information gained could be more reliably generalised to the population studied. It was also felt that the validity of the findings could be reinforced through the additional, more exploratory research with key informants. It was appreciated that an over-concentration on key informants might skew the results in favour of the opinions of certain individuals or sectors of society, but it was felt that a fairly rigorous approach to the household survey would help to minimise this risk. The fact that many people were engaged in conversation during visits to the fields and other places of work (for instance the horse-park in the case of the most touristic village) meant that a good spread of social groups was encountered, so increasing the inclusivity of the survey. Agus, who was used to talking to farmers in his previous work in environmental education, was particularly good at talking to this group and eliciting their responses on farming and other matters.

**Figure 7 – Research Villages by Population and Number of Households**

<table>
<thead>
<tr>
<th>Name of Village</th>
<th>Population</th>
<th>No. of Households</th>
<th>Households Surveyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kandang Sari</td>
<td>1,177</td>
<td>211</td>
<td>26</td>
</tr>
<tr>
<td>Ngadas</td>
<td>1,489</td>
<td>325</td>
<td>32</td>
</tr>
<tr>
<td>Ngadisari</td>
<td>1,443</td>
<td>357</td>
<td>38</td>
</tr>
<tr>
<td>Ranu Pani</td>
<td>1,037</td>
<td>246</td>
<td>24</td>
</tr>
<tr>
<td>Wonokitri</td>
<td>2,649</td>
<td>574</td>
<td>58</td>
</tr>
</tbody>
</table>

In order to have the highest chance of obtaining a representative sample of households, a modified form of the primary method of probability sampling, i.e. systematic random sampling, was used. The sample was selected as follows. The number of households in each village was known from the village secretary or from the national park reports. A detailed street plan of each village with the location of each house was then prepared (an example is shown in Appendix 6). A number between 1 and 10 was then drawn and, starting at one end of the village, the houses were counted in sequence

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3 The dusun of Kandang Sari turned out to be smaller than expected, with only 130 households. Rather than intensifying the survey here to increase the sample size or covering households in the main village of Mororejo (to which Kandang Sari belonged), it was decided to visit two dusun of other villages (Ngawu and Wionesunkoro) which were 1-2 hours’ walk away and which were adjacent to the national park boundary. The results from this survey are included with the discussion of Kandang Sari.
until the relevant number was reached (for example, the random integer in the case of Ngadas was 7). After this, every tenth house was visited. When a side-street was reached, the counting continued along these down to the bottom of the street and back to the top, then along the main road.

Most of the villages appeared to have a house-numbering system, but on closer inspection this turned out to be useless for sampling purposes. Although a number plaque was often nailed up above the front door in an official-looking manner, the system was usually confused, with non-sequential numbers used and, in some cases, the same number appearing two or three times. Only in one of the villages was there a convincingly complete and sequential numbering system, but even here, it was soon realised that there were more households than suggested by the number plaques. In some cases more than one family lived in a single dwelling, for instance when a house had been divided up after the marriage of a son or daughter in order to provide separate accommodation. In other cases a new house had been built on formerly vacant land.

A particular difficulty encountered in Ngadisari, which consisted of two important dusun, was that many villagers owned houses in both dusun, spending the night in whichever was most convenient. This made it impossible simply to visit every tenth house because far more than ten per cent of the households would then have been surveyed and because the houses were often unoccupied. Although the heads of households were registered in one dusun or the other, it would have been unrealistically time-consuming to track down people who were registered in one place but actually resident in another, particularly as the two parts were a steep mile-long walk apart. Here, it was ensured that the number of households actually visited equalled ten per cent of the official total in each dusun, with an effort made to ensure a representative sample by selecting an even spread of houses within the two parts of the village.

In order to disrupt people's lives as little as possible, household visits were made at times that fitted in with cultural and lifestyle practices. It was quickly discovered that few people were at home during the day as almost everyone was out working, and that the
best time for visiting was in the evening after people returned home, or in the early morning before they left. To begin with, Agus and I visited households together in order to practise interview techniques and ensure consistency of approach, while later on, when Agus became more comfortable with the technique, interviews were carried out separately in order to cover more ground. In some cases, interviewees were more relaxed when speaking Javanese rather than Indonesian, so responses were translated by Agus. As Agus had been recommended by a mutual friend and professional colleague, I had considerable confidence in his integrity in conducting the interviews and translating the responses. Having said that, there were occasions when he was rather hesitant in pursuing avenues of enquiry, preferring to stick more cautiously to the agreed schedule of questions, and in some cases where it was felt respondents might have had more to say on a subject, the house was returned to. On the other hand, he was well aware of the purpose of the enquiry and took an active interest in it and, as already mentioned, was able to contribute insights which otherwise would probably not have been available.

As described above, the survey schedule shown in Figure 2 was used as the basis for semi-structured interviews, but it was quickly found that this structure was still too rigid for the type of qualitative information required and that writing notes during the interviews led to anxiety and awkward responses on the part of respondents. (This was not unexpected, as a similar reaction had been encountered in the course of consultancy work.) It was found more effective to adopt a more relaxed, socialising approach as recommended by practitioners of RRA (Chambers 1993, Pretty et al. 1995), in which subjects are raised during the course of a conversation in a more natural manner, rather than trying to ask them in a pre-set order. It was also felt that this type of less formal, more interactive interview allowed a more reflexive and flexible approach, allowing new lines of enquiry to be followed as they arose. Of course, there were problems with this method: one was the need to ensure consistency and comparability between the interviews, particularly as there were two of us carrying these out, and another was the need to try and remember what had been said in the conversations (or interviews). To
overcome these, responses and attitudes were written down straight after each visit, and there were frequent conversations and checking of information between Agus and myself. The occasional loss of data which may have resulted from the methods used was certainly compensated for by the more relaxed attitudes engendered and by the freer flow of information and opinions, and in some cases, when interviews became longer or visits to the same households were repeated (as in the case of key informants), permission was asked to take notes during the conversation, which was invariably granted.

The interviews generally lasted between half an hour and an hour. In the great majority of cases the researchers were received by people as welcome guests. In some cases, however, there was an unwillingness to meet the research team. In one of the villages in particular, there would be sounds of scuffling and haste inside a house as it was approached, as the occupants rushed to hide in the rear of the premises, locking the back door as an extra precaution. This phenomenon was discussed with village leaders, who put it down to wariness towards anyone who looked like an official. The problem of non-response was considered for its effect on the survey findings. If the householders were simply not at home, the house was revisited on another occasion. The issue of refusal to respond was dealt with by moving on to the next house, which was felt to be the best way to obtain a representative sample. Of course, it is possible that the people in the non-responding houses would be particularly conservative and the least likely to be involved in tourism, and this could of course have led to a systematic error which affected the data gathered. According to Israel (1992a) and Norton and Allison (1994), however, as long as there are no obvious abnormalities or any great range of opinions in the data from the sample successfully obtained, the lack of response could be ignored. In fact, as it turned out that the information gained from more willing respondents was rather homogeneous, it is fairly likely that the lost data from the non-respondents did not result in any bias.

A contrasting problem to the reluctance to be interviewed was that sometimes friends, neighbours and relations would congregate in the house where the interview was
being conducted, making occasional interjections or even taking over the session entirely, rendering it difficult for the interview team to determine which answers applied to the householder in question. In these cases (fortunately few in number) the house was returned to on a different and quieter occasion, or the free-for-all discussion which took place was simply accepted as a useful bonus. Since greater emphasis was placed throughout on obtaining qualitative rather than quantitative data, the loss to any statistical matters was felt to be outweighed by the gain to the overall impressions gathered.

Another problem encountered, which became apparent during the pilot-testing stage of the interviews, was that when people were asked about the *taman nasional* (‘national park’), it quickly became obvious that few respondents were familiar with the phrase. To overcome this, different phrases were used, such as “PHPA’s area” or “the protected forest”, and these generally elicited more response.

The visitors’ survey presented a different set of problems to the residents’ survey - although there were also similarities. The main similarity was that as with the villagers, the tourists could in general only be surveyed at certain times of day because of their fixed itineraries; even independent travellers generally only visit Mount Bromo in the early morning, leaving by early afternoon. This left a short window of only two or three hours in the morning for talking to most of them.

In comparison to the selection of households, which was relatively straightforward as the houses were fixed and reasonably quantifiable, the selection of tourists for interview was more difficult. There was no definable point which they passed where it would be possible to delay them for a few minutes and interview a rigorously selected sample. It was therefore decided to use a non-probability sampling method, approaching tourists in the places most frequently used such as hotels, cafés and restaurants, horse-park, car-parks, and an area of seating, shelters and souvenir shops at one of the main viewpoints. This type of opportunity sampling does, of course, carry the danger of producing a non-representative sample. To counter this, every effort was made to approach a varied cross-section of tourists – although admittedly this meant making a
judgement from their external appearance as to whether they were students, school-
children, family groups, foreign backpackers, wealthier foreign tourists or tour groups,
which meant that the sampling was purposive rather than accidental.

The majority of tourists approached spoke English, except in the case of one group
of Russians accompanied by an English-speaking guide who translated the questionnaire.
However, the largest number of foreign tourists to Bromo are East Asians, particularly
from Hong Kong and Taiwan, and these groups are considerably under-represented in the
survey due mainly to their brevity of stay (and to the inability of the researchers to speak
any Chinese language). Some information on their activities, attitudes and expenditure
was gained from observation, from tour leaders accompanying the groups and from local
traders, but the inability to survey this group sufficiently meant that the accessible
population in the survey was skewed in comparison to the theoretical population.

In the case of the foreign tourists it was normally sufficient to ask them to fill in the
questionnaire on their own, but the domestic tourists were more reluctant to do this. Agus
commented that they were "kurang serius" compared to the foreign tourists – i.e. that
they took the survey less seriously. With the domestic tourists it was therefore found to
be more effective to administer the questionnaire in person, and writing down the
answers in the presence of the interviewee did not seem to be such a deterrent to open
responses as with the villagers, perhaps because they were in general better educated and
more used to the written word. 72 questionnaires were completed by foreign tourists\(^4\) and
101 by domestic ones, which it was felt would give a sufficiently good spread of opinions
to provide some reliable results.

As mentioned above, the interviews with both tourists and residents were backed up
with more informal and open-ended interviews, because "freely uttered words spoken
outside the formal setting of an interview might very well have greater validity than the
responses to a structured questionnaire with all its built-in biases" (Dann et al., 1988).

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\(^4\) Of the participants, 60% were European, 16% North American, and 16% from Australia or New Zealand.
The remainder were from Japan, Hong Kong, Taiwan, Russia, Israel, and South Africa.
Household visits were supplemented by talking to people at places such as stand-pipes, shops and warungs (small eating-houses), and in the fields where they worked. In all the villages, formal and non-formal leaders such as the village headman and secretary, religious leaders, health workers and teachers were visited to gauge their attitude to tourism and to the national park and to determine whether there was any coherent attempt to implement specific policies in regard either to tourism or the protected area, and to find out about aspects of village life which could only be approached at village level, for instance the provision of health or educational facilities or plans for future developments. Key informants were followed up on an exploratory basis, with potentially interesting contacts approached when their presence and involvement in relevant activities became known. For instance, in one of the villages there was a social forestry scheme which was not known about before the research started, and people involved in this were interviewed.

In the case of the foreign tourists, informal interviews or conversations were necessarily selective to some extent in that conversations could only be held in English. The respondents often turned out to be self-selecting because some were interested in why the survey was being carried out and were more ready to chat, while others were unwilling or in a hurry. In some cases (fortunately rare) respondents were reluctant to divulge much information, but only in one case did potential respondents refuse to complete the questionnaire at all. It is not pretended that the methods used resulted in a statistically definitive set of quantitative data for all tourism to Mount Bromo on such matters as country or town of origin or age group, but because of the size of the sample, it is believed that the statistical indications recovered did give a good indication of these. In any case, for the purposes of this research, other aspects of the survey were felt to be more important, such as the reasons for visiting the park and opinions of it. The visitors' survey was also backed up with interviews with key tourism actors such as hotel-owners and tour guides.
Field Observation

As another method of cross-checking information, time was also spent on participant observation. In all the villages residence during the survey period was in small guesthouses run by families with whom socialising took place or with the family of a village official. Since households were generally only visited in the evening and early morning, the daytime hours were spent in writing up notes, mapping the villages, talking to people in their fields, visiting agricultural lands and the adjoining national park territory, interviewing tourists, and for what Dann et al (1988) refer to as 'systematic lurking', in other words hanging around and watching what went on. A good deal of time was spent on observing what was happening in the village as people went about their normal activities, while in the main tourist-orientated village time was spent on observation at key sites such as the minibus terminal, horse-park, hotels and restaurants, the national park entry booth and an area of small shops and shelters at one of the main viewpoints.

A further aspect of observation was that environmental aspects were noted in order to assess their relevance to the research questions. These aspects included the effect of farming techniques and land management on ecological processes such as erosion, an assessment of wildlife in the area, and signs of wood-cutting and re-planting within the national park. This was accomplished principally by walking in the fields and surrounding forested lands (made more accessible by wood-cutters trails). Walking around and between the villages whenever possible helped to supplement knowledge of the geography, management and wildlife of the national park. (Map 3 in Appendix 2 shows the main walking routes taken during the research.) A bonus of this was that villagers would often be encountered during these expeditions, making a useful and natural way of engaging people in conversation.

In addition, interviews were carried out in the villages with PHPA staff concerning park management, and several attempts were made to go on patrol with PHPA rangers. However, these attempts failed as the rangers do not appear to go on patrol very often,
apparently preferring (at the time of the field survey, at least) to sit in their offices and play chess or cards or run their tourism-related enterprises. Contact was also made with non-Tenggerese people working in the area. The interviews with stakeholders in the tourism industry have already been mentioned, and other people who provided extremely helpful information included a vulcanologist assigned to monitor the activity of Mount Bromo and agricultural researchers.

Having gathered a considerable amount of data through the above processes, the question remained as to how these would be treated.

Utilising the Research Findings

Ultimately, of course, the findings of the study would be used to address the central question of whether tourism in and around a protected area can be conducive to the conservation of the natural environment. As shown above, this was broken down into four research questions, and the data from the residents' and visitors' surveys, key informant interviews, field observation and desk research would be analysed to try and find answers to these. It was also outlined above that the three principal stakeholders in the national park were seen as a triangle, with the tourists, the local people, and the national park as represented by the PHPA forming the three apexes. It was decided that the best way of understanding the processes and mechanisms of tourism in the park would be to examine the interface between each of these elements and the other two. In other words, the relationship between tourism and the national park, between the Tenggerese and the national park, and between the Tenggerese and tourism would be examined. Accordingly, the next three chapters of this thesis will tackle each of these subjects in turn.

Once the analysis and evaluation of the research findings was complete, it was hoped that the conclusions would contribute to understanding the relationship between tourism and conservation. While it was hoped that the qualitative approach would lead to greater insights into the subject, it was recognised that the method has limitations in that some of the information gained cannot be generalised to other populations and so this
study, like any other, was bound to produce findings which were location-specific. However, it was believed that the high degree of contextualisation of the study and its findings was important and that, when a comparison with other research into sustainability and protected areas management was made, common elements generalisable to other situations might be found. In this sense, it was hoped that the findings might make a broader contribution to the better management of tourism in protected areas. More specifically, the information gained from the visitors and residents surveys was used with other observations to build up a more detailed picture of tourism in Bromo Tengger Semeru than had ever previously been compiled, and several findings from the survey contradicted received wisdom on the industry here.

Before moving on to the analysis of the findings, some space will be devoted to an evaluation of the research process.

Reflections on the Research Process

On re-evaluating the research methodology used after the field research, a number of questions were asked. First and most important: were the methods appropriate to the study population, and if so, could it be said with confidence that reliable results were obtained? Were the design and implementation of the study over-influenced by judgements and conclusions formed in previous work in Indonesia? A related question was whether there had been sufficient awareness of my own position in terms of cultural bias and attitudes towards the research population and the findings of the study. Another question was whether ethical issues were sufficiently well addressed, so that it was reasonably certain that neither the research process nor the way the findings were used had caused (or would cause) any negative impact on the population studied. And finally, if a similar project was to be undertaken again, would there be any difference in approach?

In answer to the first question, it is believed that the research methodology had been sufficiently examined prior to the field study to have incorporated current thinking on tourism-related research. As noted, few studies existed on the links between tourism
and conservation, as most were economic analyses which made prescriptive or tenuous links with any conservation benefits. For the purposes of the current study, it was felt that social science research techniques would be the best tools to gain the information required to address the research question, and it is believed that these methods were fairly successful.

Throughout the field study, an attempt was made to maintain self-awareness in terms of world-view and attitudes. It is accepted that it was not possible to avoid a cultural slant on the findings: even in so-called scientifically objective studies the design of a study and its findings are embedded in a particular social context (Liberatore, 1995), and in this case it was always going to be impossible to be completely objective because of the influences of culture and upbringing and previous experiences in Indonesia. However, since the research questions were situated within the perspective of an enquiry into the sustainability of environmental exploitation (itself a phrase loaded with cultural construction and grounded in a Northern, rational and aesthetic view of the world), it was expected that any findings would also be coloured by this context but would be no less valid because of this. Similarly, it was no more possible to ignore the influence of previous experience of Indonesia than it would have been to cast aside the Northern perspective, but it was felt that this experience contributed to the conclusions in making them more likely to be realistic. Meanwhile, previous experience in the tourism industry and a Northern perspective gave a cross-cultural angle which, given the necessarily cross-boundary nature of international tourism, meant that a greater depth of analysis could be applied to the results.

The ethical elements of the study were a difficult area to consider, but this was important from a personal and a professional point of view. From a personal standpoint, there was a wish to avoid any inadvertent exploitation of or inconvenience to the people studied – although, naturally, it was inevitable that far more would be gained from them than could possibly be rendered in return. This can only really be justified in that there is a slight possibility that the findings of the research could contribute in a small way to
better management of the Earth's resources. More directly, there was genuine warmth between many of the people encountered and the research team - and the entertainment value for the villagers of having a European woman - and more especially, a small child - in their midst seemed genuine.

Finally, it needs to be asked whether there would be any difference in approach if a similar study were to be undertaken in the future. A greater understanding of attitudes to the national park could almost certainly have been gained by spending longer in each village and so participating in village life for longer; it would also have been helpful to understand Javanese. It would also have been interesting to have done a more detailed survey of household expenditure, which would have given more precise information on what proportion of money was earned from tourism and how much was spent on alternative fuels to wood. This would have required a much larger research team, however, and would have been impossible to implement within the confines of a research project not associated with a government department. It would have been very satisfying to have been able to offer more in return for the information supplied, for instance some kind of contribution towards tourism and agricultural improvement, as people's needs in these areas were not being met by government bodies. And lastly, as noted at the start of this chapter, a longitudinal study must always be more insightful and informative than a cross-sectional one, and it would have been excellent to have had the time and resources to carry this out.

The next three chapters of this thesis will examine the data recorded from the field study by investigating the relationship between the tourism industry, the national park, and the Tenggerese.
Chapter 5 - Bromo Tengger Semeru National Park and Tourism

The first three chapters of this thesis looked at sustainable development, sustainability in tourism and protected areas management, illustrated by examples from Indonesia and elsewhere which demonstrated how local characteristics often generate conflicts between the theory and the practice of these three areas. The focus of this investigation now moves to the narrower field of tourism in Bromo Tengger Semeru National Park in order to examine the processes at the interface between development and conservation. The realities of context will thus add an essential extra dimension to the discussion of the first three chapters.

As explained in the previous chapter, the three principal stakeholders in tourism to Bromo Tengger Semeru are the national park itself and its administrative body, the PHPA; the Tenggerese people who live around the national park; and the tourism industry, including the tourists and the providers of tourism services. Of course, there are other wider stakeholders in the national park: the government, for whom it is an important asset as a source of tourist revenue; the people who live in the lowlands around the Bromo Tengger Semeru massif and benefit from its attributes as a watershed; the Indonesian people as a whole, for whom it forms part of their natural and cultural heritage; and, since Bromo is a site of international significance, the global community. It was mentioned in Chapter 3 that broader groups such as these may be ultimately responsible for the threats to a national park, and there are several obvious areas of overlap, in that the government is represented locally by the PHPA, while the Indonesian people and the global community are represented by the tourists to Bromo. In order to examine the issues of tourism and conservation at the most fundamental level, however, it is only the actors most directly affected who will be discussed here.

In this chapter, the relationship between tourism and the national park will be examined, with the national park considered from ecological and administrative angles. Management aspects will be examined in the light of the evolution of national park management identified in Chapter 3 towards an approach which no longer separates
nature from human activities to the extent it formerly did, and which may be more appropriate for developing countries. Earlier beliefs which emphasised the pre-eminence of nature are still influential, however, and affect the way that protected areas are viewed. After a discussion of these issues in the context of Bromo Tengger Semeru, the characteristics, behaviour and perceptions of the tourists who use the park will be examined to see whether their activities and expectations have any bearing on the sustainability of tourism at Bromo, in particular in terms of its ecological impacts, and to find out whether differences between the user groups are relevant to sustainability.

Other aspects of sustainability such as the impact of tourism on the cultural and economic milieu of the Tenggerese - in other words the interaction between the second and third principal stakeholders - will be examined in Chapter 7, while to offer a comparison between the relatively modern industry of tourism and the traditional way of life of the local people, the non-touristic livelihood strategies of the Tenggerese - in particular their interaction with the national park - will be examined in Chapter 6, thus covering the relationship between the first and second groups of stakeholders.

To begin this chapter, then, the main ecological and administrative features of the park will be examined.

History, Geography and Ecology of the National Park

The Bromo-Semeru massif covered by the national park is the most outstanding geological feature of eastern Java. Measuring around 40 km. from north to south and 20-30 km. from east to west, it contains three major volcanic features which give the national park its name. To the south is Mount Semeru, one of Java's most active volcanoes and, at 3676 metres, its highest mountain, while to the north is the vast Tengger Caldera, measuring 6-8 km. in diameter, the remnant of some mighty prehistoric eruption. Around most of the circumference of the Tengger Caldera its almost sheer walls rise to a height of up to 130 metres from the valley floor, creating a panorama of great beauty. Within the Caldera is the third and best-known feature of the park: Mount Bromo, on whose smoking maw are focussed the attentions of the tourism industry. Besides Mount Bromo
there are several other peaks within the Caldera, of which the most obvious is the deeply
ridged and rutted Mount Batok, adjacent to Mount Bromo. To the north of Bromo is the
Sand Sea (actually formed of volcanic ash), which is kept largely free of vegetation by
frequent volcanic eruptions. The view from the rim of the Tengger Caldera looking
southwards over the Sand Sea to Mount Bromo and its attendant mountainous backdrop
forms the classic view of the national park (see Appendix 3, photos 3 and 4).

The designation of Bromo Tengger Semeru as a protected area has been a gradual
process. Several parts of its current territory were declared nature reserves (cagar alam)
by the Dutch colonial government, with the Sand Sea the first of these, in 1919 (DepHut,
1995b). After the Dutch relinquished control of Indonesia in 1949 no further protection
measures were applied until the early 1980s, when the Sand Sea and three of the lakes
near Mount Semeru were declared as tourism parks (taman wisata) (DepHut, 1995b),
inviting the possibility of intensive touristic use. The wider area around these was
designated as a national park in 1982 under the United Nations national parks programme
mentioned in Chapter 3; it was one of eleven parks declared to coincide with the Third
World Congress on National Parks held in Bali in 19821 (Sumardja et al, 1984, Robinson
and Sumardja, 1990).

As discussed in Chapter 3, the advisors on the UN programme were European
biologists who carried out essential work in documenting the natural features of the
national parks and describing their ecology, management issues and tourism potential,
and unquestioningly applied a Northern model of national parks management, reflecting
the prevailing orthodoxy of the time. Although in the case of Bromo Tengger Semeru
local people were expected to have a role in providing tourism services there was no
suggestion that they should be involved in management of the park, and somewhat facile
assumptions were made about the benefits and processes of tourism. For instance the first
field report said: “there is little doubt that a national park offers the only real possibility

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1 The first five Indonesian national parks were declared in 1980.
for economic development of this mountainous area without endangering its important function as a water catchment area for the many rivers and streams which rise on its flanks" (FAO, 1977:2) and that “local people should be involved to the maximum extent possible in such development, and in provision of services including guiding and hire of riding and pack animals, thus providing them with an alternative source of income and gradually reducing their dependence on cash crops” (FAO, 1977:12).

In other words, it was believed that tourism development would be the least damaging form of economic use, but the potential impact of tourism installations on the environment was not taken into account, no analysis was done to determine the scale of tourism needed to generate sufficient income to reduce local dependence on crops, and there was little awareness of the actual requirements of tourists. The failure to involve local people in management or to consider the detailed processes of tourism were typical of the time, in that – as discussed in Chapters 1 and 2 - the doctrine of participatory development had yet to emerge and tourism had yet to become a respectable discipline. Also, the advisors’ background was in the natural sciences rather than social ones, and they did not have the grasp of context which is now recognised as being essential to a successful planning process. It was not until two decades later that a sufficiently large body of knowledge had been accumulated to allow rational decisions to be made on whether tourism could viably replace other economic activities. Even by the 1990s there was still a dearth of data relating to tourism in developing countries, and as explained in Chapter 4, the desire to contribute to knowledge on nature tourism was one of the reasons for undertaking the current study.

Weaknesses in approaches to protected areas management were only to become obvious later, however, and in fulfilment of the aims of their programme, the UN-funded advisors to Bromo Tengger Semeru produced a management plan for the national park. This stated that: “the basic purpose of this national park shall be to conserve and protect the unique scenic and geological features of the Bromo-Tengger highlands and the mountain vegetation of Gunung Semeru, for the present and future recreational,
educational, scenic and scientific benefit of Indonesians and visitors from other countries" (FAO, 1980:12).

Of the park's "unique scenic and geological features" there is no doubt, given the outstanding scenery described above, and a useful parallel can be made here between the designation of Bromo Tengger Semeru as one of Indonesia's first national parks and the monumentalist view which prevailed when the world's first national parks were declared at the end of the 19th century, as described in Chapter 3. Then, the intention was to preserve the landscape rather than the plants and animals, after a century or so of philosophical re-alignment of views towards wilderness, while three-quarters of a century later the first English and Welsh parks -- all consisting of upland and moorland -- were seen as areas where people could escape the humdrum realities of daily life and experience a closeness with nature. It is significant that the UN consultants who advised on the network of protected areas in Indonesia (of whom the team leader was British) were operating only twenty-five years or so after the declaration of the British national parks in 1949, and it seems very likely that the aesthetic appreciation of the advisors cannot fail to have been influenced by the socially-constructed view of attitudes to wilderness which prevailed in their home countries.

Another interesting point is that local officials and domestic tourists, despite their lack of historical adherence to the 'wilderness myth', clearly share the Northern appreciation of the dramatic landscape of Bromo Tengger Semeru. This was demonstrated in the visitors survey, the findings of which will be examined later in this chapter, and was expressed thus in a 1995 PHPA management plan, written by Indonesian ecologists: "A sense of discovery will be felt by each visitor when they arrive at the Sand Sea, because the view around them will inspire a glorious impression and amazement at the power of God" (DepHut, 1995a:1-25). This sentiment echoes the awe-inspired feelings of early proponents of national parks in the North and, as with the signs of greater interest in wildlife conservation identified in Chapter 3, may be a step along the road to greater public awareness of (and support for) conservation in Indonesia --
although, as already said, there is of course no guarantee that a similar progression as occurred in the North will take place in Indonesia.

Apart from aesthetic considerations, a further motive for conferring national park status on the Bromo-Semeru massif was for watershed protection, as mentioned above. As far as the fauna was concerned there were few grounds for protection since by the late 1970s there was already no spectacular wildlife left: in fact the authors of the first management plan expressed surprise at the lack of grazing animals such as deer, which was attributed to hunting (FAO, 1977 and 1980). (Later research showed this also to be due to a lack of salt in the diet available to them - Whitten et al. 1996.) Although the park does protect much of the typical East Javan fauna, there is none of the charismatic megafauna so important for the development of animal-based tourism. Botanically the area is rather more interesting, with tropical montane forest on the slopes of Mount Semeru still in good condition, and nine species of plant found nowhere else in Java, including the endemic Melastoma zollingeri (FAO, 1977 and 1980). However these plants have no relevance for tourism and are unlikely ever to be of interest to more than a handful of botanists.

The most notable vegetative feature of the park to the casual observer is the savannah grassland which covers the floor and walls of the Tengger Caldera and the hills south of the Bromo crater. To the north of the crater, periodic eruptions have kept a large area free of vegetation and created a desert-like Sand Sea of porous lava and ash, where plants have difficulty in becoming established. The altitudinal range of the park is from 1000m to 3767m above sea-level, with the majority above 1500m, so temperatures are cool compared to lowland Java, with day-time temperatures ranging between 13 and 23 degrees (Bappeda 1996) and night-time temperatures falling as low as 3-4 degrees. Very occasional frosts are reported by villagers, and in the highest village of the national park, Ranu Pani, a fall of snow was recorded in 1984. This means that fewer tree species can grow here than in the lowlands: for instance the typical growth of fruit trees found around villages in most Javanese villages is not seen. Around the villages the principal
vegetation is secondary forest dominated by *Casuarina junghuniana*, a tree resembling a pine which between about 1500-2000 metres above sea-level has replaced the natural montane forest of oaks, chestnuts, laurels and ericaceous plants in many parts of eastern Java. *Casuarina* is resistant to fire and has come to dominate the vegetation due to frequent man-made fires over the last few centuries (Whitten et al. 1996). Through these fires people have therefore modified their environment for their own purposes, since *casuarina* is important for local people as fuelwood and for house building. The collection of fuelwood is in fact the greatest single use of the national park’s resources by the local people: the details and significance of this will be covered in the next chapter. For now, the administrative features of the park will be discussed, since these underpin (or undermine) all aspects of utilisation of the park.

**Management, Financing and Administration**

Administratively, as explained in Chapter 4, the national park falls within the province of East Java and lies across four *kabupaten*, as shown on Map 4 in Appendix 2. There is an official entry point into the park from each *kabupaten*, at Ngadisari for Kab. Probolinggo, Wonokitri for Kab. Pasuruan, Ngadas for Kab. Malang, and Ranu Pani for Kab. Lumajang.

The national park comes under the jurisdiction of the National Park office within the Directorate General of Forest Protection and Nature Conservation (PHPA)², which is part of the Ministry of Forestry. Although the park was declared in 1982, it was many years before it was ratified, and the necessary technical management unit was only set up in 1992, becoming operational in July 1993 with the establishment of a national park office and the appointment of a Head of the National Park (DepHut, 1995b; Sudarmadji, 1996). The long delay between declaration and ratification is by no means unusual in Indonesia. Whitten et al. (1996) comment that more than a decade after the network of conservation areas was proposed in the 1982 National Conservation Plan, and several

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² In February 1998 the name of the directorate general was changed to Conservation of Nature (Perlindungan dan Konservasi Alam - PKA), but the old name will be used since it was in force at the time of the field research.
years after the promulgation of a law\(^3\) which defined what national parks are in Indonesia, many still lacked legal protection and as a consequence had suffered considerable damage. Up to 1992, large areas of the park came under the jurisdiction of the state forestry company Perum Perhutani, and the change-over had caused various problems, principally in that there was a lack of clarity over boundaries and also because the change had not been well publicised to local people, so that there was confusion over the status of the land. This aspect will be further examined in Chapter 6.

The headquarters for Bromo Tengger Semeru National Park are in Malang, a major town to the west of the park. The Head of the National Park is based in Malang, and is answerable to the local provincial office of the Ministry of Forestry as well as to the Director General of PHPA (ADB, 1992). Day-to-day patrolling and protection of the park is carried out by rangers, based in ten Ranger Stations \((\text{resort})\) around the park, organised into three Groups \((\text{rayon})\). (See Appendix 7 for diagram of administrative structure.)

As the status of Bromo Tengger Semeru was gradually formalised it was adjusted in size, initially being proposed as 67,600 ha. and eventually reduced to 50,276.3 ha. (Sumardja et al.; 1984, DepHut, 1992/93a). A zoning system with four zones was introduced in 1987, but this was altered after a 1992 study to five zones (Table 5.1).

<table>
<thead>
<tr>
<th>Zone</th>
<th>Area (ha)</th>
<th>%age of total</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core</td>
<td>19,862.00</td>
<td>39.50%</td>
<td>Habitat of protected species, high conservation value, little or no sign of human intervention, fragile ecosystem, no development allowed</td>
</tr>
<tr>
<td>Wilderness</td>
<td>22,280.30</td>
<td>46.30%</td>
<td>Important conservation area, important hydrological or soil stability function, mostly still in natural condition. Limited tourism allowed, no installations.</td>
</tr>
<tr>
<td>Intensive Use</td>
<td>4,994.00</td>
<td>9.90%</td>
<td>Has tourism attractions and potential for development, e.g. accessibility, and can tolerate relatively high concentrations of visitors.</td>
</tr>
<tr>
<td>Traditional Use</td>
<td>1,590.00</td>
<td>3.20%</td>
<td>Adjacent to villages where over 25% of inhabitants depend on the national park for some basic needs; some extractive uses permitted (buffer zone).</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>550.00</td>
<td>1.10%</td>
<td>Former production forest.</td>
</tr>
</tbody>
</table>

Sources: Bappeda, 1996; Ceballos-Lascurain, 1996

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\(^3\) Act no. 5 of 1990

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Different levels of activity or conservation are supposed to apply to each zone, for instance no development or human activity is allowed in the core zone, while tourism installations may be built in the intensive use zone. However, at the time of the study not only the zones but the boundaries of the park were still unclear. There were few boundary markings, and neither park managers nor people living around the park differentiated between the zones, while even PHPA staff were unsure of the boundaries. For instance, the head of the resort at Wonokitri said that the boundaries of the national park had not been formally decided yet as the official national park status was “still new” (in fact, it was three years old by that time). He had no map at all (Prayoga, 1997). Similarly, the PHPA ranger in Ngadas did not know exactly where the boundaries were and had only a poor photocopy of a 1938 Dutch map to help him in his duties (Suajarwo, 1996). Indeed, no good maps of the park appeared to exist: at least, none was seen during the course of the research, even at the National Park Head Office, despite several requests. Instead, five separate outline maps showing the zonation scheme were obtained, each showing different information, including two conflicting ones within the same planning document (DepHut, 1995b). The lack of good maps had been experienced in previous consultancy work and there are almost certainly cultural and political reasons for this, but as a discussion of this would be only tangential to the study it will not be undertaken here - except to mention that the fact that it is perceived as a shortcoming is perhaps indicative of a Northern rationalist viewpoint. On the other hand, it is hard to see how, without such a basic management tool, the park’s resources could be properly monitored.

In addition to the lack of clear boundaries, there were several aspects of the PHPA bureaucracy and its internal culture which interfered with effective management of the park. First, only one of the rayon headquarters was located close to the edge of the park, while the others were in towns some kilometres away. The distance of any senior personnel from the park made it difficult for them to supervise their staff, enforce park regulations or to be aware of infringements. The rarity of spotting any PHPA personnel in the field was partly because of budgetary restrictions. As with all Indonesian civil
servants, whenever staff travelled they should receive a daily allowance known as a *per diem*, but if finances were too restricted to allow the distribution of the *per diems*, then staff simply did not go anywhere – even locally. In Wonokitri the resort head claimed that his staff normally went on patrol once or twice a week, but explained that one of the guards was currently away on a training course, and so with only three others plus himself they were very short-handed, especially with having to collect the ticket money as well, so that in fact they did not always manage to go out on patrol (Prayoga, 1997). During the entire survey time, only one ranger was observed on patrol, and he was simply riding a motorbike up a road near one of the villages, while a VSO conservation worker assigned to the national park for two years confirmed that it was hard to find the rangers much of the time (Fleming, 2003).

Again from a Northern standpoint, it is difficult not to be critical of the failure to take basic measures to protect the resources of the park, but Indonesian voices too were raised in criticism: for instance the vulcanologist at Ngadisari (a very helpful key informant) commented that they 'appear like a phenomenon' to describe the rarity with which PHPA rangers went on patrol (Syafi‘i, 1997), and the Village Secretary of one of the villages surveyed said that “the damage to the forest is because of the failure of the government to protect it; they never come here, they only work in their offices and don’t come to the field, and there are no sanctions against people who take wood” (Ismandi, 1997).4 The low levels of surveillance meant that - not unnaturally - people continued to exploit the forest without much concern that they would be caught. (The significance of this to the village economy will be discussed in the next chapter.)

The lack of visible presence in the field was symptomatic of the general abandonment of duty by PHPA staff observed during the study period. During a total of three weeks spent in Ngadisari, the most popular destination with tourists, the PHPA staff were only seen to be correctly dressed in uniform and at their posts on two occasions: the

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4 This individual was a particularly well-educated and motivated man who was also an important informant.
first when a group of delegates from other Indonesian national parks arrived on a field trip, and the second when a group of 15 members of the Kabupaten Probolinggo local government arrived to make sure that entry tickets were being correctly issued. For the remainder of the time, PHPA staff were rarely at their posts, and the Visitors’ Centre was rarely open (again, confirmed by the VSO conservation worker). PHPA employees and their families were quite open about their relaxed attitude to their job: one, who was employed to clean up litter, said that “if no-one knows [when wood is taken], it doesn’t matter” (Supandi, 1997), while the wife of another employee commented “it’s easy to get a tree because he [her husband] works for PHPA” (Pasir, 1997).

These two fairly simple remarks demonstrate two aspects of the way PHPA rangers approach their work. One is that they empathise with the villagers quite strongly. Many originate from the villages where they work and thus find it difficult to enforce regulations, and even if this is not the case, there is a good deal of fellow-feeling towards people who are simply trying to make a living. For instance, when the head of the Cemoro Lawang resort was asked why it was permitted for people to collect grass for the tourist horses within the Sand Sea, he said “we turn a blind eye because it’s their livelihood – and anyway, what else would the horses eat?” (Djoko, 1997). Another aspect is that there is considerable abuse of power by individuals within PHPA. In Cemoro Lawang, for example, the head of the PHPA rayon owns the most popular restaurant and hotel in the village, and had recently opened a second hotel near the Caldera rim in an area where all development was officially prohibited. His father-in-law ran a stall selling soft drinks and snacks at the foot of the Bromo crater, where no other enterprises were allowed. It is hard for individual members of PHPA to go against the prevailing culture of ignoring infringements of regulations, as demonstrated by the case of a former head of the Wonokitri resort. He had been strict on not permitting wood-cutting, even confiscating the parang (machetes) of those who transgressed, but when the villagers had protested at his attitude he was removed from his post and replaced by someone less strict (Bambang, 1997).
Whatever the reasons for it, the lack of attention to duty observed at Bromo Tengger Semeru is not an isolated situation. As already noted in Chapter 4, the general inefficiency and low morale within PHPA has been noted by a number of foreign observers. A report on Indonesia’s land resources for the Overseas Development Administration (the former name of the UK government ministry responsible for overseas affairs) stated that “a disproportionate number of PHPA staff can be found in the offices and not in the field. Those who are formally based in the field rarely have money to travel around their area of responsibility because budget priorities have been set elsewhere, and they work without the example, direction, supervision or support they need from more senior levels when they encounter active encroachment or other misdemeanours” (RePPProt, 1990:173). The same report comments that, for PHPA managerial staff, “lack of direction and inadequate budgets often stifle whatever enthusiasm and motivation they might have had” (RePPProt, 1990:173). These failings might not have much significance if they were associated with unimportant matters, but when they are contributing to the irreplaceable loss of biodiversity in one of the world’s most ecologically rich countries, then it is difficult not to deplore them. This is not just a Eurocentric view: as shown in Chapter 3, since the fall of the Suharto regime there has been a stronger demonstration of interest by Indonesians themselves in protecting their natural resources from over-exploitation.

Although criticism of the PHPA was common – and far more frequent in spoken discussion than in written texts – little attention has been given to the reasons why there is such a failure to attend to conservation responsibilities at both collective and individual levels, and this study was designed partly to address this question. There seem to be two principal reasons. The first is the imposition of a system of protected areas management based on the assumption of shared norms – but these norms were shared by the Northern advisors who designed the national parks system, rather than by the people they were ostensibly designed to be run by and for. As we saw in Chapter 3, the philosophy of parks management in the North is based on decades of socially-constructed attitudes to the
world's wild places, and as Indonesian society does not yet appear to share these attitudes (or at least not to the same extent), it is hardly surprising that the motivation for protecting national parks is weak at both an individual and an institutional level. The shortcomings of the system can also perhaps be ascribed, secondly, to the characteristics of Indonesian society and culture discussed in Chapter 2: a reluctance to criticise, a readiness to accept the status quo, and an emphasis on form over substance. These factors result in the neglect by civil servants of their public responsibilities and in the apparent belief that everything is fine as long as administrative structures nominally exist, regardless of whether or not they function properly on the ground.

It was noted above that the distance of senior PHPA officials from the Park was one reason for the difficulty of enforcing regulations. The other salient point regarding the location of the PHPA rayon and resort is that when these are close to the loci of tourism and related developments, there is an overwhelming temptation for PHPA personnel to become involved in tourism in order to share in some of the wealth it generates. This is particularly the case in Ngadisari/Cemoro Lawang and Wonokitri. Indeed, the enthusiasm with which staff are active in accumulating a slice of tourism income is in astonishing contrast to the general lassitude with which their overt duties are treated, as shown in the case cited above of the head of the PHPA Cemoro Lawang rayon, who owns two hotels. Such privileges are well accepted in the hierarchical society of Java, where the patronage opportunities associated with government office are considered perfectly natural, and the dereliction of public duty in favour of the pursuit of individual attainment is common at all levels of the bureaucracy. Under the Suharto regime, for example, the president's family and ministers were notorious for developing their business interests at the expense of the wider community (Schwarz, 1994; Vatikiotis, 1993), and it is generally accepted that "corruption is the prerogative of the élite" (Vatikiotis, 1993:54). This élite at local level in Bromo Tengger Semeru included the civil servants of PHPA, who apart from using their position to become involved in business ventures related to tourism, also
profit by the illicit extraction from the official system of ticket entry money (described below).

The only positive (but small) nugget which could be extracted from this situation is that at least the prospect of earning money to supplement their pitiful salaries ensured that PHPA staff in Ngadisari/Cemoro Lawang were physically present there. Their presence in the field was extended by a system of guided walks run by the rangers which was instigated by the VSO worker at Bromo, who also commented that once they were encouraged to observe their natural surroundings, their level of conservation awareness increased – although he noted that the rangers’ enthusiasm for the walks was largely because it was a way of “lining their pockets” (Fleming, 2003). However, since the mere presence of the PHPA did not appear to deter infringement of park regulations to any great extent, this point offers scant encouragement for conservation of the park’s resources, and in other parts of the park there is in any case little incentive for staff even to be present.

The discrepancy between form and substance mentioned above and in Chapter 2 is again evident in the financial arrangements for the national parks. Funding for conservation at national and provincial level comes from the central government. In 1995/96 the total budget for Bromo Tengger Semeru was supposed to be Rp.1,279,808,000 (£319,952)\(^5\), but less than sixty per cent of this money materialised (Table 5.2).

<table>
<thead>
<tr>
<th>Source of Finance</th>
<th>Amount allocated</th>
<th>Amount paid</th>
<th>%age of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Budget</td>
<td>26,300,000</td>
<td>26,253,700</td>
<td>99.80%</td>
</tr>
<tr>
<td>Overseas aid</td>
<td>670,196,000</td>
<td>128,058,521</td>
<td>19.10%</td>
</tr>
<tr>
<td>Administration</td>
<td>193,300,000</td>
<td>173,137,874</td>
<td>89.60%</td>
</tr>
<tr>
<td>Routine budget*</td>
<td>121,459,000</td>
<td>187,544,407</td>
<td>154.40%</td>
</tr>
<tr>
<td>BTS development budget</td>
<td>268,555,000</td>
<td>236,596,440</td>
<td>88.10%</td>
</tr>
<tr>
<td>Totals</td>
<td>1,279,808,000</td>
<td>751,590,942</td>
<td>58.73%</td>
</tr>
</tbody>
</table>

*The Routine Budget overspend includes salaries for extra staff.

\(^5\) An exchange rate of £1=Rp.4000 is used, i.e. the exchange rate prevailing at the time of the 1995/96 report cited (the Indonesian currency began a dramatic slide in the second half of 1997).
The major shortfall was in the amount allocated from overseas aid. It would have been interesting to find out at what stage in the allocation or transfer of funds the shortfall occurred and how the park managers coped with it, but when this question was put to the Head of the National Park he was reluctant to answer. The annual report merely states that the allocated sum was spent, without giving any explanation as to why the specified amount did not appear or how the items detailed were paid for (DepHut, 1996). As with the administrative structure, there seemed to be an acceptance that as long as figures appear in a printed document the situation was satisfactory, even though in practice the system may be failing. It is noteworthy that there is no direct linkage between revenues generated from tourism to the national parks and the budget allocated to these, unlike in some other countries, where the revenue from national parks off-sets the cost of management and even subsidises other sectors. This is the case with parks as diverse as the Fiordland National Park in New Zealand, the Tikal World Heritage Site in Guatemala, the Galapagos World Heritage Site in Ecuador, and the Amboseli National Park in Kenya (Ceballos-Lascurain, 1996). On the other hand, Indonesia is not alone in having no direct linkage between national park visitor fees and operating budgets, as shown in a study commissioned by DfID (Goodwin et al., 1997). There are implications here both for tourism and for conservation, which can be usefully illustrated by the distribution of income from Bromo Tengger Semeru.

Entry fees to Bromo Tengger Semeru generate the second highest income of any Indonesian national park, with Rp.246,299,000 (£61,575) produced in 1995/96. This sum was divided up between seven different government agencies, including the local governments of the four different kabupaten into whose administrative territory the national park falls (Table 5.3). The allocation to kabupaten is made according to the number of tickets sold at each of the four main entry points.
Table 5.3 – Allocation of park revenue (1995/96)

<table>
<thead>
<tr>
<th>Destination of Funds</th>
<th>Amount (Rp.)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Treasury</td>
<td>36,944,850</td>
<td>15.00%</td>
</tr>
<tr>
<td>Ministry of Forestry</td>
<td>36,944,850</td>
<td>15.00%</td>
</tr>
<tr>
<td>East Java government</td>
<td>73,889,700</td>
<td>30.00%</td>
</tr>
<tr>
<td>Kab. Probolinggo</td>
<td>69,623,600</td>
<td>28.27%</td>
</tr>
<tr>
<td>Kab. Pasuruan</td>
<td>27,102,000</td>
<td>11.00%</td>
</tr>
<tr>
<td>Kab. Malang</td>
<td>1,417,200</td>
<td>0.58%</td>
</tr>
<tr>
<td>Kab. Lumajang</td>
<td>376,800</td>
<td>0.15%</td>
</tr>
<tr>
<td>Total:</td>
<td>246,299,000</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Source: PHPA, 1992; DepHut, 1996a

The Ministry of Forestry allocation of 15 per cent is intended for natural resource conservation, and of the 70 per cent which goes to the local governments, 30 per cent is supposed to be ear-marked for conservation in the province and 40 per cent for general development purposes (PHPA, 1992). According to PHPA informants, the reason that park funding is not linked to revenues is because national parks are seen as a national asset and any revenue generated from them should therefore accrue to the national treasury, and because it makes the system fairer on parks which generate little or no tourism-related revenue. The final reason is that it prevents ‘empire-building’ on the part of individual heads of tourist-popular parks who might be tempted to develop tourism facilities to the detriment of conservation measures (Soebagyo, 1991; Sudarmadji, 1996). On the other hand, it gives little incentive to park directors to manage the park in a positive way to integrate tourism and conservation, while it encourages all government departments which receive money from the share-out to foster tourism development, even at the expense of conservation of the resources on which, ultimately, tourism may depend.

The distribution system for national park revenues was part of an effort during the 1990s to regulate tourism in the parks; another measure was to introduce standardised entry charges (PHPA, 1992). Before this, each national park set its own fees, within reason, and there was no national accounting system for the revenue. The visitor figures
for Bromo Tengger Semeru (Table 5.4) show that until the political and economic instability of 1998 the overall trend was upwards, but there is some inconsistency in the figures reported.

Table 5.4 - Visitors to Bromo Tengger Semeru National Park

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic</th>
<th>% of total</th>
<th>% change</th>
<th>Foreign</th>
<th>% of total</th>
<th>% change</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976/77</td>
<td>13,113</td>
<td>77.5%</td>
<td></td>
<td>3,799</td>
<td>22.5%</td>
<td></td>
<td>16,912</td>
</tr>
<tr>
<td>1990/91</td>
<td>66,539</td>
<td>72.4%</td>
<td></td>
<td>25,352</td>
<td>27.6%</td>
<td></td>
<td>91,891</td>
</tr>
<tr>
<td>1991/92</td>
<td>84,898</td>
<td>74.7%</td>
<td>27.6%</td>
<td>28,792</td>
<td>25.3%</td>
<td>13.5%</td>
<td>113,690</td>
</tr>
<tr>
<td>1992/93</td>
<td>98,728</td>
<td>74.3%</td>
<td>16.3%</td>
<td>34,113</td>
<td>25.7%</td>
<td>18.5%</td>
<td>132,841</td>
</tr>
<tr>
<td>1993/94</td>
<td>87,118</td>
<td>73.3%</td>
<td>(11.8%)</td>
<td>31,713</td>
<td>26.7%</td>
<td>(7.0%)</td>
<td>118,831</td>
</tr>
<tr>
<td>1994/95</td>
<td>88,484</td>
<td>68.5%</td>
<td>1.6%</td>
<td>40,653</td>
<td>31.5%</td>
<td>28.2%</td>
<td>129,137</td>
</tr>
<tr>
<td>1995/96</td>
<td>91,459</td>
<td>70.8%</td>
<td>3.4%</td>
<td>37,689</td>
<td>29.2%</td>
<td>(7.3%)</td>
<td>129,148</td>
</tr>
<tr>
<td>1996/97</td>
<td>138,323</td>
<td>73.6%</td>
<td>51%</td>
<td>49,561</td>
<td>26.4%</td>
<td>31.5%</td>
<td>187,884</td>
</tr>
<tr>
<td>1997/98</td>
<td>235,388</td>
<td>72.0%</td>
<td>70%</td>
<td>52,518</td>
<td>28.0%</td>
<td>5.9%</td>
<td>187,906</td>
</tr>
<tr>
<td>1998/99</td>
<td>104,723</td>
<td>80.2%</td>
<td>(55.5%)</td>
<td>25,897</td>
<td>19.8%</td>
<td>(50.7%)</td>
<td>130,620</td>
</tr>
<tr>
<td>1999/2000</td>
<td>130,801</td>
<td>92.7%</td>
<td>24.9%</td>
<td>10,334</td>
<td>7.3%</td>
<td>(60.1%)</td>
<td>141,135</td>
</tr>
</tbody>
</table>

Sources: FAO, 1977; DepHut, 1996a; DepHut, 1996b; DepHut, 2003

In 1993/94 and 1995/96, for instance, there was a drop in the official numbers of foreign visitor arrivals, whereas there was no similar decline nationally. Similarly, the drop in domestic arrivals between 1992/93 and 1993/94 contrasted with the growth of national tourism at this time, which Gunawan (1997) puts at 6 per cent per year over the decade to 1994. While the decline in the later years of the 1990s and early 2000s is more easily explained by the overall decline in Indonesian tourism due to economic and political instability, it was discovered during the research that the inconsistencies noted in the earlier figures may be because official arrivals are a considerable under-estimate of the true figure (as in the case of the Galapagos Islands, cited in Chapter 2).

This is because there were a number of ways that entry fees could be avoided by visitors to the park or that fees could be diverted by PHPA staff or tourism service
providers before reaching the government’s coffers. Some domestic visitors, for instance, had discovered routes into the park which circumvented the official PHPA entry booths, or had learned how to pass the booths without paying: in Wonokitri, a PHPA ranger reported that: "if people come on motorbikes they sometimes wait down the road until the duty officer has gone inside the guard post, and then zoom up past it" (Ari, 1997). In Ngadisari/Cemoro Lawang regular visitors had worked out how to use the back lanes to reach the touristic heart without passing the entry booth, while in Ranu Pani and Ngadas the booths were staffed too infrequently to allow consistent collection of entry fees. In Ngadas and Wonokitri barriers across the road were supposed only to be opened to permit entry once people had paid, but in practice they were kept permanently open in order not to irritate local residents, who used the roads to reach their fields, and this also allowed tourists free access. This meant that tourism was not making as large a contribution as it could to the government’s revenues. The reason for the apparently widespread evasion of fees was probably because, as described in Chapter 1, private individuals were rather free under the Suharto regime (despite the political oppression practised by this) to ignore regulations which covered civil aspects of society, and because in the absence of any government-generated conservation messages there was no reinforcement of the idea that payment of the entry fee could contribute to Indonesia’s natural heritage.

As for the scams operated by PHPA staff, one was that visitors would pay the entry fee (then Rp.2,100 per person) at the ticket booth but not receive a ticket, which meant that the money received did not have to be accounted for. In another, the drivers of the public buses charged domestic tourists Rp.3,600 for the bus ride from Probolinggo (the interchange for Bromo) to Cemoro Lawang. The normal fare was Rp.2,500, with the additional Rp.1,100 presented as the park entrance fee. Since the entry fee was in fact Rp.2,100, the passengers were happy to pay a discounted rate. The difference of Rp.1,100

6 The information on the ways of avoiding and mis-using ticket revenue came from personal observation (with Agus Wiyono in particular carrying out systematic lurking near the entry booth), from a PHPA ranger working at Ranu Pani, from the vulcanologist working at Bromo, and from tourists.
was then split between the bus driver/conductor and the ticket-booth staff – and again, no ticket was issued. Confirmation of the under-reporting of entry figures came from the visitor survey carried out as part of the research. Although this question was not asked systematically, as its significance was not realised to begin with, some tourists were asked whether they had been given a ticket on entry, and it was found that a substantial number (12.5 per cent of foreign visitors and 35.4 per cent of domestic tourists asked) had not. For example, one tourist had paid for six people and was initially given no tickets, and when he asked for them was given only five. Other scams concerned the jeeps entering the Sand Sea to drive visitors to the Bromo crater, for which jeep drivers are supposed to pay Rp.12,500, but tickets for this were observed to be rarely issued when the money changes hands. The unofficial money generated in this way is presumably split between various PHPA staff members.

As with the evasion of entry fees by domestic tourists, the diversion of fees by PHPA staff can be seen as a failure to respect the institutions of the state, but it is particularly striking as it is they who should be ensuring the prudent management of the national park for the benefit of the nation. It was shown earlier in this thesis that the discourse of sustainability is predicated on a shared desire to manage the Earth's resources for the benefit of present and future generations, but if efforts to do this are undermined at a very fundamental level, as described here, then the goals of sustainable development may be very hard to achieve.

Even given the blatant under-reporting of visitors, however, official arrivals at the park are still substantial, and more significant by far than entry revenues are the sums spent by tourists in East Java as a whole because of visiting Bromo. According to the East Java government, Bromo is the 'primadona' (sic) of its tourism attractions, being the largest

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7 An additional scam operated by bus drivers was that when they reached the ticket booth, they would claim that all passengers were local residents and therefore exempt from the entry fee, and retain the sum charged in excess of the bus fare. In the case of foreign tourists, the drivers also charged a set rate which included the entry fee, and at the entry booth under-reported the number of foreigners on board.

8 Another way of avoiding the entry fee was for a jeep driver to tell his passengers to walk a short way down the track to the Sand Sea and wait for him. The driver would pass the ticket barrier with an empty vehicle, for which no fee is payable, and pick his passengers up out of sight of the ranger.
single attraction for foreign visitors: elsewhere in the province, only Surabaya Zoo (17,656 visits) saw foreign arrivals in excess of ten thousand, compared with the 40,000 or so for Bromo (Diparda, 1996). In 1995 tourism to East Java generated foreign exchange of $173.98 million, making a major contribution to provincial revenues and illustrating the importance of Bromo Tengger Semeru at provincial level. The national tourism authority also recognises its value as a national asset because of its uniqueness and because it is the most accessible large natural attraction in the whole of Java. In many cases, it is the only natural obyek wisata (‘tourism object’) that tourists visit during their stay in Indonesia.

A discussion of tourist activity and behaviour, along with a profile of the visitors and their perceptions, will now be undertaken. There are three principal groups of tourists, and their perceptions and characteristics will be examined separately in relation to their interaction with the national park. While this case study does not pretend to be a detailed market study, the outline of the characteristics of visitors to Bromo will give an indication of how the perceptions and usage patterns of the park differ between different groups.

**Tourism Activity in Bromo Tengger Semeru**

There are very few tourism installations at Bromo Tengger Semeru other than at Cemoro Lawang, on the rim of the Tengger Caldera, where there are several hotels, an area of kiosks and seats from which people can admire the view, the PHPA-run Visitors’ Centre and, slightly lower down in the village, several shops and restaurants. There is a bus terminal served by public and chartered buses, a car-park, and a horse-park where the Tenggerese horsemen await tourists for rides to the Mount Bromo crater (Appendix 3, photos 5 and 6). With all these facilities, care has been taken so that they are ‘low rise’ and do not make a great visual impact.

The experience on which the major part of the tourism industry at Bromo Tengger Semeru is based consists of staying in Cemoro Lawang, the village nearest Mount Bromo, and rising before dawn to walk or ride across the Sand Sea to the foot of the Bromo crater, from where it is a steep climb up steps to the rim. This is traditionally visited at dawn to watch the sun rising over the dramatic landscape of the Sand Sea and the Caldera.
Large numbers of tourists also stay at Tosari or Wonokitri, which are further from Bromo so that everyone from there travels by car or motorbike. There is another viewpoint at the top of Mount Penanjakan, the highest peak on the rim of the Caldera, which is nearly always visited by vehicle. In spatial and temporal terms the tourist experience is limited, occurring principally in a four-sided area with Cemoro Lawang, the Bromo crater, Wonokitri and Mount Penanjakan as the apexes (see Map 5 in Appendix 2, showing touristic zones). Additionally, there is a small area of tourism activity centred on Ranu Pani, the base village for the three-day hike up Mount Semeru, and less important routes into the park via Ngadas and Pakis Bincil, both of which are shorter for people coming from Malang and other places to the west (as well as being a convenient way of avoiding the PHPA entry booths). Tourist literature on the area focuses almost entirely on the crater of Mount Bromo and the panoramic views of the Sand Sea and Mount Semeru, with the iconic use of sarong-cloaked Tenggerese men and their horses adding an easily-identifiable cultural stamp to the landscape.

The volume of visitors to Bromo and the probable inaccuracy of the figures has been discussed above, but assuming that the various scams and methods of under-counting entry fees are applied fairly evenly, the proportion of foreign to domestic visitors is probably more accurate than the actual volume of people. The split remained fairly constant throughout the 1990s at a ratio of around 70 domestic visitors to 30 foreigners (Table 5.4). Many of the visitor characteristics such as age and occupation are not relevant to this study and will not be discussed, but the nationality of foreign visitors is interesting in that over half (52.8 per cent) are East Asian, from Hong Kong, Taiwan, Japan and Korea (Table 5.5, overleaf). The next largest group are Europeans, North Americans, and Antipodeans (38.3 per cent). The three largest categories of tourist to Bromo Tengger Semeru, then, are domestic tourists, East Asians, and non-Asian foreigners, and the behaviour and perceptions of these groups will be discussed accordingly.
Observation of the behaviour of the East Asian visitors and experiences related by the Tenggerese showed that this group had a different travel pattern to non-Asian foreigners, showing more similarities to domestic tourists.

Table 5.5 - Nationality of visitors to Bromo 1995/96

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Numbers</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hong Kong</td>
<td>13,208</td>
<td>32.4%</td>
</tr>
<tr>
<td>Taiwan</td>
<td>6,953</td>
<td>17.1%</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>5,003</td>
<td>12.3%</td>
</tr>
<tr>
<td>Other European</td>
<td>6,464</td>
<td>15.9%</td>
</tr>
<tr>
<td>North America</td>
<td>2,131</td>
<td>5.2%</td>
</tr>
<tr>
<td>Australia/New Zealand</td>
<td>1,976</td>
<td>4.9%</td>
</tr>
<tr>
<td>ASEAN</td>
<td>1,383</td>
<td>3.4%</td>
</tr>
<tr>
<td>Japan/Korea</td>
<td>1,334</td>
<td>3.3%</td>
</tr>
<tr>
<td>Other</td>
<td>2,192</td>
<td>5.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40,644</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Dep. Kehutanan, 1996a

The main differences are in the way travel is organised, the size of group and the length of stay. Using the typology presented in Chapter 4, nearly all the Asian foreign visitors were Mass tourists, which was the case for only 8 per cent of the non-Asian foreigners who visited Bromo via Cemoro Lawang, while Indonesian tourists were generally Economy or Mass Budget tourists on a trip organised through their school, university or work-place. Bromo has a wide appeal for non-Asian foreign tourists, and these fall into several categories, principally Backpacker, Backpacker Plus and General Interest, with a few Explorers in remoter corners of the park and occasionally some Mass tour groups. Group sizes for Asian foreign visitors and domestic tourists were much larger than for non-Asian tourists, with an average of 20 for East Asian groups, 15.5 for Indonesians, and only 2.2 for non-Asians. Not infrequently some extremely large groups arrive, and facilities at Bromo are sufficient to cope with these easily as long as overnight accommodation is not required. For example, a group of 108 British people from a cruise ship was observed during
the study period, all of whom were provided with horses for the trip to the Bromo crater, and one group of over 350 Indonesian students was encountered.9

As far as length of stay was concerned, the Asian groups stayed the shortest time – around 2 hours, which is just long enough to ride a horse from Cemoro Lawang to the Bromo crater, climb to the rim, take a photograph, and return to the village. Domestic tourists stay for an average of 0.88 days, while non-Asian foreigners stay for 1.89 days.10 These differences are largely due to the method of travel, organisation and the provenance of visitors. As East Asian visitors are on highly packaged tours with efficient organisation and have only a week’s leave from work in which to visit the whole of Java, they spend less time at each attraction than any other category of visitor. Domestic tourists come from a shorter distance and over half of the respondents (56 per cent) had been there before, so they feel less inclination to stay for long as they can visit at any time. Foreign tourists are generally on longer tours of Indonesia than East Asians, with an average length of stay in Indonesia amongst those surveyed of 5.6 weeks, and so have more time available in each place than the Asian foreign visitors.

While the ‘mechanical’ aspects of tourists’ visits to the national park are important for their impact on its economy and ecology, the psychological aspects are also important for adding to the debate on recreational use of national parks. It was interesting, therefore, to compare the motivations of foreign and domestic visitors to Bromo Tengger Semeru, their behaviour while at the park, and their attitudes to and perceptions of the park. The differences between the three major groups in terms of these aspects will now be discussed, taking the domestic visitors first, followed by non-Asian foreign tourists and finally the East Asians. The greatest space will be devoted to a discussion of domestic tourists, because this group has been substantially neglected in previous studies of tourism and because it is the

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9 Groups of this size were excluded from the calculation of average group sizes as it was felt that they would have skewed the figures.

10 This does not include visitors to Ranu Pani, who all stay for a minimum of three days as this is the length of time required to climb Mt. Semeru.
opinions and actions of Indonesians towards natural resources such as Bromo Tengger Semeru which will influence their long-term protection.

To consider the Indonesian visitors first, then, the reasons cited by this group for visiting Bromo and their activities while there were almost entirely recreational (Table 5.6).

Table 5.6 – Motivation for Visit to Bromo Tengger Semeru (Domestic Visitors)

<table>
<thead>
<tr>
<th>Reason for Visit</th>
<th>No. of comments</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreation</td>
<td>30</td>
<td>25%</td>
</tr>
<tr>
<td>To enjoy the view/nature</td>
<td>21</td>
<td>17.6%</td>
</tr>
<tr>
<td>Sight-seeing</td>
<td>21</td>
<td>17.6%</td>
</tr>
<tr>
<td>Relaxation</td>
<td>9</td>
<td>7.5%</td>
</tr>
<tr>
<td>Study or observation</td>
<td>9</td>
<td>7.5%</td>
</tr>
<tr>
<td>Camping</td>
<td>7</td>
<td>6%</td>
</tr>
<tr>
<td>To see the dawn</td>
<td>7</td>
<td>6%</td>
</tr>
<tr>
<td>To take photos</td>
<td>4</td>
<td>3.5%</td>
</tr>
<tr>
<td>To feel closer to God</td>
<td>3</td>
<td>2.5%</td>
</tr>
<tr>
<td>To ride on a horse</td>
<td>3</td>
<td>2.5%</td>
</tr>
<tr>
<td>To practise English</td>
<td>2</td>
<td>1.7%</td>
</tr>
<tr>
<td>For the cool air</td>
<td>1</td>
<td>0.8%</td>
</tr>
<tr>
<td>For the peace</td>
<td>1</td>
<td>0.8%</td>
</tr>
<tr>
<td>For the motorbikes</td>
<td>1</td>
<td>0.8%</td>
</tr>
<tr>
<td>**Total:</td>
<td><strong>119</strong></td>
<td></td>
</tr>
</tbody>
</table>

Many respondents simply cited 'recreation' (rekreasi) generally as their main purpose of visit, with others mentioning related aspects such as sight-seeing, looking at the view, and enjoying nature. Some Indonesian comments on the reason for coming to Bromo revealed an admiration for the wonder of God's creation, with remarks such as melihat kekuasaan Allah ('to see the power of God'), menikmati dan mengamati keindahan alam ciptaan Allah ('to enjoy and gaze upon the beauty of nature, the creation of God'). This supports the point made earlier in this chapter, that the appeal of Bromo to the visual and spiritual senses is common to both Northerners and Indonesians. The overwhelming impression gained from interviews and observation was that people simply enjoyed the fresh air, the views, and being with friends and family in a pleasant place.
Only 46 per cent of Indonesian visitors went to the crater rim of Mt. Bromo (predominantly people who had not been there before), although many people did spend a lot of time simply 'consuming' Bromo by admiring the view from Cemoro Lawang. The method of consumption was, on the whole, rather passive and limited to the rather formulaic pattern described at the beginning of this section; during the survey at Ngadisari/Cemoro Lawang, no groups were encountered who deviated from this, although at Ranu Pani several small groups of young, single Indonesian workers or students (all male) were met who were cycling or hiking around the area, either with the intention of climbing Mount Semeru or simply as a holiday from the lowlands. One of these people said that he preferred not to go in a big group because “it’s a hassle” (Rahmat, 1996), while a middle-aged, educated visitor to Ranu Pani, who had been going there for almost 30 years, had noticed both an explosion and diversification of tourism in the last few years, with more small groups now arriving alongside the larger ones (Bambang Suryo, 1996). This was further confirmed by observation of and interviews with domestic tourists at Wonokitri, most of whom arrived in family groups or as small groups of friends.

Amongst visitors to Cemoro Lawang there seemed little interest in a more active way of enjoying Bromo, as confirmed by responses to the visitor survey on what was disliked about the place (Table 5.7).

**Table 5.7 – Dislikes about Bromo Tengger Semeru (Domestic Visitors)**

<table>
<thead>
<tr>
<th>Dislikes</th>
<th>No. of comments</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smell of horse manure</td>
<td>18</td>
<td>17.3%</td>
</tr>
<tr>
<td>Litter</td>
<td>14</td>
<td>13.5%</td>
</tr>
<tr>
<td>Lack of WC's</td>
<td>13</td>
<td>12.5%</td>
</tr>
<tr>
<td>Lack of transport to the crater &amp; facilities there</td>
<td>12</td>
<td>11.5%</td>
</tr>
<tr>
<td>Weather</td>
<td>11</td>
<td>10.5%</td>
</tr>
<tr>
<td>Lack of water</td>
<td>10</td>
<td>9.6%</td>
</tr>
<tr>
<td>Expense</td>
<td>8</td>
<td>7.7%</td>
</tr>
<tr>
<td>Poor facilities at Cemoro Lawang</td>
<td>7</td>
<td>6.7%</td>
</tr>
<tr>
<td>General hassles</td>
<td>7</td>
<td>6.7%</td>
</tr>
<tr>
<td>Lack of information or guides</td>
<td>3</td>
<td>2.9%</td>
</tr>
<tr>
<td>Vehicles in the Sand Sea</td>
<td>1</td>
<td>0.09%</td>
</tr>
<tr>
<td>Total:</td>
<td>104</td>
<td></td>
</tr>
</tbody>
</table>
The greatest number of comments (17.3 per cent) concerned the smell of horse manure, while smaller numbers commented on the litter (13.5 per cent) and the lack of WCs (12.5 per cent) and water (9.6 per cent). Over one-tenth of visitors (11.5 per cent) commented on the lack of cheap ways of reaching the Mount Bromo crater itself (other than on foot) and the lack of facilities there, while a far smaller number (2.9 per cent) remarked on the shortage of information about the park and the lack of guides. This finding seems to support the point made in Chapter 3, that taman nasional are not distinguished from other, more artificial, types of taman such as amusement parks or urban parks and that they are viewed principally as places for relaxation and general leisure, with concomitant expectations of amenities.

Similarly, when asked about the functions of national parks, there was a rather low level of awareness (Table 5.8).

<table>
<thead>
<tr>
<th>Topic of comment</th>
<th>No. of comments</th>
<th>%age of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation of nature/environment</td>
<td>51</td>
<td>44.7%</td>
</tr>
<tr>
<td>Recreation/tourism/relaxation</td>
<td>29</td>
<td>25.4%</td>
</tr>
<tr>
<td>Education</td>
<td>13</td>
<td>11.4%</td>
</tr>
<tr>
<td>Protection of archaeology or culture</td>
<td>11</td>
<td>9.6%</td>
</tr>
<tr>
<td>To attract foreigners and increase foreign earnings</td>
<td>5</td>
<td>4.4%</td>
</tr>
<tr>
<td>National pride</td>
<td>1</td>
<td>0.9%</td>
</tr>
<tr>
<td>Didn't know</td>
<td>4</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

Nine respondents did not answer the question, while four said that they did not know. From the remaining respondents there were 114 comments. The largest number (44.7 per cent) concerned environmental or conservation aspects, but given that conservation is in fact the primary function of a national park it was notable that this was less than half the total number, while a quarter of comments (25 per cent) concerned the recreational facilities offered by parks, and just over one-tenth (11.5 per cent) cited educational functions of various kinds. Just under a tenth of comments (9.6 per cent) were to the effect that the park was to protect cultural elements or archaeological finds. Five people (4.4 per cent of comments) thought the park was to attract foreigners, while one person remarked that it
enhanced Indonesia's national pride. The findings echo the conclusions reached by Sensudi (1997) in his investigation into tourism in Gede Pangrango National Park and mentioned in Chapter 3, that Indonesian tourists tend to be unclear about the conservation functions of national parks. The Bromo survey was, of course, carried out before the new climate of openness in Indonesia which, as also mentioned in Chapter 3, has given rise to some negative media reports on national parks as conflicts over resources become more prominent: it is possible that this will influence people's views on national parks.

As a related question, respondents were also asked if they had visited other national parks, and if so, which ones. Of the 93 people who answered this question, 35.5 per cent had never visited another park, while 64.5 per cent said they had. However, the places cited as national parks were often incorrect, with only just over half (55 per cent) of those who said they had visited another national park giving examples which actually are parks, while 43 per cent mentioned places which are not, such as botanical gardens or theme parks.

Taken together, these findings are significant in that they reinforce the suggestion made in Chapter 3, that the national park system is a Northern concept imposed on Indonesia which, in the absence of a campaign designed to raise public awareness about them, has failed to penetrate far into the national consciousness. This point is particularly striking given that the people amongst whom the survey was carried out were a self-selecting group who had chosen to visit Bromo, rather than a representative cross-section of the community as a whole, and so awareness of the national park and its functions could be expected to be higher amongst this group than among the general public. Even though one must be wary of drawing too many conclusions from a survey carried out amongst a relatively small group of people or of making a direct link between weak appreciation of national parks and the degradation of Indonesia's natural resources, this finding has implications for conservation in that without support from the opinion-forming and professional classes for conservation-orientated policies, it is unlikely that Indonesia's natural resources can be sustainably managed. As discussed in Chapter 1, reports on the management of forests and other resources indicate that destruction has increased since the
Suharto regime fell in 1998 (even though under the presidency of Megawati Soekarnoputri there are some indications of a greater willingness to enforce environmental legislation). Yet without strong leadership or public support, the 'top-down' conservation structures established under the centralised, neoclassical planning of the Suharto era are simply too weak to prevent over-exploitation of natural resources.

Having said this, the fact that nearly 45 per cent of respondents did see the park's function as conservation-related can be seen as a positive sign, along with the fact that, as shown in Chapter 3, there are now indigenous movements which aim for the preservation of fauna and flora. These points do, perhaps, indicate a growing conservation awareness. Visitors' responses at Bromo also demonstrated an element of the more self-conscious enjoyment of nature anticipated by Northern users of national parks: for instance a young visitor interviewed at Ranu Pani said "I was first attracted to nature by a feeling within myself; Surabaya is no longer a natural environment, and I wanted to get back to nature". He then declared *Langit itu atapku, alam itu rumahku* ('The sky is my roof, nature is my house') (Atan, 1996), a type of romantic sentiment not uncommon amongst urban visitors to natural environments in Indonesia and which may, perhaps, be seen as a parallel to the romantic nostalgia which enthused early advocates of national parks in the US and elsewhere.

The findings of the domestic visitor survey at Bromo will now be discussed in relation to domestic tourism in Indonesia generally. First, it must be noted that far less research has been done in most parts of the world on domestic tourism than international tourism (Cooper et al., 1993), a fact borne out in Indonesia, where there are fewer statistics on domestic than on international tourism. Studies of tourism often focus on the international aspects because of its importance for foreign exchange revenues, and yet domestic tourism is also extremely important. Indonesian government policy towards domestic tourism has always been whole-

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11 For example: "I would prefer to have my habitat in this beautiful part of the world, where time seems to have stopped in reverence of nature, and sorrows too seem to evaporate, together with the morning mist, away to the blue sky above" (comment by Tjandra P Mualim in the visitors' book of a guesthouse by a lake in Central Sulawesi, 1994).
heartedly positive: it has been promoted as a way of fostering national integration, of redistributing income from urban to rural areas, and of discouraging people from travelling abroad to spend their disposable income (Spillane, 1987; Hadmoko, 1998). In the wake of the 2002 Bali bombing which caused a severe decline in tourism to Indonesia, it has also been seen as a way of supporting the tourism infrastructure (Handoyo, 2002; Sukamdani, 2003).

It has already been seen that there were up to three times as many domestic tourists to Bromo Tengger Semeru as foreign visitors each year during the 1990s, while at other attractions in East Java the proportion of domestic to foreign visitors was even greater (Diparda, 1996) – a pattern repeated throughout Indonesia. Indications of the growth of domestic tourism can be gleaned from various facts: domestic visitors to Bromo increased by 350 per cent over the seven-year period 1991-1998; hotel-nights by domestic tourists increased from 15.5 million in 1985 to 25.5 million in 1994 (Gunawan, 1997); and in 1997 even Bali, for so long the ‘engine’ of international tourism to Indonesia, received as many domestic tourists as foreigners for the first time, at 1.6 million (Eklöf, 1998). In 2001, domestic tourists were estimated to number 133.45 million, compared with just over 5 million foreign tourists (Sukamdani, 2003). The scale of Indonesian domestic tourism is likely to increase as Indonesia’s middle-class becomes larger (Faulkner, 1997), as is the differential between foreigners and domestic visitors, particularly if foreign arrivals take time to recover from current international political uncertainties. Indonesia is not alone in this trend: domestic tourism in some other developing countries is growing much faster than international tourism, especially in Asian countries with a large and fast-growing middle-class such as India, China and other Far Eastern nations (Ratnapala, 1994; Eklöf, 1998; Jones, 2002).

There are several important features of domestic tourism relevant to tourism in national parks. One is that, according to Gunawan (1996), most domestic travellers are reluctant to visit ‘new’ places - they tend to re-visit places which are already familiar or to rely on word-of-mouth recommendations, while most leisure trips are made within a 2-3
hour radius of home. This was confirmed by the Bromo survey which showed that 56 per cent of domestic tourists had been there at least once before and that 88 per cent came from towns within a two-hour drive of the park. Another important point is that although 40 per cent of leisure trips are made to visit friends and relations (Gunawan, 1996), including the vast movement of people to visit their home villages (*pulang kampung*) for the Idul Fitri celebrations at the end of Ramadhan, personal observation of younger Indonesian friends and acquaintances suggests that some people no longer *pulang kampung* because of distance, cost, or disinclination to take part in the ritual feasting and mutual visiting of neighbours and the extended family that the occasion involves. Such people may take the opportunity of a few days' break to go to nearby attractions with the nuclear family or in a group of friends, and all attractions experience a surge of visitors during Idul Fitri or at other extended holidays. The New Year of 2003, for instance, was welcomed in by large numbers of people at Mount Bromo, despite rain, cloud and cold temperatures (*Kompas*, 2003). As will be shown in Chapter 7 when the involvement of the Tenggerese in tourism is considered, periods such as this offer significant opportunities for earning large sums over a short period.

Some of the other characteristics of domestic tourism relevant to Indonesian national parks were mentioned in Chapter 3 when the example of Bohorok was described and were confirmed by observation at Mount Bromo. Principally, people have a tendency to enjoy leisure time in large groups, as shown by the large Mass Budget groups. The most visited attractions are theme parks and beaches, with historical sites and zoos also popular (Gunawan, 1996), and Gunawan also reports that urban dwellers in particular appreciate areas of natural beauty. The growth in domestic tourism is evident at natural attractions too with, again, domestic tourists vastly outnumbering foreigners. For example Sensudi (1997) found an average ratio of domestic to foreign visitors of 28:1 for Gunung Gede National Park, in West Java, from 1991/92-1995/96, and Taufikurahman (1997) found average ratios of 8:1 for Tangkubahan Perahu (a volcano in West Java) for the three years 1992-1994, and 26:1 for the Ciater Hot Springs (also in West Java) for the same period. Gelbert (1998) also
indicated a ratio of 10:1 for visitors to Bohorok (the orang-utan centre in Sumatra given as an example of uncontrolled tourism growth in Chapter 3). However, Gunawan (1996) again reports that domestic visitors make little distinction between national parks and other leisure attractions, enjoying facilities such as fairground rides and restaurants while there. This echoes the findings of Backhaus (2001), reviewed in Chapter 3, that domestic tourists to national parks in Malaysia require more 'leisure' type amenities in comparison to Western visitors, who are seeking a more authentic wilderness experience.

The significance for Bromo Tengger Semeru and other national parks of these features of domestic tourism is three-fold. First, domestic tourism is on a very large scale and therefore demands substantial installations in terms of amenity provision. Secondly, extensive and reasonably diverse amenities are also necessary because although domestic tourists enjoy nature, they do not necessarily do so in a self-conscious, knowledge-seeking way and prefer facilities conducive to communal recreation. The third and related point is that Economy and Mass Budget tourism may be evolving into Economy Plus and Family & Incentive tourism, and the facilities required by these groups may offer new opportunities for both the government authorities and local entrepreneurs to diversify the current product. The danger is, of course, that outside entrepreneurs may move in to provide the more sophisticated services a changing market requires, which may result in the marginalisation of local people in the way predicted by the TALC process. This may depend on the characteristics of local participation in tourism, and while this will be examined in Chapter 7, at this point the experiences of foreign visitors will be examined, taking non-Asian visitors first.

As mentioned above, non-Asian foreign tourists stay in the national park for longer than Indonesians and more of them go to the Bromo crater rim to watch the sunrise, an experience which forms part of the standard cultural capital of an overland tour of Java. As far as perceptions of the national park were concerned, the survey of non-Asian foreign tourists showed a greater awareness of the conservation purpose of national parks than demonstrated by Indonesian visitors, together with an orientation towards a more active
form of enjoyment. This was hardly surprising, given that the visitors interviewed were, again, a self-selecting sample who could be expected to have some pre-conceptions of Bromo Tengger Semeru and that the majority came from Northern countries where, as noted, the concept of national parks is well-established. When these visitors were asked about their motivation for visiting Bromo and their activities while there, they generally cited some fairly targeted points or activities. For instance, over half the visitors (55.4 per cent) went hiking, while over a third (38.4 per cent) had come to see an active volcano (Table 5.9). There was a clear appreciation of the attractiveness of the area, while the high numbers who were interested in active recreation (all foreign visitors interviewed walked or rode to the crater) reflects the popularity of these activities in the country of origin of the visitors, as well as the fact that this was likely to be their first and only visit to the area.

<table>
<thead>
<tr>
<th>Reason for Visit</th>
<th>No. of comments</th>
<th>%age of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>To go hiking</td>
<td>36</td>
<td>55.4%</td>
</tr>
<tr>
<td>To see a volcano</td>
<td>25</td>
<td>38.4%</td>
</tr>
<tr>
<td>To ride to Bromo</td>
<td>9</td>
<td>13.8%</td>
</tr>
<tr>
<td>Because it's beautiful</td>
<td>6</td>
<td>9.2%</td>
</tr>
<tr>
<td>To see the dawn</td>
<td>4</td>
<td>6.1%</td>
</tr>
<tr>
<td>To take photos or paint</td>
<td>3</td>
<td>4.6%</td>
</tr>
<tr>
<td>To enjoy the cool air</td>
<td>3</td>
<td>4.6%</td>
</tr>
<tr>
<td><strong>Total of comments:</strong></td>
<td><strong>86</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total respondents:</strong></td>
<td><strong>65</strong></td>
<td></td>
</tr>
</tbody>
</table>

To assess how foreign visitors perceived national parks, they were asked what the words ‘national park’ meant to them. The greatest number of comments (57 per cent, or 56 out of 99) focussed on the protection of nature and the environment, while 15 per cent thought that tourism should be permitted, but that it should be controlled. 28 per cent of respondents suggested words such as ‘tranquillity’, ‘inspiring’, and ‘beautiful’ as part of their image of a national park. The majority of respondents (87.5 per cent) knew that Bromo was part of a national park, but only 41 per cent thought that it fitted with their image of a national park, and this was because of the beautiful scenery and the tranquillity. Almost as
many (37.5 per cent) thought that it did not fit their image because of the litter, commercialisation, lack of information and crowding. The remainder (21.5 per cent) had no opinion either way. Significantly, a third of visitors (32 per cent) would like to have seen more information on the park or more trails. This is in contrast with the reactions of the Indonesian visitors noted above, only 2.9 per cent of whom commented on the lack of information or guides.

In summary, therefore, the survey findings point to a desire for a more active enjoyment of a natural area by Northerners in comparison to the majority of Indonesian visitors, who appeared to consume Bromo in a more passive way. Although it is important to note that a direct comparison cannot be made between the motivation of Indonesian visitors, for most of whom Bromo constitutes a day-trip, and foreign visitors, who have invested a considerable amount of time and money in making a long trip to the region, the comparison is thrown into sharper relief by consideration of the third important group of tourists: the Asian foreign visitors. While, as noted in Chapter 4, it was not possible to carry out many individual interviews with the East Asian tourists because of the language barrier and their short stay at Bromo, interviews with tour operators and guides and with local people, as well as observation, allowed a few useful conclusions to be drawn.

A principal difference between the East Asians and other tourists is that, while most people time their visit to reach the crater rim of Mount Bromo or Mount Penanjakan at dawn, an increasing number of East Asians arrive in Cemoro Lawang in the late afternoon because of the constraints of their rapid tour around Java, with some even arriving in the evening and visiting the crater in complete darkness. According to the tour guides and horsemen, the horse-ride to the crater and the sight of a live volcano (even by torchlight) form the highlight of the week-long tour to Indonesia and are the essential element that these tourists wish to consume, while the panoramic view, which for domestic tourists and non-Asian foreigners is of primary importance, is of secondary significance (Amir Moeliono, 1997; Ho Pei Jung, 1997; Pujiadi, 1997). All the East Asian groups depart immediately after their visit to the crater.
What, then, is the significance of the behaviour of the different groups of tourists for the national park? The simple answer is 'not much at present', because the success of the existing pattern of tourism means that little attempt has been made by the local government or tour operators to diversify the Bromo product or to target different groups by presenting it in different ways. As discussed in Chapter 2, there has been some attempt generally in Indonesia to diversify into products other than beach tourism, but awareness of the needs of foreign nature tourists is weak, largely because of the absence of a shared understanding of what is required. This was exemplified in the conflict between the needs of domestic and foreign tourists at Bohorok, as described in Chapter 3. One of the interesting things about Mount Bromo, however, is that it provides a useful overlap between nature and cultural tourism because of the legends and the colourful Hindu rituals associated with it, and because Mount Semeru is significant in Javanese mythology as the seat of the gods.\[12\] What is remarkable here is that the most important elements of the tourist experience – the panoramic view, seeing a live volcano, the trip to the crater – are largely the same for domestic, East Asian, and Northern tourists, and yet the way these elements are consumed is completely different. While the East Asians arrive in a highly packaged tour group and spend the minimum time possible at Bromo, the foreign visitors take a more leisurely approach, staying for longer in order to absorb it more fully. Meanwhile, for most domestic visitors the trip is no more than an easy excursion, while active volcanoes are a fairly unremarkable element of the cultural and physical topography familiar to the Javanese.

The existing facilities, too, help the different groups use and perceive the park in different ways. For domestic Economy, Mass Budget and Family & Incentive tourists Bromo has some of the familiar accoutrements of urban parks, with food and souvenir stalls and convenient public transport, while for the more adventurous Economy Plus tourists it offers the possibility of wandering off in small groups to enjoy the more self-conscious

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\[12\] The continuing significance of this belief was demonstrated by a Tenggerese respondent, who reported that when it had been tried to introduce wayang kulit (Javanese shadow-puppetry) to his village, the gods were angry with the performance because it was too close to their seat (Mount Semeru), and had shown their displeasure by a major eruption of the volcano (Matas, 1997).
encounter with nature that seems to be increasingly common. Meanwhile, for foreign tourists it also offers a breadth of attractions: Budget tourists can visit cheaply and stay in the type of guesthouse familiar from elsewhere in South East Asia, while there are also more upmarket facilities suitable for Backpacker Plus and General Interest tourists, and the service providers can even cope with the frequent arrivals of Mass tour groups.

The perception of the different groups will also be shaped by the kind of interpretative or communicative staging discussed in Chapters 2 and 3, since marketing information on Mount Bromo is nearly always presented in terms of the mystery and legends surrounding the crater. The preconceived notions which many people will therefore hold when they arrive at Bromo may not always be dispelled by reality, since – again as noted in Chapter 2 – tourists are predisposed to enjoy the best of what the destination has to offer. The findings of the visitors' survey show that for many people, especially non-Asian foreign visitors, a brief acquaintance with Bromo Tengger Semeru convinced them that it approximated to their idea of what a national park should be. Even though over a third of people felt that aspects of their experience were incompatible with their expectations of a national park, in-depth interviews with some of these respondents revealed that even they assumed that it was only the superficial elements of park protection which needed improvement, while the more fundamental aspects of environmental protection were presumed to be in place. This echoes the point made in Chapter 3 about communicative staging and authenticity in national parks: if the 'signs' of a true park are in place, its underlying features will be believed to be genuine too, especially when the people presented with the situation are tourists inclined to accept an apparently favourable situation at face value rather than to indulge in a critical investigation.

As discussed earlier in this chapter, however, the reality of the situation is that the management of the park is in fact extremely poor, to the extent that its resources are in jeopardy.

So far, then, the prospects for sustainable tourism at Bromo Tengger Semeru look rather bleak. As noted above when the characteristics of domestic tourists were discussed, there seems to be little awareness by the authorities of differences between the three
principal market segments - let alone the categories within these segments - or measures which need to be taken to ensure their continuing arrival, and yet this awareness is essential to the long-term viability of tourism to Bromo. As at Bohorok, the different categories are catered to by spontaneous responses in service provision (an aspect which will be examined in Chapter 7), but opportunities for maximising the benefits of tourism are being missed. Tourism via Ngadisari/Cemoro Lawang has been facilitated to some extent by better service infrastructure such as the construction of a better road to the top village and connecting the village to mains electricity, while the main secondary route via Wonokitri was facilitated by communal enterprise on the part of the villagers (a feature which will again be discussed in Chapter 7), but there appears to have been very little input by any agency into conservation of the national park in terms of better protection for its wildlife. This is significant because, as shown in Chapters 1 and 2, market forces alone are unlikely to incorporate the wider social and environmental considerations of sustainability: some form of supporting regulation or incentive is also necessary.

A related opportunity is being missed by the authorities to convert the high level of domestic interest in Bromo into a wider level of support for national parks and nature conservation. Since Bromo is one of the most popular parks in Indonesia, an ideal scenario presents itself here to generate more awareness of conservation – and of the function of national parks in particular. As it is, the interaction of PHPA with the visitors is limited to relieving them of some money, while the Visitors' Centre remains under-resourced and frequently closed, and no clear attempts are made to inform visitors of the wider, non-touristic functions of the park.

On the more positive side, there are signs that things are changing. The fact that Indonesian visitors come to Bromo to enjoy its natural beauty and that nearly half of them are aware of its conservation functions is encouraging, and in Indonesia at large the move towards campaigning on issues directly related to the preservation of flora and fauna is a positive indication that there is greater interest in protecting biodiversity. Another encouraging sign is that in 2003 the Bromo national park authorities announced that they
were introducing some interpretative facilities at Bromo in the form of nature trails and
specialist guides (Kompas, 2003b). Without wishing to indulge in speculative flights of
fancy, it is possible that these moves are part of a growing awareness throughout the country
of the need to conserve natural resources.

The Ecological impacts of Tourism

An important element of the physical and administrative interaction between the
national park and the tourists is the effect of tourism on the ecology of the national park.
Numerous studies (mentioned in Chapter 2) attest to the damaging effects that tourism can
have on the environment. While these studies provided a good general background to the
environmental problems tourism can cause, it was not, unfortunately, possible to enhance
this knowledge with much specific information about Bromo because a full ecological
survey was beyond the scope of this study (and my own capabilities), and because no
ecological survey of Bromo Tengger Semeru was found other than those carried out by the
WWF/FAO programme in the 1970s. Although several undergraduate studies had been
made more recently on the impacts of tourism in the park, their findings tended to be rather
superficial and limited to comments on trampling of vegetation, litter, and the graffiti
scrawled on rocks and trees (Imelda, 1996; Nani Alza, 1996; Noor, 1996; Ruslan, 1995;
Waloyo Jati, 1995). None mentioned the effect of the frequent volcanic eruptions on the
vegetation. An MSc dissertation did contain useful information in its references to other
ecological studies, however (Sutito, 1994). In the absence of detailed surveys, observation of
the area affected by tourism and of the activities of tourists and a comparison of photographs
taken in 1983 and 1997 were used to draw tentative conclusions about the ecological impact
of tourism on the national park (while bearing in mind other possible causes). It was found
that the effects fell into three main categories: impacts which could be directly attributed to
tourism, impacts due indirectly to tourism, and the induced effects of tourism.13

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13 The impacts discussed in this section relate only to the area around Mount Bromo, since in the other
places where there is a small amount of tourism there appear to be few impacts directly related to
tourism, other than litter at the camping grounds and on the trails on the way up to Mount Semeru.
As far as the direct effects were concerned, there was certainly trampling of vegetation in the Sand Sea along the path to Mount Bromo, as noted by the students Imelda (1996), Noor (1996) and Ruslan (1995), but this is limited in extent as most visitors tend to keep to the path, whether on foot or on horse-back, and the vegetation of the Caldera floor to the north of Mount Bromo is anyway rather sparse. The Sand Sea and the two volcanoes in the centre are formed of unstable, sandy volcanic soils (Keys, 1991, cited in Sutito, 1994), and there is erosion around the paths, but as there is also erosion caused by wind and rain in areas where tourists are infrequent it was not possible to conclude that tourist-related damage was very great. Damage is certainly caused by jeeps and motor-bikes in the Sand Sea, particularly by off-road driving, with a vehicle track between Cemoro Lawang, Mount Bromo and the road to Wonokitri/Penanjakan now obvious, whereas in the 1983 photograph this was much less evident (Appendix 3, photos 3 and 4). However, the impact is probably more aesthetic than ecological as, again, the vehicles tend to stay on the same tracks, and traffic circulation is limited almost entirely to a four-hour ‘window’ on either side of sunrise, between 4 am and 8 am. The impact of the litter — mentioned in the undergraduate reports and commented on as a ‘dislike’ by the visitors — is, again, probably more significant aesthetically than ecologically.

A more significant problem is the collection and sale of the ‘everlasting’ flowers of the Javan Edelweiss, Anaphalis javanica, a mountain plant popular with domestic visitors, who consider it lucky. If left undisturbed, the edelweiss can reach several metres in height, making an impressive sight. It can withstand a certain amount of harvesting and propagates easily, but this has not been done since Dutch times and the plant is now becoming rare (Whitten et al, 1996). The main cause of its decline is over-collecting, with flowers collected from the slopes of Mount Batok (the peak next to Mount Bromo) and from other mountains within the national park. Collectors relate that it is becoming harder to find (Suwastono, 1997), but even though it is a protected species under Indonesian law it is collected and sold quite openly, with park rangers ignoring the trade and even seen during the study to direct tourists to places where they could buy it. The trade is by no means
confined to Bromo Tengger Semeru, as the edelweiss is collected from other
mountainous areas too; however the high levels of visitors to Bromo is undoubtedly
contributing to its over-exploitation, and the willingness of the villagers to collect it for sale
seems to indicate a lack of interest in preserving the integrity of the national park’s
ecosystem, despite the importance of the park to the local economy.

This is also the case with the principal indirect environmental effect of tourism, which
is the harvesting of grass for the horses used to provide rides across the Sand Sea. Most of
the grass is collected in the grasslands bordering the Sand Sea and on the walls of the
Caldera. There is also periodic burning of the grass to encourage new growth. The
combined effect of the burning and grass collection is to prevent natural vegetative
succession, whereby bushes and eventually trees might be expected to take over from the
predominant graminaceous forms. There is not a straightforward negative effect here,
however, since the grass-cutting helps to maintain the sweeping, open landscape so
attractive to tourists, and in any case it probably has a less significant impact on the
vegetation than volcanic eruptions, which are frequent enough to require constant
monitoring by an on-site vulcanologist.

The other noticeable indirect impact of tourism is the increased litter in Ngadisari
resulting from the higher disposable income of the villagers and from the visitors. Waste
packaging from household goods was observed in litter dumps down the Caldera wall at
Cemoro Lawang, and there is considerable litter around some of the hotels. This is despite
the fact that Ngadisari is the only village out of the five studied to have an organised rubbish
collection. If not addressed, this problem will probably have more serious impacts in the
future as more litter accumulates, as harmful substances could seep from the waste into the
ground water and wildlife could be damaged by items such as broken glass. Whereas in
lowland Java waste rots down rather quickly because of the heat and humidity, this process
is slower at the cooler temperatures of the Tengger massif. At the same time, the problem of
waste cannot yet be said to be of overwhelming significance.
Of the induced environmental effects of tourism, ownership of motorcycles and jeeps in Ngadisari and Wonokitri is perhaps the most noticeable, with vehicles purchased both because of increasing disposable income and for use in tourism (as will be discussed in Chapter 7). As tourism grew until the late 1990s, the traffic in the Sand Sea increased in parallel since for cultural reasons (mainly pressure from jeep drivers) the PHPA was unable to implement regulations intended to prevent vehicles driving to Mount Bromo and crossing the Sand Sea to access Mount Penanjakan (Jatung, 1997; Syafi'i, 1997; Sutito, 1994). On the other hand, the vehicles are also used to facilitate work and ceremonial practices and because of family ties between the Tengger villages, with the Sand Sea used as a thoroughfare because it offers a more direct route between some of the villages than the roads around the outside. Local people also use vehicles to visit the sacred sites within the Caldera for devotional reasons, including Mount Bromo itself, a large Hindu temple at the foot of Mount Batok and a holy cave on Mount Widodaren. These journeys were formerly accomplished on foot or on horse-back. Although vehicular traffic in the Sand Sea is therefore not entirely due to transporting tourists but also to the increasing prosperity of the Tenggerese, this itself is due in part to tourism, as will be shown; and although a quantitative survey of vehicle movements in the Sand Sea was not carried out, it was clear from observation that tourism-related traffic was far higher than non-tourism traffic.

The ecological impacts of tourism are only one aspect of the complex interplay of relationships between the different stakeholders in Bromo Tengger Semeru. In terms of the sustainability of tourism and the sustainable management of the park generally, these impacts are probably rather insignificant compared with other threats to the ecological integrity of the park, as will be seen in the next chapter when the interaction of the Tenggerese with the park is considered. Before this, the implications of the way the park is managed by the PHPA for conservation and for tourism will be considered.

A Microcosm of Conflicts

In this chapter, one aspect of the interface between stakeholders in tourism at Bromo Tengger Semeru has been discussed: the interaction of the tourists and the national
park, with the park considered both from the point of view of its ecology and through its representatives, the PHPA. Although it was concluded that the ecological impacts of tourism are fairly minor, given the spatial limitation of tourism and the fairly robust ecology of the area of tourist utilisation, it is already clear that the long-term potential for sustainable tourism at the park is in doubt, even in terms of soft sustainability. The greatest threat comes from the failure to steer tourism along a course of best practice, which is largely due to cultural norms towards resource management.

In most Northern countries, it is assumed that a civil service free of corruption or bias will administer the state's assets for the good of the nation and as directed by government policy. In Indonesia, on the other hand, the struggle between private and public interest often results in a victory for the former, at the expense of considerable costs to society. So, for instance, it is common practice for civil servants to be involved in misappropriating funds. A recent report by the World Commission on Forests and Sustainable Development found that “the most readily perceived problem in the forest sector – most prevalent and most blatant – but the one least discussed in the literature and in national or international fora on forests is the existence of corrupt practices” (WCFSD, 1999). Although the report concerned forest resources globally, other studies have confirmed the significance of corruption in natural resource management in Indonesia (RePProt, 1990; TI/EIA, 1999). At Bromo Tengger Semeru, this takes the form of civil servants channelling some of the substantial flow of tourism revenues into their own pockets. It would be unrealistic to assume, too, that this tributary of illicit funds was benefiting just the few staff based in the national park. It was rumoured that one man in particular paid large sums of money to his superiors in order to avoid a routine transfer to another park, which would have removed him from his lucrative sidelines, and it is not unreasonably speculative to imagine that the resourcefulness shown by staff on the ground is also demonstrated by people further up the hierarchy.

The determination to gain from tourism as individuals can be explained in part by the lack of good governance arrangements in Indonesia, with the high degree of social
insecurity resulting in people being forced to squeeze a living wherever they can because they cannot trust the government to guarantee one on their behalf. As van Latesteijn and Schoonenboom (1996) say, confidence in the secure provision of basic essentials such as food is a pre-condition to sustainable development; without it, people can only focus on their short-term needs. In the case of PHPA, for instance, rangers are regularly paid several months in arrears (Yono, 1996), and it is difficult to criticise such people for siphoning off a percentage of the tourism wealth into their own pockets. At least some of the tourism wealth is being siphoned off at a fairly low level of society and therefore goes some way towards reducing social inequality. Furthermore, the money taken in this way does at least circulate within the local economy, generating additional wealth through the multiplier effect. A degree of rather gloomy satisfaction can also be derived from the admirable initiative and resourcefulness demonstrated by local officials and entrepreneurs in devising a plethora of ways to divert tourism earnings away from national or regional accounts into their own.

The other side of the coin is that, as noted above, the energy demonstrated by the PHPA in profiting from tourism is in strong contrast to their listless attitude to conservation. Senior officials are rarely present in the field and there is little support for enforcement of regulations, so that conservation policies are poorly implemented. Few voices seemed to be raised in condemnation of this. Without a strong body of public opinion to counter this situation, it is hard to see how it can change. The popularity of tourism to Bromo Tengger Semeru (and some of the other Indonesian national parks) creates an opportunity for building up greater support for conservation, but on the evidence seen at Bromo Tengger Semeru, this opportunity is being neglected.

This is not a minor, or superficial, aspect of conservation in Indonesia. The negligence of PHPA staff and the apparent lack of conservationist determination amongst the general public are symptomatic of a deep-rooted lack of interest within Indonesian society generally in preserving wilderness. As discussed in Chapter 3, attitudes to conservation are culturally constructed, and there is no reason why Indonesians should
share Northern conservation values – particularly when these values are held against a background of social and economic well-being, which itself has come about principally because of the large-scale alteration of the natural habitat in Northern countries. Internationally, differences in attitudes to the exploitation of natural resources have been demonstrated in negotiations on climate change, whereby developing countries are unwilling to accede to Northern proposals for reducing emissions of climate-changing gases if it means sacrificing developmental goals (van Beukering and Vellinga, 1996), and by the same token, it is hard to insist that Indonesia should forego the income-generating opportunities presented by resources such as the nation’s forests - even though exploitation of these resources may be happening too quickly and too destructively to be sustainable.

The fundamental issue here concerns the search for a workable theory of sustainable development. The two most obvious areas of stress which affect this are between Northern and Southern attitudes to conservation and natural asset management, and between attitudes to public and private interests. In the latter case, it is not just the fact that individuals are making private profits from what should be state assets, but that this is widely accepted which undermines sustainability. A broader dichotomy is between the ideal of ensuring inter-generational equity through preservation of the world’s resources and the reality of people’s immediate needs. The endeavour to integrate the ideal with reality is at the heart of the debate over sustainable development in its various contexts: in the case of this study, the context is whether tourism in a protected area can be managed successfully in the long term, with success judged in terms of guaranteeing the natural evolution of organisms within the park, the gradual improvement in the lives of the people around the park, and the continued satisfaction of the aspirations of the tourists.

As far as the touristic aspects are concerned, Bromo Tengger Semeru is currently rather successful in attracting tourists from a number of different market segments and providing them with an experience which largely satisfies their expectations. On the other
hand, there are previously unremarked differences between the user groups, with the
three principal categories (domestic tourists, Northerners and East Asians) having
different aspirations and patterns of behaviour. While all three groups are important
because of the income and employment generated through tourism and, at the level of the
individual, because the need for self-actualisation can be fulfilled through a visit to
Bromo, the lack of sophistication in providing for their diverse needs already causes
dissatisfaction which could be exacerbated if visitor numbers increase. For example,
many domestic tourists require more artificial facilities to fulfil their leisure aspirations,
while Northern tourists need more services which would enhance their enjoyment of the
natural aspects of the park. Providing more interpretative facilities such as waymarked
trails would be a way of increasing the length of stay of certain groups of tourists, which
would increase the value of tourism to local people.

The direct environmental impacts of tourism at Bromo Tengger Semeru, then,
appear currently to be relatively slight and probably less than the damage caused by
natural forces, in particular volcanic activity. However, the indirect and induced effects
may well become more serious in the longer term if tourism reverts to its former upwards
trend - although they may be outweighed by the benefits of tourism, an examination of
which will form part of Chapter 7. Before moving on to that aspect, the next chapter will
examine the interaction of the Tenggerese with the resources of the national park. This is
important in order to understand the pressures and aspirations which shape the
relationship of the Tenggerese with the natural resources around them and their
involvement in tourism.
Chapter 6 - The Tenggerese and Bromo Tengger Semeru

National Park

The previous chapter examined the relationship between two of the major local stakeholders in Bromo Tengger Semeru: the national park and the tourists. Although tourism-related ecological damage did not appear to be great, it was found that PHPA staff often neglected their conservation duties while actively profiting from tourism in various ways. This was added to information discussed earlier in this thesis to conclude that the PHPA is generally less fervent in its responsibilities than would ideally be the case if Indonesia's biodiversity was to be protected. However, it was accepted that this conclusion was drawn from a Eurocentric viewpoint, in that the culturally-constructed appreciation of nature which prevails in many Northern countries appears to be of weaker significance in Indonesia, while the day-to-day struggle to make a living is more intense. Although there are a few signs that greater public support for wildlife protection may be arising in Indonesia, for the present there remain considerable challenges to the protection of natural assets such as Bromo Tengger Semeru. One of these is the conflict between the private interests of individual PHPA staff and the public benefit to society of the greater tourism revenues which should accrue to the national treasury if they were not being diverted (or evaded). It did not appear, so far, that the financial returns from tourism were resulting in any conservation benefit to the national park.

If this was the case with the PHPA, would the same also apply to the third local stakeholder, the Tenggerese? In order to investigate this, it was decided (as explained in Chapter 4) to study the livelihood practices of the Tenggerese, both to discover whether and how tourism was integrated into their traditional lifestyle and to find out whether their society showed any characteristics which could lead to sustainable co-existence with the resources of the national park. This point has been addressed in other parts of the world, as described in previous chapters, and it was generally found that income-generating projects around protected areas parks have not succeeded in alleviating pressure on them. This is sometimes because efforts to achieve this have often been too
narrowly focussed or too small in relation to the scale of the problem, and sometimes because such schemes may be established more in hope than in certainty of a positive outcome since there is often insufficient understanding of how people's livelihoods relate to the resources of the protected area.

In this chapter, then, the ethnographic make-up and livelihood strategies of the people who live around Bromo Tengger Semeru will be examined, beginning with a brief outline of the history of the Tenggerese and a discussion of their traditional economic activities, which largely focus on agriculture. Their success (or otherwise) as farmers is important as a background to their use of the national park's resources and their involvement in tourism. Consideration will also be given to the environmental impacts of their agriculture and other livelihood activities, since this may contribute to the debate on attempts to achieve sustainability and, more specifically, to the question of whether the resources of Bromo Tengger Semeru can be sustainably managed. Differences and similarities in agricultural success and social indicators between and within the five villages will be identified, along with possible causal factors. This will lead on to an examination of the relationship of the Tenggerese with the protected area in terms of their utilisation of the park's resources and of their attitude towards the national park, including their relationship with the park authorities. Again, differences and similarities between the villages in terms of resource utilisation and attitudes will be identified.

From the above, conclusions concerning the long-term viability of the economic strategies of the Tenggerese and the implications of these for sustainability will be drawn. While it is of course realised that the circumstances of these five villages cannot necessarily be generalised to all Tengger villages, it is hoped that sufficient common characteristics will be found to allow reasonably valid conclusions to be drawn, and it is also hoped that the discussion will form a useful springboard for consideration of the Tenggerese involvement in tourism, to be examined in Chapter 7.
Tenggerese Agriculture and Ecological Unsustainability

The Tengger people are a remnant population of the Hindu-Buddhist Majapahit kingdom which dominated Java until the 15th century, when it was gradually replaced by kingdoms with Islamic affiliations. The last Hindu-Buddhist state in eastern Java succumbed to a Muslim regime in around 1527 (Ricklefs, 1981) and the Hindu courts fled to Bali, but strongholds of Hinduism survived in the region (Hefner, 1987), and until the late 18th century supporters of Hinduism engaged in periodic uprisings against the Dutch. When the area was finally pacified the Dutch became aware of its potential for crops, including coffee cultivation on the slopes of the Bromo-Semeru massif. Agricultural labourers were brought in from the island of Madura (to the north of East Java) to work the land, but the Islamic religion and different form of Javanese language of the Madurese were barriers to integration with the Tenggerese (Hefner, 1985). Many Tengger villages thus remained outside Dutch and Madurese influence, retaining their Hindu faith. While the significance of religious and other cultural differences with the lowland Javanese will be discussed in Chapter 7, the outcome of this separation for the purposes of this chapter is that as the lower and middle slopes were cleared for cultivation, the Tengger communities were forced to assimilate or to retreat higher into the mountains. This was facilitated by the introduction of non-rice staples by Europeans (Kathirithamby-Wells, 1998), which meant that higher land could be cultivated for food: for the Tenggerese, the main food-crop was maize.

Later on, even this higher land became attractive to the Dutch for the cultivation of temperate fruit and vegetables, which began here on a large scale at the end of the 19th century. Potatoes were particularly successful, and local men moved from the production of vegetables into trading them as well, to the extent that "trade profits underwrote the formation of a new class of wealthy villagers in upland commercial centers. At least in these communities, mountain society seemed on the verge of a new social order, more affluent and class-stratified than the old" (Hefner, 1990:70). It will be seen in Chapter 7
that this social stratification is still visible and that it affects people's involvement in different aspects of tourism.¹

In the early 1930s, however, a potato blight spread across the highlands and wiped out this nascent prosperity, which was not to return until the 1970s, when the techniques of the Green Revolution became widespread at the same time as roads were pushed into the highlands. By 1980 four-fifths of the Tengger villages were accessible by vehicle, at least in the dry season (Hefner, 1985). The framework was now in place for resources to be exploited at whatever pace people could manage, and they rushed to take advantage of this opportunity. In Chapter 1 the assumption that people traditionally lived in conscious harmony with their natural environment was questioned. It was suggested that in many cases restraint has been exercised in resource exploitation only when enabling factors such as technological means or market forces are absent, and the findings of this part of the study certainly bore this out. Older local residents confirmed that the new roads gave easier access to markets for the better crop yields produced by the improved agricultural techniques; vegetable production was intensified and more land was brought under cultivation (Marianto, 1996; Buari, 1996; Saturan, 1996; Supak, 1996; Sutandi, 1997). The main crops grown were potatoes, cabbages and a type of multi-stemmed leek called bawang prei. In the 1990s garlic also began to be grown, particularly in Ranu Pani and Ngadas, and in some places there was experimentation with other crops, including broad beans, tomatoes and peas. The traditional staple of maize was largely replaced by the new crops.

Although the diversification and intensification of agriculture was made possible by the increased access to markets and availability of chemical inputs and new seeds, the incentive to increase productive capacity also seems, to an extent, to have been provided by endogenous cultural characteristics. Hefner (1990) notes that after 1980 the farmers experimented with the new seeds and agricultural chemicals on their own initiative rather

¹ It is not known whether today's richer families are the same ones who became wealthy in the earlier wave of affluence.
than waiting for government-sponsored extension programmes, with an appetite for innovation and entrepreneurship which had already been demonstrated in the 1920s - and which would also become apparent in their dealings with tourism, as will be seen in the next chapter. This willingness to diversify and experiment was demonstrated on several occasions during the current research. For instance, in Ngadisari, the village headman asked for pear trees and other temperate seeds and seedlings from the UK, while one elderly resident of Kandang Sari reported having sown a glassful of wheat which had grown well, but he did not know what to do with the resultant grain; "you can't cook it like rice or maize" (Sutandi, 1997). Despite their relative isolation, the farmers kept abreast of current crop prices by listening to daily local radio broadcasts of prices for crops sold earlier in the day (Shepherd and Schalke, 1995; Giman, 1997). This progression from isolated hill communities to participants in the global economy is an example of the increasing commercialisation of peasant farmers in South East Asia identified by Rigg (1991) and mentioned in Chapter 1.

Thanks to improvements in agricultural techniques and communications, then, the prosperity of the Tengger highlands grew throughout the 1980s, and this time the Tenggerese seemed to have gone beyond being "on the verge of a new social order" (Hefner, 1990:70) to its actual manifestation. However, the drive for greater productivity brought with it problems which led to a setback in the accumulation of riches. By the early 1990s the potato crop was beginning to fail (Roberts, 1997), and was still doing so at the time of the research. In some cases, the harvest produced only the same amount as the seeds planted, and in other cases failed completely (Bambang Sukarto, 1997; Yanto, 1997; Manang, 1997; Ponija, 1997), causing considerable losses: one family, for instance, had been forced to sell a second house they owned in order to repay a loan taken out to buy seed potatoes which then failed (Nguwulo, 1997). The harvest failure was partly due to geographical factors and partly to inappropriate farming techniques, and demonstrates how non-economic costs are not accounted for in the market economy.
First, the physical and geographical factors. As in much of upland Java, the dominant soils of the Bromo-Semeru region are andisols.\textsuperscript{2} The thick black earth is loose, easily-worked and isothermic (i.e. of an even, cool temperature), characteristics which make it a good vegetable-growing medium (University of Idaho, 2000). But in mountain areas generally soils tend to be unstable, easily eroded and take longer to recover from damage (Dennison, 1995), while for the specific area in question, Donner (1987) and a PHPA planning document (DepHut, 1995b) note that the whole of the Bromo-Semeru massif is threatened by erosion because of the steeply sloping land. A report by the PHPA to assess park zonation remarks that much agricultural cultivation is on slopes of over 45° and the farming of slopes up to 60° is not uncommon (DepHut, 1992/93b). Meanwhile, rainfall within the park varies from 1,500-3,500mm per year (DepHut, 1995b) – although Whitten et al. (1996) suggest that rainfall is significantly higher, up to 5,000mm per year. The common practice of cross-contour cultivation, carried out to avoid water-logging the roots of the vegetables, makes for rapid and severe rainwater run-off, and as Hefner (1990) comments, “from the perspective of topsoil preservation, vegetable crops represent one of the worst choices for these steep-sloped lands” (Hefner, 1990:109).

During the current study, Malang-based agricultural researchers pointed out that the depth of the topsoil had masked the problem up till now, but that the high levels of soil run-off, characterised by deep erosion gullies, exposure of the stony sub-soil at the tops of slopes, and ditches and stream-beds filled with silt meant that the fertility of the soil was declining (Dwi Cahyono, 1997) (see Appendix 3, photos 7 and 8).

At various times in the 20\textsuperscript{th} century the farmers had been encouraged to conserve soil and preserve its fertility by terracing their lands, but there is a dislike of making new terraces or maintaining old ones because of the amount of work involved and the fact that it results in a smaller land surface (DepHut, 1992/93a, Munir, 1996). This echoes the finding of Clay (1992) mentioned in Chapter 1, that one reason indigenous peoples do not

\textsuperscript{2} Named from the Japanese word ‘ando’ which means a dark, volcanic soil.
conserve their resources more carefully is that it involves too much work. Perhaps in justification of this, however, a study of upland conservation projects in Java found that farmers who had been given incentives to terrace their land were actually worse off after four years than those who had not done so, indicating that the benefits of terracing are too long term to be appreciated by most farmers (Huszar et al, 1994). In the Tengger region, one farmer said “if we can grow good crops without it, then why bother?” (Suswo, 1996). This attitude ties in with one of the points examined in Chapter 3, that indigenous inhabitants of marginal lands may react poorly to attempts to encourage sustainable resource use if these attempts affect their short-term returns. Kathirithamby-Wells, in a study of attitudes to the environment, confirms that: “environmental and ecological sustainability are irretrievably locked, but a balance between forces is compromised by the primarily utilitarian perceptions of the environment as a resource by Southeast Asian forest and swidden communities.” (Kathirithamby-Wells, 1998:930).

On the other hand, many Tenggerese farmers were aware that cutting trees increased soil erosion, and some terracing and other methods to counter erosion did take place, with terrace edges planted with casuarina trees or a type of fast-growing shrub called daun triwulan, both of which are used for fuel, or with elephant grass, which is cut for animal fodder. Terracing was done most noticeably in Wonokitri, where an important initiative had been taken in the mid-1970s (Boenadi, 1997; Mutak, 1997; Nasuli, 1997; Ponisan, 1997), and the village headman, other village officials and farmers asserted that measures to reduce soil erosion were carried out as a matter of course (Lurah4, 1997; Sutono, 1997). It was interesting to consider why terracing had succeeded here rather than in other places. The work of Brandon and Wells (1992) and others suggests that conservation and sustainability initiatives work best when there is an immediate incentive in the form of quickly-realisable gains or when there is strong leadership, and in the case

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3 In other places contour farming was practised or crops were planted in a herring-bone pattern, which reduces soil loss.

4 ‘Lurah’ is the usual name for a village headman in rural Java. He is always referred to as ‘Pak Lurah’ (Mr Lurah) by villagers and others, with his given name rarely used (and often not even obtained).
of the terracing around Wonokitri, it would appear to be the latter which was significant since, as shown, the short-term gains from terracing are questionable.

Some discussion of the issue of leadership will now be undertaken since it seems to have received little attention in development studies generally, although it was touched upon in Chapter 1 in the context of the Javanese world-view and the Indonesian hierarchy. It was shown in Chapters 1 and 2 that one reason for the disappointing results of the participatory approach to development is the strongly hierarchical nature of some societies, including many in Indonesia, and that the popularity of the participatory doctrine reflects the cognitive frame of development researchers rather than the socio-cultural realities of non-Northern societies. In this respect, some interesting illustrations of the significance of strong leadership were encountered during the field study. At Wonokitri, the terracing was instigated by a man who became village headman in 1955 and held his post for 33 years. During that time, many advances took place in agriculture, health, religion, communications and tourism – in fact in every significant area of the villagers' lives - and after his retirement, development programmes were carried forward by his successor and by his daughter, who was married to the new headman. For example, the Bu Lurah organised women’s house-groups to promote health programmes through a government-sponsored scheme (the PKK) which, in theory, operates in all Indonesian villages, and while it is difficult to prove a causal link on the basis of the qualitative evidence collected, health indicators seemed much better in Wonokitri than in the other four villages studied: for instance the health cadre could not remember the last time a child had died there (Sutono, 1997). In three of the other villages, on the other hand, several families reported the loss of a baby or young child just before (or during) the study period, while interviews with government health workers and other sources confirmed that infant mortality rates were high (Irlan, 1996; Sastrasuanda et al, 1995; Suparman, 1996; Yani, 1996; Suprapman, 1997).

5 Wife of the village headman.
This reinforces the point made in Chapter 1 on the role of enlightened or 'developed' leadership in social change, and illustrates the significance of human agency as a differentiating factor between situations. While in Wonokitri the *Bu Lurah* and her husband were universally regarded with approval and felt to be responsible for developmental advances (Warsi, 1997; Supiani, 1997; Tunesri, 1997; Wartin, 1997), in Ngadas, by contrast, there were repeated criticisms of the village headman and his wife, who were seen as lazy and inefficient. Criticism was so widespread that it did not seem to be an example of factionalism. Villagers appeared to be waiting for a strong lead in order to carry out village development projects and were disappointed that this was not forthcoming (Suliono, 1996; Wariamo, 1996; Pujiono, 1996; Suparman, 1996), with comments such as "we are waiting from instructions from the Pak Lurah but they never come" (Karsono, 1996). A similar situation was recorded by Schouten (1986) in the Minahasa region of North Sulawesi, where in one village the headman was successful and respected while in another, people were discontented with theirs. It was found that villagers' responses to government expectations were better in the first case, which tallies with the influence that leaders wield. It is understandable that participatory development undervalues strong leadership, since the near-cosmic power leaders enjoy in many parts of Indonesia conflicts with democratic ideals of participation, but it is more surprising that the sustainable livelihoods approach, which encompasses wider societal issues, also appears to underplay this aspect. (This is not to say, of course, that all aspects of these approaches are mistaken — they also have many strong points, as discussed in earlier chapters.)

The relationship between villagers and village headman was one element of the interface between the communities and the institutions of government, and another came in the field of agriculture. Here, the sophisticated knowledge needed for modern agricultural techniques was lacking, which contributed to the falling crop-yields farmers were experiencing by the early 1990s. The weakness of policy implementation seen in the conservation sector, described in the last chapter, also applies to other fields, with
agricultural extension work rarely penetrating as far as the Tengger uplands. The
principal problem is the classic dilemma of Green Revolution techniques: although yields
may be excellent in the first few years, they rapidly decline when viruses and insect pests
become resistant to the chemical deterrents used as part of the package of techniques and
as natural soil fertility declines under intensive fertiliser application (Sloep and van Dam-
Mieras, 1995; Sharma, 2000). Potatoes, the principal cash-crop of the Tenggerese, are
particularly susceptible to disease, and in the last few years more virulent strains of the
blight which caused the Irish potato famine in the mid-19th century have appeared,
affecting potatoes all over the world (New Scientist, 1998). In Northern agriculture, the
loss of disease-resistance is compensated for by annual checking of seed stock for viral
resistance and use of new first generation hybrids (Grant, 1997), but in the Tengger
region new seed potatoes are rarely bought in. Instead, as with peasant farmers all over
the developing world (ActionAid, 1999), part of the harvest is reserved for next year's
planting. Even when new seed potatoes were bought, farmers remarked with
disappointment that the high yield in the first year had given way to reducing yields in
subsequent years, showing a lack of awareness of agricultural science which, again,
indicates the poor quality of information available to them (Yanto, 1997; Ismandi, 1997;
Giman, 1997; Ngarnin, 1997).

This is a further indication of the way that techniques developed in one part of the
world may not necessarily succeed in another, at least not without extensive support in
the form of educational and extension work, the cost of which cannot be viably factored
in to the end-price of the product. Furthermore, there is an assumption of shared norms
and basic knowledge in the case of agriculture which, as will be seen below, has resulted
in the damaging application of what may appear (to Northern cognition) to be
straightforward practices, and in their attempted resolution within the cultural paradigm
of the society where they are being used.

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6 Although, as mentioned in Chapter 1, Edmundson found in his 1994 study of East Java that Green
Revolution techniques had increased prosperity overall.
In the absence of understanding factors such as potato viruses - and as elsewhere in Indonesia - “farmers rely too heavily on chemical pesticide applications to control pests and diseases” (Fuglie, 1999). Hefner (1987) reports that in 1980 potato crops in the Tengger region were sprayed an average of 6 times per harvest in the dry season, and 8-12 times in the wet season, but by the time of the current research, 16 years later, people were spraying on average 16 times in the dry season (i.e. once a week over the 4 month growing period) and as much as 25 times in the wet. There were even farmers who reported spraying every two to three days – i.e. over 40 times per harvest. The chemicals used are various types of fungicides and pesticides, but many farmers have little understanding of why and how they are effective. One farmer seen spraying his potatoes during rain and wind was asked: “isn’t that rather a waste of time?” He answered: “I don’t know” (Mutak, 1997). In some cases people had run out of money to buy commercial agricultural chemicals and fabricated their own concoctions from plant extract, ash and other ingredients, including water from a spring at a holy cave. This is an example of the cultural paradigm referred to in the preceding paragraph of a non-rationalist world-view, which is still important here. There was general astonishment at the information that people who grew potatoes in their gardens in the UK rarely or never sprayed for pests yet still achieved good yields.7

As Hefner notes, “the tragedy here is that a technology that brought economic benefit to small and large farmers alike in the upperslope region has created ecological problems likely to give it only a short life” (Hefner, 1990:112). The failure to apply appropriate agricultural techniques and the resultant decline in yields can be attributed in part to the absence of help from government agencies, in part to low standards of formal education, and in part to the farmers’ utilitarian attitude towards the environment. As mentioned above, links with government agencies were few and the farmers felt abandoned. Several people reported having requested assistance from the agricultural

7 The International Potato Center in Indonesia has initiated a Potato Integrated Pest Management scheme in Indonesia to try and introduce alternative – and less environmentally damaging – methods of crop production, but it will take some time before its benefits reach the Tengger region (van de Fliert, 1999).
extension department but either none had been forthcoming, it had been very slow, or advice had been ineffectual (Sujarso, 1996; Saturan, 1996; Ismandi, 1997). This was also demonstrated by the failure of government agencies to distribute information on a particular pest which had begun to attack the potato crop not long before the research period began. The farmers knew that a large fly was destroying their plants but not how it did so, and yet during the field research this information was obtained quite easily from the headman of Ngadisari, who had a government leaflet about it.\(^8\) In some cases, the farmers attributed the failure of their crops to excessive rain or wind or to sulphur from Bromo’s eruptions – factors confirmed by government reports (Bappeda, 1996; DepHut, 1992/93a) – or, less reliably, to “pests that can’t be seen, pests from God” (Saturan, 1996). None of the official reports seen, though, mentioned the most probable cause of the crop failure, which was the particular susceptibility of potatoes to viruses, as outlined above.

The farmers are further impeded from understanding the complex agricultural techniques they now use by the low standard of education in the villages. An attempt was made during the research to discover what facilities and propensity there were for schooling. It was found that in all the villages there were few people who had been educated above junior high school level, and even this level was rare, especially in Kandang Sari, Ranu Pani and Ngadas where high schools were distant. In Ranu Pani, for instance, out of the 25 households visited, only 5 had at least one member who had been educated at junior high school level or above. It was interesting however that one of the wealthier farmers in Ranu Pani, the only person in the village to have been through higher education and who had a degree in agriculture, claimed that his crop yields were double those of his neighbours and said that “we educated ones know that with education we can manage the world” (Suswo, 1996). It may well be that in time, more people will come to share this view. In the meantime, there seemed little enthusiasm on the part of

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\(^8\) The insect concerned was the Leafminer fly (Chromatomyia horticola), which lays eggs in the leaves of the plants, where they hatch out and feed, eventually killing the plant. The Leafminer fly normally occurs below 1800 metres, but had recently extended its range to higher altitudes (Dirjen TPH, 1996).
this farmer for sharing his knowledge with his fellow-villagers. It is possible that achieving higher crop-yields than others adds to an individual's social capital, and it is also a reminder of the fact that the unit of reliance in many South East Asian communities was not the broader community but the discrete family (Rigg, 1991).

A similar situation prevailed in Kandang Sari, where in only 3 out of 23 households had someone been educated to at least junior high school level, and in Ngadas, where 6 out of 26 households had. In his research in the region, Hefner found that "for a rural élite still solidly attuned to local ways, .... there was no advantage to encouraging higher levels of education" (Hefner, 1990:178), as the income from a reasonably-sized farm was better than a pegawai negeri (civil servant) could expect. However, there were some signs that the situation was changing. In August 1996 the villagers in Ngadas had set up their own junior high school with a specially-designed package of materials, and several children were now attending this. In Wonokitri and Ngadisari far more respondents reported that they or their children had gone through high school or further education or were intending to do so: in both places half of all households were in this category. In Wonokitri this may be because of the general developmental advances made in the village, while in Ngadasari, as will be seen in the next chapter, it seems to be partly due to the influence of tourism.

Returning to the weakness of local agriculture as discussed above, three interesting points are illustrated. First, the failure to apply soil conservation programmes or disseminate improved agricultural techniques is here, as in other parts of the world (Hudson and Cheatle, 1993; Chambers et al, 1989), due partly to the lack of resources which might enable farmers to identify and resolve their own problems. The techniques of the agricultural revolution have been inadequately explained by government institutions, and traditional land-use practices have generally been abandoned in favour of less labour-intensive ones.9 A second point is that the agricultural environment is

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9 Although farmers did still use livestock manure in addition to chemical fertilisers (Pa’i, 1996; Soetomo, 1996; Sayuni, 1997).
suffering from the effects of both poverty and prosperity, as noted by van Lasteijn and Schoonenboom (1996), in that the historical alienation of the Tenggerese from the lowlands has forced them to cultivate very steep slopes, while at the same time farmers are far enough involved in the cash economy to be able to afford – generally – the capital-hungry inputs of fertilisers and pesticides. Finally, we see here a clear demonstration of the difficulty of operationalising the principles of sustainable development. The Tenggerese farmers have been encouraged by the combination of an initially fertile environment, improved communications and more sophisticated agricultural inputs to try and achieve greater prosperity. It seems unlikely that any human society would have rejected this opportunity, let alone in Indonesia, where “current economic strategies for achieving export promotion and agricultural diversification [...] tend to be narrowly focussed on maximizing short-run gains with very little regard to proper resource management” (Pearce et al. 1990:69). The focus on short-term gain by the Tenggerese in their agriculture has strong parallels with similar efforts by the PHPA in relation to tourism, as seen in the last chapter, and in relation to exploitation of assets elsewhere in Indonesia, as discussed in previous chapters. All this indicates the difficulty of reconciling the two principal aspects of sustainable development, in other words to maintain environmental well-being while at the same time fulfilling societal aspirations for better welfare.

Left very much to their own devices (and certainly unaware of how they are personifying the difficulties of implementing sustainability) the Tenggerese farmers are again demonstrating their ability to respond to change by replacing lost agricultural income with other ways of earning a living. While non-farming methods will be treated later in this chapter and tourism will be discussed in the next, other agricultural options will now be briefly discussed. Many farmers have turned to crops other than potatoes - but problems have begun to arise with these, too. For example, cabbages were fairly successful until about 1994, when they began to suffer from a disease which the farmers described as ‘mengrupuk’, meaning that the leaves turn hard and crispy like a prawn.
cracker. Even with bawang prei (leeks), which had lower returns but were generally more robust, farmers reported that in recent years leaf-hoppers (small insects) had begun to attack the plants. In three villages (Ranu Pani, Kandang Sari and Ngadas), farmers had begun planting garlic, and particularly in Ranu Pani had been successful with this. The inputs are expensive, however, especially the initial seed-stock, and not everyone had sufficient capital to break into this market. Nearly everyone still planted the traditional staple of maize; some people commented that they continued with it so that they always had something to fall back on (Syukur, 1997; Sukina, 1997).

The precarious state of Tenggerese agriculture and the willingness of the farmers to embrace new opportunities offer significant indications that the possibilities offered by an alternative income-generating activity such as tourism would be eagerly welcomed. Unfortunately for the environment, other means of supplementing the household economy have also been embraced: these supplementary activities and their effects on the resources of the national park will now be considered.

**Tenggerese Use of National Park Resources**

The most important way in which the Tenggerese use the resources of the protected area is as a source of fuelwood. A second use was for planting crops and for collecting livestock-fodder. Trees and other plants were also used for building materials and medicines, and occasionally animals were hunted for food or revenue. Other interactions between villagers and wildlife mainly centred on incursions by animals into people's fields.\(^\text{10}\)

Taking fuelwood extraction first, it was known before the field phase of the study from PHPA reports on Bromo Tengger Semeru that use of wood from the forest was substantial, with people in all the buffer zone villages using the protected area as a storehouse of firewood (DepHut, 1995a). However, calculations by the PHPA indicated that only 4.5 per cent of families depended on the forest for their fuelwood (DepHut, 1995a). There were other threats to the national park from people outside the area, principally illegal timber extraction, but these and other exogenous pressures are outside the scope of this thesis.
which the current study found to be a vast under-estimate: in fact, a majority of households in some villages appeared to depend on fuelwood, and a very large proportion of this came from the forest. There was a different pattern of utilisation in the five villages studied, which will now be outlined, along with suggested reasons for the differences.

Fuelwood utilisation was highest in Ngadas, Ranu Pani and Kandang Sari. A village report for Ngadas said that all households used wood for cooking (SekDes, 1996), and this was confirmed by the house-to-house survey, in which only three of the 30 householders who were asked this question ever used an occasional alternative to wood. In Ranu Pani only two out of 24 respondents occasionally used another fuel, and in Kandang Sari only one out of 24 respondents did. In these places, the general response even among better-off families was that they preferred wood because it was quicker and warmer (Sutarmi, 1996; Buari, 1996). The need to keep warm in these high altitude villages was certainly a significant reason for the high consumption of fuelwood. In Ranu Pani and Ngadas even more fuel was needed because of the method of processing garlic, with the bulbs hung in the rafters over the stove for about five months to dry out before planting: many households kept the fire going all night in order to dry out the garlic more quickly.

The situation in Wonokitri and Ngadisari was rather different in that more people used alternatives to wood. In Wonokitri 18 out of the 48 households responding to this question used paraffin or charcoal for cooking (37.5 per cent), while in Ngadisari 17 out of 30 respondents did so (56 per cent) – although 22 respondents also used wood sometimes, generally for heating. In Ngadisari, the wife of the village headman had an electric cooker and other people were known to use LPG (gas) for cooking (although none in the survey were found to use this). More people used charcoal in Ngadisari for heating than in the other villages (14 of the households visited bought charcoal in for this
purpose\textsuperscript{11}), and one family had even placed an electric element in the hearth for warmth. The greater propensity to use convenience fuels in these villages will be returned to in Chapter 7 in relation to whether this factor is related to greater prosperity, and in particular tourism-related prosperity.

As far as the provenance of the fuelwood was concerned, it is doubtful whether completely accurate information was obtained because there was probably a tendency for people to indicate that they took wood from their fields rather than from the protected forest. In any case, even if people said they took the wood from the forest, this could not necessarily be taken as meaning that they were taking wood illegally as there was a general belief in all the villages, confirmed by the PHPA, that dry or dead wood could be collected as long as it was for household use and not for sale. However, there were various ways of encouraging the wood to appear dead: for instance, a PHPA ranger in Wonokitri said that the usual method of stealing wood was to cut down a tree, leave it for a few weeks until it was obviously dead, and then carry it past the PHPA post (Ari, 1997). Similarly, at Ranu Pani during the survey a tree within the national park was observed to have been ring-barked.

Even given a probable degree of dissembling, however, the acknowledged use of wood from the protected area was far higher than indicated in the PHPA reports. In Ranu Pani, Ngadas and Kandang Sari around half of the people who responded to this question said that they got wood from the fields and half from the forest (some said both). In Wonokitri and Ngadisari the numbers getting wood from the forest was much lower: only 15 families (27 per cent) interviewed in Wonokitri mentioned collecting wood from the forest as against 40 families (73 per cent) who got their wood entirely from their fields, while in Ngadisari only three families (14 per cent) of the 22 who said they used wood collected it from the forest, with 19 from the fields (86 per cent).

\textsuperscript{11} This contributed indirectly to park exploitation because they often bought the charcoal from men from Keduwong, a poor village with desa tertinggal ("backward village") status which also bordered the national park.
The evidence offered by observation was also useful in confirming the villagers' statements, in that claims to use wood from the fields in Wonokitri and Ngadisari were more convincing because more trees were grown amongst the fields than in the other three villages. In all the villages, there was evidence of wood-cutting in the nearby forest, but there seemed to be a greater dependence on the forest in Ranu Pani and Kandang Sari. The traditional leader (kepala dukun) of Ranu Pani said that “people have no other choice than to get wood from the forest” (Sutarmi, 1996), and another respondent remarked that it now took him much longer to collect wood than formerly (Supak, 1996). At Kandang Sari the situation was even more striking: there was barely a tree to be seen in the section of national park adjacent to the village. Older residents here commented that until about 1980 the trees were much denser, but they had been cut down in recent years since residents had started selling charcoal and wood outside the village (Sutandi, 1997; Senapi, 1997; Wandi, 1997). The situation had been exacerbated because of the weakness of the agricultural economy, according to the headman of Kandang Sari: “because the price of potatoes has dropped and the crop is failing, people are forced to turn to other sources of income such as selling charcoal and firewood” (Sasanto, 1997). Several large, recently-cut tree-stumps were observed in the ‘forest’ just outside Kandang Sari, and two instances of illegal charcoal-making within the park were encountered here during the field survey. The PHPA was well aware of incursions into park territory: “in the parts of the [national park] territory directly bordering the villages, the condition of the vegetation gives cause for concern. Some areas appear to be bald, in the sense that there are no clusters of trees but only grass and scrub” (PHPA, 1995a:1-16). The same document ascribed the lack of tree cover to utilisation of the natural resources of the national park for firewood and sawn wood, but although this awareness exists, no action was being taken to prevent further infringements of the regulations.

The lack of field patrols by the PHPA meant that villagers could be fairly certain that they would not be caught stealing wood or other forest products. An older man formerly employed on an informal basis by the PHPA confirmed this, saying that “there
aren't enough rangers for the area, so there is a lot of stealing of wood, fungi, orchids and animals such as deer, monkeys and leopards" (Sukintok, 1996). To a degree, this was due to sympathy for the villagers by the PHPA, as described in the last chapter, as well as to institutional weakness, and this sympathy was more formally expressed in policy decisions which could also be seen as examples of the paradigm shift in protected areas management which occurred in the early 1980s, as identified in Chapter 3. Two manifestations of this were noted within the study area. One was at Ranu Pani, where a hectare of national park land had been given to a locally-run NGO to generate funds for social projects within the village (Nenih, 1996). The other was at Ngadas, where a social forestry programme was introduced in 1996 under which 15 hectares of national park land was ear-marked for division between villagers to plant up for fuelwood (Sujarwo, 1996; Wariamo, 1996; Sukemi, 1996). According to the Director of Bromo Tengger Semeru National Park, the latter programme came about because "we recognise that local people have always used the forest as a source of fuel and have no alternative to doing so, and we would like to encourage them to use it sustainably by giving them secure rights over the land" (Sudarmadji, 1996). This is very much in line with the advice of forestry activists that a long-term stake in an area is essential for prudent management (White and Martin, 2002). At the time of the survey these schemes were in their early stages and it was too early to tell whether they would be successful or not.

Another example of the forestry department taking account of the needs of the people living around protected areas was the tumpang sari system of integrating forestry with farming operated by the state forestry company Perum Perhutani. Under tumpang sari, farmers were allowed to plant crops on forestry land between tree seedlings in return for keeping the weeds down and looking after the trees, and on payment of a sum of money. The farmers generally contracted the land for three years, by which time the trees had become so large that they no longer needed weeding, and also they shaded out the crops (Paimo, 1996; Yoyo, 1997). Tumpang sari was common in fringe areas of Bromo Tengger Semeru before responsibility for the area was transferred from Perhutani to
PHPA in 1992, when it was officially designated a national park, but after that it was phased out (Sugiharto, 1997). Some farmers interviewed said that it made no difference to them that the system had ended (Sujo, 1996; Tinayu, 1997), but more frequent comments were that an important source of income had thereby been lost (Karnoto, 1996; Ngataji, 1996; Tularip, 1997; Mariadi, 1997), and there was some confusion as to why the system had ended. Several people had turned to day-labouring once they no longer had access to forest land, while the village secretary of Kandang Sari said that “the tumpang sari system was good, and yielded good crops; since the system ended the forest has become a lot more damaged” (Ismandi, 1997). A 1990 report concluded that tree cover was better in government-owned areas of upland Java where tumpang sari was permitted than in areas where ownership was not clear (Machfud, 1990), which again reinforces the point made in Chapter 1 that resources for which there is assigned responsibility are better managed than common property.

On the other hand, the value of the tumpang sari system was compromised by several factors, both biological and social. In the first place, the most common tree planted was *Acacia auriculiformis*, used because of its rapid growth and fuelwood potential, but as it is a non-native species its value to the natural ecosystem – other than as vegetative cover - was limited (Whitten et al, 1996). A second problem, as a local man said, was that “people only worried about the success of their own crops, so many of the regreening plants were cut down” (Karsono, 1996). In addition to this, forestry officials often failed to supervise the system properly (Proud, 1998). On balance, however, given the potential of the tumpang sari system for using land without jeopardising its future productiveness, the integration of social and environmental needs provided by the system seems highly positive.

*Tumpang sari* and the other social forestry schemes have been described because they are an attempt to integrate commercial imperatives with sustainability, but as with other efforts to do this (discussed in Chapters 1 and 2), a liberal approach to sustainable forest use is unlikely to work without the backing of educational or awareness
programmes and a strong supervisory framework. This may have wider implications for the involvement of people living around protected areas in economic activities such as tourism, in that if the link between the economic benefits of the resource-dependent activities and the need for long-term conservation of the protected area is not made obvious, local people may not see the need to manage the park's resources carefully.

As far as other uses of the national park were concerned, the second major use after fuelwood extraction was as a source of fodder. Cows (and to a lesser extent pigs) were husbanded in all the villages as an extra source of income, either by people buying them as young stock and rearing them to be sold on, or by richer people who placed cows they owned with poorer families to be cared for. The proceeds would then be split 50:50 at the time of sale. The animals were kept in sheds in the fields and fed on grass collected from field edges or, in the dry season, from the national park. Additional fodder was collected for the horses used for the tourism industry, which was mentioned in Chapter 5 and will be further discussed in Chapter 7. People also went into the forest to collect plants for medicinal use and for sale, particularly various types of fungi.\footnote{The use of jammu, or traditional medicines, is widespread and popular in Java.}

The other way that people traditionally interacted with the protected area was through encounters with its wildlife. This contact occurred mainly in two situations. The first — and at the time of the research the most frequent — was crop disturbance by animals, especially in fields adjacent to the protected area. Crop-damage was reported in all villages, particularly in Ngadisari, where monkeys (both the Long-tailed macaque \textit{Macaca fascicularis} and the Silvered leaf-monkey \textit{Presbytis cristata}) were the chief culprits, and in Kandang Sari and the adjacent hamlet of Wonosunkoro, where the Javan porcupine \textit{Histrix javanica} and the Green jungle fowl \textit{Gallus varius} caused the greatest nuisance by eating maize and broad beans (Sasanto, 1997; Paitono, 1997; Manang, 1997; Mistuo, 1996). There were reports that depredations by wild pigs (\textit{Sus scrofa}) used to be common but no longer occurred, presumably because they have been hunted out. In
Ngadisari, damage by monkeys was so severe that some people had given up cultivating fields near the forest boundary, although - as will be seen in the next chapter - this was also because the villagers here were less reliant on farming income. No respondents mentioned hunting or trapping animals in order to stop them destroying the crops, but farmers in Ngadisari did take some precautions to protect their crops by posting someone to stand guard when the crop was ripe, leaving a dog tethered nearby, or setting a magic fence (tumbal) around vulnerable plants (Delajah, 1997; Marmoyo, 1997; Suwito, 1997). The last method falls within the Javanese world-view which will be further explored in the next section of this chapter.

The second type of interaction with the wildlife was hunting, which appeared to have been more common in the past than at the time of the research. Several people reported that they formerly hunted wild pigs and muntjac deer (Muntiacus muntjak), but that in general they no longer did so because there were no more animals (Sali, 1997; Buari, 1996; Supendam, 1997). The only place where hunting of mammals was still reported was on the slopes of Mount Semeru above Ranu Pani (Mariarti, 1996, Ujat, 1996), although other people said that if they found a deer in their field they would hunt it (Cahyus, 1997; Kasun, 1997), and PHPA officials reported that hunting was still common (Ari, 1997; Djoko, 1997). Also, birds were clearly still trapped for the flourishing cage-bird market in Java. On one trip into the forest near Ngadas during the survey period two men with bird-trapping equipment were encountered, and a woman interviewed in Kandang Sari said her husband made his livelihood from trapping birds and other animals in the forest (Suhartini, 1997). The findings supported the conclusions drawn by the biologists who wrote the management plans for the park, commented on in Chapter 5, that most large animals were hunted out some time ago.

More generally, the use of the park's resources again confirms one of the points discussed in Chapter 1 and in this chapter, that given appropriate technological and

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13 The man himself was not at the house because he had been arrested that morning for stealing a cow.
market stimuli and a lack of effective regulations, people will tend to exploit their assets to the point of extinction or disappearance. In Bromo Tengger Semeru (and other Indonesian national parks), the institution which should apply these controls is the PHPA, whose weaknesses were discussed in Chapter 5. A brief consideration will be given now to the way these affect the Tenggerese and their attitudes to the national park, after a discussion of the perceptions of the Tenggerese generally towards their environment.

Tenggerese Attitudes to the National Park

It was determined above that a utilitarian approach to the land’s resources is evident in Tenggerese agriculture and in their use of the forest for fuel and other necessities. However, another aspect of Tenggerese attitudes to the forest illustrates the Javanese world-view of acceptance of a magical and spirit dimension based on beliefs rather than scientific proof, and it was an interesting and unexpected finding of the research.

To set the context for this, it must be said that the investigation into local attitudes towards nature and the national park was approached with a degree of pessimism, since during previous work in Indonesia the impression had been formed that there was little innate respect for the environment amongst Indonesia’s peoples. This was demonstrated by the alacrity with which people would seize any opportunity for economic advancement, even if it meant destroying the resource on which the opportunity depended (as discussed in Chapter 1). An apparently contradictory finding was that, as with the fear of unexplored mountains in medieval Europe and the ‘untamed’ forests of pioneer-country America described in Chapter 3, the forests and mountains in Indonesia were often treated with circumspection. Anecdotal evidence must of course be treated cautiously, but two illustrations may be helpful here. A conservation officer in Sumatra related how city-based drivers employed by his project would hasten to unload their vehicles and leave the forest as quickly as possible in order to return to the safe, ordered world of towns (Budi, 1998), while in the early 1980s taxi drivers were reluctant to enter the forested Jakarta Zoo at night, not because of the animals, but because they were ‘takut hantu’, i.e. ‘afraid of the spirits’ (pers. obs.).
The word *hantu* is a general term for poltergeists, the spirits of the dead, and other unearthly beings such as the spirits which inhabit rocks, bodies of water, trees and other inanimate objects. Within the Javanese pantheon of *hantu* is a complex array of good, bad and neutral spirits which affect humans in different ways (Geertz, 1960). In contrast to the rationalist scientific paradigm in the North, for the Javanese there is no clear dividing line between what can be observed or scientifically proven and things that are known to exist but cannot be seen or demonstrated by recognised scientific experiments, such as the inhabitants of the spirit-world (Forster, 1958). Instead, there is a continuum from tangible objects and beings which Northerners would consider as having existence to the intangible and inexplicable, with the inability to touch or see a *hantu* making them no less real since they have actual, observable effects, for instance causing sickness or a decline in crop-yields. The prosaic acceptance of elements which Northerners might find irrational goes some way towards explaining the fatalistic attitude to agricultural phenomena referred to earlier in this chapter such as crop-failure, and the matter-of-fact description of using magic fences and holy water to deter crop-pests. From a Eurocentric viewpoint, these beliefs are difficult to comprehend, and yet it is probable that they hold much in common with attitudes held by Europeans before the Scientific Revolution of the 16\textsuperscript{th} and 17\textsuperscript{th} centuries, when Descartes (1596-1650) and other philosophers and scientists propounded a mechanistic view of nature and a system of understanding natural processes based on scientific experimentation (Brooke, 1991; Hobsbawm, 1962). While there is no wish on the part of the researcher to be judgmental about non-European belief systems, the lack of scientific comprehension based on provable cause and effect (knowledge as opposed to belief) must play a part in the ability of the Tenggerese to understand how modern agricultural techniques work, and it is thus a contributory factor in the deterioration of the Tenggerese environment.

The purpose of this aspect of the research was not to investigate spirit-beliefs generally amongst the Tenggerese, but in order to find out whether there were any long-held taboos on forest exploitation which might have helped preserve the forest.
Accordingly, several interviewees were asked whether there were any sacred places for the village or areas of forest which should not be touched. However, the only sacred places mentioned were the dhanyang (shrines) located just outside several of the villages, and the only reason forthcoming as to why the forest should not be touched was because it was ‘protected forest’ or ‘it belongs to PHPA’ and fines might be applied if it was interfered with. This finding was slightly disappointing but not a great surprise. Although Boomgard (1995) argues that some forests in Java may have survived initially because they were held to be sacred, this belief has diminished along with the forests themselves, which Boomgard ascribes to the fact that “the state, Western enterprises and the need of the peasantry for land were stronger than the fear of tree-spirits, sacred trees and haunted forests” (Boomgard, 1995:57) while, in a parallel with the clearance of forest and taming of wilderness in Europe and America discussed in Chapter 3, Geertz (1960) relates how the Javanese creation myth describes how Java’s primeval forests were cleared and settled.

On Asian perceptions of nature more generally, Bruun and Kalland (1995) remark that traditional sensitivity towards nature and beliefs in forest-dwelling spirits have not prevented Asians from exploiting their environment to the point of degradation. A further contributory factor to a lack of interest in preserving wilderness must be the anxiety about forests and hantu mentioned above in this section. Perhaps wilderness can only be enjoyed and appreciated once it is domesticated to within prevailing belief systems, either by being examined and scientifically understood, as in the North, or by being tidied up and transformed into agricultural lands or safe recreational parks, as in Indonesia.

While it is unlikely, therefore, that in the Tengger region - as in the rest of Asia - the ethereal can be invoked to protect the temporal, there is another side to the generally-held belief in spirits which is relevant to the relationship of the Tenggerese with the wider environment. When the anthropologist Robert Hefner began his work amongst the Tenggerese in the late 1970s, he was warned by a lowland Javanese contact that “the spirits of the Tengger region are dangerous” (Hefner, 1985:4). Hefner went on to find that
the geographical isolation of the Tenggerese and the anxiety-tinged respect in which they were held by the lowland Javanese had both helped to preserve their differences with mainstream Javanese culture and fostered their sense of independence (referred to above). This independence has, to an extent, stood them in good stead in their agricultural enterprises, and it might well be the case that it has also influenced their ventures into tourism. This point will be returned to in the next chapter.

Returning now to the discussion of the relationship of the Tenggerese with the national park, although a spiritual element in their perception of the forest was not identified, other attitudes to the park were more readily elicited - especially once phrases such as ‘PHPA’s area’ or ‘the protected forest’ were used rather than taman nasional, which as described in Chapter 4 was recognised by few people. Even so, awareness of the functions of protected area was found to be low in most places, although there were considerable differences between the five villages studied. These differences will now be outlined, together with possible reasons for them.

Overall awareness of the existence of the protected area was good in all villages, with the majority of residents knowing that the forest bordering their villages was under the management of a government department or had some kind of ‘public interest’ function in terms of conservation or tourism.\(^\text{14}\) Awareness was lowest in Kandang Sari, where only three-quarters of the households (75 per cent) seemed to know that there was anything special about the area, and there was a very vague knowledge of what it was for. This was perhaps because there was no longer any ‘forest’ as such in the part of the national park bordering the village since, as explained above, nearly all the trees had been cut down for fuelwood or charcoal, and because visits by PHPA officials were rare. Although three hectares had been planted up with acacia within the last year (Mujianto, 1997; Sukina, 1997), there appeared to have been no larger-scale attempt at reforestation. It was reported that some years previously there had been a meeting about regreening

\(^{14}\) The estimates of awareness of the forest were based on information elicited from conversations with the families as to how they used the forest, who owned it, or what it was for.
with funds supposed to arrive from the Ministry of Forestry, but the funds had never materialised (Sasanto, 1997).

In Ranu Pani just over three-quarters of households (78 per cent) knew of the protected area, and there was much greater understanding of the functions of the park. There were several comments to the effect that the area was necessary for watershed or wildlife protection and for penghijauan (regreening) and that new land could not be opened up for agriculture there (Kimun, 1996; Parjono, 1996; Misan, 1996; Supak, 1996). One younger woman remarked that it had to be looked after so there was something left for their descendants (Rawi, 1996). There was a PHPA guard-post at the entrance to Ranu Pani and two people who lived in the village were current or former PHPA rangers, so more awareness of some form of management could be expected. However, although regreening activities organised by PHPA were described as happening ‘often’, or even ‘once a month’, it seems unlikely that this was actually the case, given that no evidence was encountered in Ranu Pani of recent PHPA-inspired planting. On one occasion during the survey period a regreening activity around one of the lakes at Ranu Pani was scheduled but no-one actually turned up. This, with the unfulfilled promise of reforestation funds for Kandang Sari, were demonstrations of the tendency described in Chapter 2 to emphasise form rather than substance, as if the fact that regreening was scheduled to happen was sufficient cause for satisfaction, whether or not trees were in fact planted.

Having said that, in contrast to Kandang Sari, there was a greater willingness in Ranu Pani to preserve tree cover. The village headman said that he encouraged people to plant seedlings along the edges of their fields (Marianto, 1996), and during the course of the research several places were observed where people had either recently planted trees or were actively doing it at the time, either on their own land or on PHPA land. This was on villagers’ own initiative rather than at the instigation of PHPA. Again, the element of good leadership entered the picture here, as a particular family had been active over a long period in preserving tree cover around Ranu Pani, a fact commented on by people...
elsewhere in the region as well as by villagers in Ranu Pani (Soetomo, 1996; Ngatrulin, 1996). As far as other functions of the park were concerned, many people were aware of its use for tourism (Djati, 1996; Mariarti, 1996; Swiyono, 1996; Sukintok, 1996), which can be ascribed to the fact that Ranu Pani is the base village for climbing Mount Semeru, and the park was clearly viewed as important for the local economy because of tourism – although no direct link seemed to be made between the ecological integrity of the park and its attractiveness to tourists.

Turning now to Ngadas, awareness of the park and its conservation functions was higher still, at 85 per cent. This is probably because a PHPA ranger lived here full time and was well-integrated into the village community, the social forestry programme mentioned above had recently been initiated, and there was an active ‘regreening’ group which worked with the PHPA. Several respondents in Ngadas also mentioned recent extension work by the PHPA. All of this seemed to have had some effect in that comments such as “the forest has to be protected so that the plants can get big” (Sujo, 1996), “so that people don’t just do what they like with it” (Parjono, 1996), and “so that no-one burns it” (Suladi, 1996) were fairly common. One man expressed himself more fully: “the forest is a source of water, which will dry up if it isn’t looked after. My grandfather looked after it and I feel it is my duty to look after it for my children. We have to live in harmony with the forest, we can’t live independently of it” (Soetomo, 1996). This heart-warming awareness of the forest’s functions was not universal, however: some respondents in Ngadas thought the forest’s main function was “to provide wood” (Sukemi, 1996; Bumin, 1996).

In Wonokitri, awareness of the park (or protected forest) itself was again high, at 84 per cent of households. However, given the generally high level of social education here, knowledge of its ecological functions seemed rather low. This may have been because public education programmes within the village tended to focus on health and agriculture, with extension work concerning the national park left up to the PHPA (Lurah, 1997). When asked what the protected forest was for, a fifth of the respondents did not know,
although over half (57 per cent) cited some ecological function, for instance “the forest is protected so that not many people cut wood. If lots of wood is taken there will be erosion and landslides” (Toro, 1997) and “to conserve nature” (Supendam, 1997). The people who expressed these views said that they had learned this information from the PHPA, demonstrating that extension programmes — though limited — were successful in raising awareness of the ecological functions of the park to an extent. Another fifth of the respondents ascribed a touristic purpose to the forest, saying that it was “for the views” (Wartono, 1997) or “for increasing income and recreation” (Dharsan, 1997). One interviewee used the term taman nasional spontaneously and said that it was important for tourism and for enhancing the prestige of the village (Suharjo, 1997).

As far as Ngadisari was concerned, it was difficult not to approach the question of awareness of the national park and its functions without some preconceptions, since most tourism to Bromo Tengger Semeru is centred here. Respondents were nevertheless given the same opportunities to talk about the protected area as in the other villages, and given the centrality to the village economy of the park it was not surprising that all the interviewees knew something about it and that almost as many respondents (56 per cent) believed the park’s purpose was for tourism as for conservation (60 per cent). Whether this translated into a greater propensity to protect the park, however, is debatable, which will be discussed in the next chapter.

Taking an overview of villagers’ attitudes to the protected area, the language used to describe its functions seemed to have been shaped by PHPA extension work, since many people used the terminology of national park conservation such as “to prevent erosion” and “for regreening”. However, given that the agricultural techniques described earlier in the chapter demonstrated little awareness of basic ecological processes, it seems likely that little direct connection had been made between practices such as charcoal-burning and the potential damage to the long-term ecological functions of the forest. For instance, one of the better-off villagers in Ranu Pani commented that “people here don’t really understand what the national park is about; the extension work by PHPA is limited,
and people just go to watch and don't pay attention" (Suswo, 1996), and other indications that an awareness of ecological functions does not run very deep were encountered. One came from a man who had been quite specific that he had attended talks by PHPA on reforestation and the national park every five months, but when he was asked what the effect might be on the forest if people collected a lot of fuelwood there, he replied "there's no problem for the forest – only if PHPA catch us it's dangerous" (Supak, 1996). Another example was when Agus fell into a discussion one evening with village youths in Ngadas, who had no idea of basic ecological processes such as the reasons for erosion, and were amazed but apparently interested when some of these were explained to them.

Given the weak institutional structures of PHPA, there was a surprisingly high level of adherence to constraints on the use of park land – at least where infringements would have been obvious. As with the techniques used to 'hide' tourism revenues and cutting of green wood, however, various ways had been developed of 'hiding' use of park territory. For instance, villagers sometimes cultivated land away from the PHPA patrol paths, knowing that the rangers rarely stray from these, or waited until after there had been an Operasi Gabungan (a major check on forest exploitation involving forest police, civil police and the Army), and then cleared some land and planted a crop in the knowledge that it would ripen for harvest before the next Operasi (Ari, 1997). Similarly, as noted above, there was substantial utilisation of wood from the protected forest, despite high awareness that this was officially prohibited. These features demonstrate a point made in the first chapter, that despite the existence on paper of legislation designed to protect Indonesia's assets, there are plenty of opportunities to ignore these regulations in order to gain individual benefit and without much fear of sanctions.

The Tenggerese and Resource Sustainability

The investigation in this chapter into the livelihood strategies and resource use of the Tenggerese was designed to shed light on the research questions identified in Chapter 4 by assessing the propensity for utilisation of resources in the national park. The intention was to use this information to assess whether any variation in attitude towards
the park between the different villages could be attributed to involvement in tourism. Generally, it seemed that economic hardship caused by the failure of cash-crops, coupled with the traditional use of the forest as a 'free' store of fuelwood and other necessities, and exacerbated by weak efforts to raise public awareness and to police the area, had resulted in substantial utilisation of forest resources.

This, along with the agricultural use of the steeply-sloping, easily-eroded land, appeared to be unsustainable, in that the environment was being damaged and was not being allowed time to recover. Historical and geographical factors had shaped the Tenggerese into a self-reliant people with a high dependence on the natural resources around them, but the self-sufficiency presumably afforded them in the past by their farming methods had been replaced by their integration into the national economy. The intensive farming methods of modern agriculture, combined with a utilitarian approach to the environment and poor understanding of ecological processes, had resulted in a decline in the capacity of their farmland and in a need to turn to other ways of earning a living. This was most notable at Kandang Sari, where wood and charcoal had increasingly been extracted from the protected area for sale rather than for domestic consumption. In certain places tree cover had diminished considerably in recent years, while throughout the region wildlife had been much reduced through over-hunting.

On a more optimistic note, the process of land failure and the consequent fall in people's incomes in and around Bromo Tengger Semeru National Park had not (at least at the time of the study) resulted in widespread or extreme poverty, and it may well be that this will not occur if better land-management techniques are introduced or if ways of relieving pressure on the land arise. Given these inputs, the farmers could almost certainly improve their yields and stem the decline in the productive capacity of their land. Whether this will happen or not is debatable, since government services in the Tengger region were largely absent even before the fall of the Suharto regime and since then (as noted in Chapter 1), government involvement in resource management has declined under devolution, with a consequent deterioration in their management. As seen
in this chapter, some of the ways in which people are trying to compensate for lost agricultural income appear to be unsustainable, such as the over-utilisation of trees from the protected area and the sale of fuel outside the communities, although one area which looked more promising (at least until the late 1990s) was tourism, which will form the subject of the next chapter.

More generally, it is striking how few resources are being devoted to protection of the national park, which is after all a site of national and international importance. This was discussed in the last chapter, when it was said that an opportunity to create a body of public support for national parks is being missed, and the same failure to engage with the local people in terms of the presentation of the national park is also evident. With a judicious public information campaign, the national park could be much more strongly positioned as a source of long-term income and local and national pride than is currently the case. The failure to achieve this can be seen as an example of how policy decisions made under the top-down, neoclassical economic system are extremely hard to translate into ground-level actions when human and financial resources and a conservation-orientated political will backed up by good governance are lacking. Currently, the local weakness of government institutions means that the villagers are only vaguely aware of the national and global value of the national park, which is a demonstration of the way that the people who live around the park – who are its ultimate guardians and yet are amongst the most marginalised groups in Indonesia – are supposed to bear the costs of maintaining it, while the national and international community benefit from its existence at no cost to themselves.

There are clear issues of development and distribution here which, of course, form one of the dilemmas at the heart of the debate on sustainability and the protection of natural assets: in a world of increasing globalisation and interdependency, how should the costs of conservation be paid for, and by whom? If the people who live around Bromo Tengger Semeru are to look after it by abstaining from using its resources, should they be compensated for the lower standard of living they will thus experience, and if so, how?
Will the direct transfer of funds from overseas or from wealthier parts of Indonesia through tourism to Bromo Tengger Semeru prove to be a way of addressing this? It was shown in Chapter 5 that the substantial revenues generated by tourism did not appear to be having much positive impact on the park as far as government administration of it was concerned, and the next chapter will investigate whether this was true of the Tenggerese. It would be interesting to see whether the factors identified in this chapter, i.e. of a utilitarian yet unscientific approach to the environment and the ability and desire to respond to market forces and respect for leadership, would also affect their involvement in this. These questions will be addressed in the next chapter.
Chapter 7 - The Tenggerese and Tourism

The previous chapter described the livelihood strategies of the Tenggerese who live around Bromo Tengger Semeru National Park and their reliance on the natural environment. It showed that although the agricultural techniques of the Green Revolution had initially led to increased prosperity, inadequate understanding of the sophisticated physical, chemical and biological interactions of these techniques had resulted in degradation of the agricultural environment. To supplement their income, most villagers depended on the neighbouring state-owned forests for fuelwood and other supplies. No evidence was found that a strong innate respect for the environment existed in the Tenggerese communities which, coupled with weak institutional support from the government, meant that people’s individual natural assets (the land) and their common ones (the forests) were being over-exploited. At the same time, it was found that the Tenggerese were entrepreneurial and willing to experiment with alternative ways of earning a living, particularly when forced to do so by the failure of the cash-crop agriculture which had formed their principal means of participating in the market economy during most of the 20th century.

Whereas many poorer communities forced to seek alternative means of livelihood have no option but to migrate to cities or to turn to ever more exploitative means of extracting a living from the environment (Kates and Haarman, 1992, in Sage, 1996), the case of the Tenggerese is interesting in that in some parts of their territory there are both endogenous and exogenous factors which attach them rather firmly to their ancestral lands and at the same time give them an unusual opportunity to earn an income while there. The endogenous factors are primarily related to the unique history and culture of the Tengger people, while the exogenous ones are mainly the result of the geographical accident of their position on the site of one of Indonesia’s principal tourist attractions. These factors will be examined in this chapter through a discussion of the involvement of the Tenggerese in tourism and the influence of tourism on the Tenggerese.
The main characteristics of the tourism market segments attracted to Bromo were discussed in Chapter 5, and in this chapter, an investigation into the Tenggerese culture and lifestyle as it relates to tourism will be used to inform the discussion of how tourism has developed in the region. It has been mentioned previously that on the surface the Tengger communities present a rather homogeneous aspect to the outside world. It has already been seen, however, that they have reacted in a variety of ways to local and outside circumstances in terms of their choice of crops and of alternatives to agriculture, and further differences between them will be discussed below. It would also be interesting to see whether any differences arose from the range of opportunities presented by tourism. If there were any differences, what seemed to be the source of these? And would there be any consequent influence on use of natural resources? This touches on the core consideration of this thesis: the positive and negative effects of involvement in tourism on the exploitation of the natural resources of the protected area and its surroundings, in other words whether tourism to a natural area can help conserve the environment rather than causing it to deteriorate.

It was seen in the last chapter that the principal use of forest resources by villagers throughout the Bromo Tengger Semeru region was for fuelwood, and that out of the five villages studied, utilisation of wood as a fuel was lowest in Ngadisari. But was this lower level of use linked to tourism in any way, either because increased income meant that reliance on the ‘free’ fuel of the forests was less necessary, or because an awareness of the importance of the national park as a source of income affected attitudes towards it in Ngadisari?

In order to examine these issues, this chapter will begin by outlining the religion of the Tenggerese in order to highlight some differences between the villages while emphasising the separate history of the Tenggerese from the mass of lowland Java. The participation in tourism of residents of the five villages will then be described, followed by a discussion of how tourism is impacting on the Tenggerese and an assessment of whether higher levels of tourism in some places seem to be reducing people’s reliance on
agriculture and on the resources of the national park. It is possible, of course, that there will be no discernible effect on national parks from tourism and that – as in the case studies reviewed by Brandon and Wells (1992) and mentioned in Chapter 3 – the villagers will simply treat tourism as an additional source of income rather than an alternative, and this aspect will be considered too. Finally, an attempt will be made to identify the particular strengths and weaknesses of the Tenggerese in relation to tourism, since it is these factors which may point towards the sustainability (or otherwise) of tourism in their area.

Religion and the Tenggerese

In the previous chapter, it was described how the Tengger people are a relict Hindu population which survived in the mountains of eastern Java long after most of the rest of Java had been Islamicised. The communities remained more or less undisturbed in their mountain strongholds until the 20th century. The layout of some of the older villages, including Ngadas, Ngadisari and Wonokitri, where houses are clustered in defensive positions on hill-crests and with distant views over the surrounding countryside, is an indication of the threat under which the Tengger people had felt themselves to be in the past (see Appendix 3, photos 9 and 10). Of the five villages studied, these three are long-established Tengger communities, while the other two, Kandang Sari and Ranu Pani, were established in the second half of the 20th century with populations of incomers from other areas, including, in the case of Kandang Sari, significant numbers of people of Madurese origin, who were Muslim. The Islamic faith of the Madurese and other lowland Javanese increased the isolation of the Tenggerese, and religious differences remain their most important distinguishing factor. At the same time, there are significant differences between the Tengger villages and, in some cases, within them which can be illustrated by a brief discussion of the local religion; this discussion is important because it helps to illustrate Tenggerese reaction to the opportunities and threats offered by the 20th century expansion in communications, including the development of tourism.
Although the roots of the Tengger religion are the same as those of Balinese Hinduism, by the mid-20th century the Tenggerese had been separated for at least two centuries from the Balinese and in consequence their religion had developed along different lines. Indeed, it was not even termed 'Hinduism' by the Tenggerese but was (and in some places still is) known as Buda Jawa. There were no sites of worship other than small spirit shrines (dhanyang), sometimes marked only by a grove of ancient trees, and there was no theological infrastructure other than a dukun, or traditional religious leader. The lack of formal structures had two principal implications. First, it meant that the Tenggerese could not be classified as belonging to an official religion, which was of great significance during the civil strife of 1965-66 when thousands of members, sympathisers and suspected sympathisers of the Indonesian Communist Party were killed (Southwood and Flanagan, 1983). Anyone who could not confirm membership of a major religion was in danger of being taken for a Communist and killed, and some Tenggerese converted to Islam for this reason (Hefner, 1987). Secondly, as the adherents of Buda Jawa attempted to clarify and formalise their religion in response to this threat, inconsistencies within the religion were thrown into relief.

The formalisation process came about largely through a campaign spearheaded by the Balinese for official recognition of Hinduism, which was achieved in 1962, while a movement which had begun in the 1950s to affiliate the Tengger religion with Balinese Hinduism gathered momentum. In the process, some Tengger villages adopted the institutions and rituals of Balinese prayer and the ornate architectural forms of the temples. Communities in the north-west of the Tengger region, including Wonokitri (identified in the last chapter as the most forward-thinking of the villages), accepted the change in 1962, when Hinduism was recognised by the Indonesian state, and many other villages, including Ngadisari, followed suit in 1977 (Hefner, 1985; Djojono, 1997). By 1996/97 the only sizeable Tengger village to profess a majority adherence to Buda Jawa was Ngadas. Even here, a growing number of people termed themselves Hindus and had built a pura - a Balinese-style temple - in 1996. Later the same year, the Buda community
built their own prayer-house (sanggar) near an older spirit shrine in order to give their members somewhere to worship.¹

These tensions have meant that although there is a pan-Tengger Hindu Council and certain common festivities, the largest being the Kasodo festival which takes place once a year (in the Javanese calendar)² at the volcanic crater of Bromo, the religion of the Tenggerese is not a particularly unifying factor between the villages. An additional source of stress is the gradual erosion of Tengger Hinduism through conversion to Islam. Hefner (1985 and 1987) noted an increased interaction between Tenggerese and lowland Javanese through greater commercial activity since the 1970s, and commented that Islam seemed to be most successful in the communities which were most involved in cash-crop agriculture (Hefner, 1987). The current study, in the mid-1990s, found that while three of the five villages studied (Ngadas, Ngadisari and Wonokitri) were still predominantly Hindu or Buda Jawa, another (Kandang Sari) had an important Muslim element and the fifth (Ranu Pani) was rapidly becoming Islamised.³ Even in highly conservative Ngadas a strong proselytising push towards Islam was occurring, largely through the efforts of the former school teacher, a lowland Javanese who by his own account had set out to convert people to Islam (Suliono, 1996).

All this demonstrates several points: first – as discussed earlier - that an apparently homogeneous community may, on closer inspection, be riven with tensions; secondly,

¹ The determination of the traditionalist Buda Jawa community to maintain their distinction from Hinduism had led them into an anomalous situation in that their sanggar was financed by a Chinese Buddhist community from the lowlands (the Buddha Siddharta Gautama sect). At its opening ceremony, Chinese families attended and participated in the rituals, even though the liturgies and beliefs of the two religions had nothing in common.

² The Javanese calendar which applies to this is the lunar calendar of 354-355 days, with the Kasodo occurring on the 14th day of the 11th month.

³ Here, one of the four original settlers of Ranu Pani – then in his 70s – had converted to Islam in 1990. His reasons were expressed thus: “I wanted to go on an aeroplane, so my wife and I thought we’d go to Jakarta, but then we thought ‘well, if we’re going that far, why don’t we go to Mecca?’ But to do that we had to be Muslims, so we converted to Islam and built a mushollah. After it was opened I realised I didn’t know how to pray. We learned how to do it at Mecca and learned about Islam from the school-teachers here.” He also said he wanted to become a Muslim because they seemed clean and there were always lots of people at the mosque, and because at Lebaran (Idul Fitri) the government gave the village presents. He also thought it was nice and friendly that when someone died a lot of people said prayers for the deceased, which does not happen with the traditional religion. He and his wife went on the Haj in 1993 – the first people from the Tengger region to do so (Mariarti, 1996).
that exposure to similar influences may result in diverse responses, depending on local circumstances; thirdly - as described in the last chapter - that the Tengger communities are keen to accommodate new ideas; and fourthly, that the Tenggerese are not only subject to the possible influences of foreign tourists but also to the influence of pan-Indonesian (or pan-Javanese) cultural norms. This framework will be used to discuss the involvement of the Tenggerese in tourism.

Tourism in the Tengger Region

In this section an overview of tourism development around Bromo Tengger Semeru will be given, followed by an examination of the scale and nature of involvement in the industry in the different villages, with Ngadisari - where most tourism takes place - treated last.

It was remarked in Chapter 2 that tourism in Indonesia has often developed spontaneously in response to demand rather than according to a plan, and this pattern has also been evident around Bromo Tengger Semeru. Tourists were already visiting Mount Bromo during overland tours of Java early in the 20th century (Cribb, 1995), and once the political and civil turmoil of the middle decades of the century had died down, tourism began to revive. By the mid-1970s Mount Bromo was again well-established on tour itineraries. The form of tourist activity here has been outlined in Chapter 5, but it is worth reiterating that the experience is rather limited, both temporally and spatially. The great majority of tourists pass through Ngadisari or Wonokitri to visit Mount Bromo itself, with a smaller number staying at Ranu Pani to climb Mount Semeru. Visitors to Mount Bromo generally stay for between two hours and two days, while people climbing Mount Semeru from Ranu Pani of necessity stay longer, as the climb takes three days. The window of opportunity available for residents to benefit from the tourists is therefore rather short, and the response of the villagers has depended on the size of this window, the type of tourists, and the skills available locally.

During interviews with householders in all five villages studied, it was found that people were happy to relate their experiences and hopes of tourism, and that there was
general enthusiasm for participating in its perceived wealth-creating opportunities, with no disapproving comments heard. At the same time, there were some unrealistic expectations of the potential benefits of tourism, particularly in the villages where the least tourism occurred, namely Ngadas and Kandang Sari. Here, village officials expressed a desire to tap into the tourism market, but there was little understanding of how to do so. In Kandang Sari the hope was expressed that a road might be built through the village to the Sand Sea, enabling visitors to approach Bromo from the west (Ismandi, 1997; Yanto, 1997; Sasanto, 1997). However, as it is further to Bromo from Kandang Sari than from Ngadisari or even Wonokitri and the views are not as spectacular, it seemed unlikely that such a link could be justified. The interest in a road seemed to have sprung from observing what had happened at Wonokitri, from where a road had been built up Mount Penanjakan and down into the Sand Sea, thus enabling the village – unfairly, according to the residents of Kandang Sari – to grab the benefits of tourism (Ismandi, 1997; Kadar, 1997). Here, already, was an indication of the jealousies that could be caused by the lucrative possibilities of tourism.

In Ngadas there was a more realistic possibility of earning income from tourism, as some domestic tourists (and a tiny number of foreigners) already entered the national park via the village, with at weekends especially a steady trickle of young people arriving on motorbikes. On the other hand, there was, again, little notion of how best to exploit this passing trade: for instance no food or souvenir stalls were set up. This may simply be because, despite appearances, there were too few tourists to make this a viable option, or because of a lack of entrepreneurial expertise in an unfamiliar field; a possible unwillingness to branch out into unfamiliar areas was suggested by the village secretary, who said that people were “not used” to opening shops (Matas, 1997). The conservative attitude here may have been a particular characteristic of Ngadas which, as mentioned above, contained a strong traditionalist element which clung to the Buda Jawa form of the local religion.
Another reason for the lack of tourism-related entrepreneurship may also have been the lack of enlightened leadership in Ngadas, identified in the last chapter. This factor was confirmed by comments from several respondents. For instance, a woman who made and sold sweetmeats commented that "there's no leadership" when asked why she did not set up a stall to attract passers-by at the weekends (Martunah, 1996), while other people made remarks such as "tourism depends on the Pak Lurah" (Yoyo, 1996) and "the Bu Lurah hasn't pushed tourism yet" (Pa'i, 1996). The fact that residents of Ngadas found it difficult to engage with tourism also tends to reinforce a point made in Chapter 2 with reference to tourism developments generally, that it is often difficult to find a mechanism whereby relatively unsophisticated local communities can become involved in the industry. Under the TALC processes described in Chapter 2, of course, this would seem to leave the way open for outsiders to capitalise on the commercial opportunities, and it was interesting that this was not happening to any great extent in the Tengger villages. It was mentioned in Chapter 4 that the Tengger communities are rather closed to outsiders, while the circumspection with which they were viewed by outsiders (as found by Hefner and mentioned in the last chapter) may have been a deterrent. There are other psychological and institutional barriers to incomers, which will be discussed below; although, as discussed in Chapter 5 in relation to the involvement of PHPA personnel in tourism, if outsiders find a local 'peg' on which to hook their entrepreneurial ambitions they may take advantage of this with alacrity.

The difficulty of finding possible entry points into tourism was borne out by the situation in Ranu Pani, which also offers an interesting demonstration of an early stage of the TALC process. Here, there had been a campsite as a staging-post on the way up Mount Semeru even in Dutch times, and tourists began arriving in appreciable numbers in the early 1970s. It was difficult to obtain accurate visitor numbers, but fairly reliable figures are that 292 tourists stayed at the only guest-house in 1996 (Suroto, 1996), and 3722 tourists climbed Mount Semeru in 1993 (Sutito, 1994). These figures do not include day-visitors from Lumajang and other lowland towns, of whom several were observed.
during the study period. Even the sketchy figures obtained show that substantial numbers of visitors do arrive, presenting concomitant commercial possibilities.

It was found in Ranu Pani that, as suggested by the reluctance to engage in unfamiliar activities exhibited in Ngadas, involvement in tourism centred on existing skills and work patterns, consisting principally of acting as porters and guides for the climb up Mount Semeru. Of the 25 households surveyed in Ranu Pani, sixteen (64 per cent) reported having had some contact with tourists, of which half was through working as porters or guides at some point. Significant sums could be earned for portering (around Rp.11,500 per day) and guiding (around 25,000), which compared favourably with the daily agricultural wage of Rp.2,500. Even though the work was infrequent, with only 4 to 6 trips per year at most, this income was a useful sum and was further supplemented by participation in *kuda lumping* (horse-trance dancing)⁴ performances for tourists (16 per cent) and by provision of accommodation (12 per cent). The households which provided rooms tended to be the better-off ones, and use of these generally occurred on an ad hoc basis and before purpose-built facilities were introduced, which by 1997 consisted of a large building built by the PHPA where most Indonesian mountain-climbers stayed, a simple guest-house owned by lowland Javanese where most foreign tourists stayed, and a *warung* (café) owned by someone from another village.

Tourism development in Ranu Pani thus offers a good illustration of the transition from the second to the third stages of the TALC. Enough tourists were arriving to make dedicated facilities viable, with a shift away from reliance on pre-existing ones, but the principal groups of tourists catered to (using the typology presented in Chapter 4) are still the least demanding ones, i.e. the Domestic Economy and Economy Plus groups and International Explorers with a few Backpacker Plus and General Interest tourists. The TALC model predicts that as tourism develops local people tend to be side-lined, but there are features of the nascent tourism in Ranu Pani which indicate that this would not

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⁴ The dancers go into a trance which is induced and maintained by the rhythmic sounds of small groups of musicians and by the inhalation of various substances provided by a 'ring-master'.

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necessarily happen. In the first place, the current facilities are owned not by complete outsiders but by 'semi-outsiders' who, as mentioned above, are able to capitalise on some form of social access to the village due to their position. For instance, the Javanese guest-house owners had come to Ranu Pani 15 years previously as school-teachers and had retired there, while the warung owner was herself Tenggerese and the sister of a man who had married and settled locally.

Of course, it is possible that these people are the 'thin end of the wedge' and that in time more outsiders will move in. On the other hand, indications of a determination to increase local future participation were that a wealthier resident had plans to open a guest-house (Ujat, 1996), while the village authorities were arranging to send three young people annually to attend a year-long course at the Academy of Tourism in Malang (Marianto, 1996).

Another example was in the case of portering, which also illustrates a successful approach to conflict resolution and to preventing the incursion of outsiders, and this will be briefly described. In the early years of modern tourism to Mount Semeru, climbers were generally accompanied by guides and porters from lowland Java, but local men found that they were called out to help when climbers got into difficulties. In 1985 the villagers complained to PHPA that this was unfair and negotiated an agreement whereby only local men were permitted to accompany the groups (Marianto, 1996). Some of the local porters subsequently registered in a PHPA-sponsored Guides & Porters Association (Yono, 1996). These developments showed the villagers' awareness of the potential growth of tourism and of their readiness to plan for longer-term options, and also demonstrated their ability to stand up against the Javanese majority; further examples of this will be seen later in this chapter. On the other hand, the system also illustrated some intra-community tension in that there were complaints that the PHPA had their favourites

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5 One of the key informants at Ranu Pani, who worked as an occasional porter and as a volunteer with PHPA, was a graduate of this academy (Tutin, 1996).
within the association, while others were rarely called upon to work (Ngadun, 1996; Kimun, 1996); there did not seem to have been any attempt to resolve this problem.

Another aspect of tourism is that, as mentioned in Chapter 2, it is difficult to ensure the equitable distribution of its benefits throughout a community, with the industry particularly prone to élite capture. In Ranu Pani there were clear differences between the entry level and intensity of participation in tourism, depending on the availability of capital and skills: both are needed in substantial quantities, for instance, to construct, equip and run a guest-house. Having said this, there were also opportunities for no-cost involvement through portering and guiding. In any case, while the reinforcement of social stratification through tourism may be poorly accepted by Northerners keen on democratic forms of social justice, it is unlikely to encounter much resentment in the hierarchical society of Java where, as already noted, the accumulation of further riches by already wealthy people is an accepted part of the social fabric. Indeed, the most serious example of intra-community resentment encountered during the field research was when traditional hierarchical norms were not respected, as in the case of the headman of Ngadas, who was not providing the leadership which his position both empowered and obliged him to do.

As discussed in Chapter 2, participation by local stakeholders and their retention of tourism's economic benefits are considered essential to sustainability in tourism, and in Ranu Pani – so far – there appeared to be a reasonable degree of this. But, as shown in Chapter 3, the extent to which income-generating benefits accrue to the host community can also determine whether people will be sufficiently motivated not to over-exploit the natural resources around them, and this was another important aspect of the investigation. It was found in Ranu Pani that although the economic opportunities of tourism were still relatively small, a generally favourable attitude towards tourism and the national park had nonetheless been created. For instance, several respondents expressed the view that infrastructural improvements such as the new road to the village had been made because of tourism (Djati, 1996; Mariarti, 1996). On the other hand, although awareness of the
national park (or 'PPA's area') was quite high (as noted in the last chapter), there was no indication that the villagers associated the ecological integrity of the park with tourism and that they might be keen to protect it as a result. Any reforestation seemed to come about because of a desire to maintain a supply of firewood or because they had been told to do so rather than for any other reason. As mentioned in the concluding remarks to the last chapter, an opportunity was being missed here to position the park much more strongly as a source of income and local or national pride. This is not the fault of locally-based rangers, since these men are on the lowest rungs of the PHPA hierarchy: the policy and stimulus for stronger positioning and awareness-raising needs to come from above.

The response to tourism in Ranu Pani makes an interesting comparison with Ngadas, in that residents had not waited for any leadership initiative or outside stimulus to take advantage of the opportunities offered. The contrast with the rather introspective and passive attitude of Ngadas may have been partly because, as described above, the history of the two villages was very different in that Ngadas had been established on its hill-top for at least two centuries, while Ranu Pani was only settled in the 1950s and, having drawn settlers from a fairly wide area of the highlands, had a more diverse social composition. There was a strong collective memory of the pioneering spirit which had led people to open up these high mountain areas, with at least four of the original settlers still alive. The fairly recent community history and the rather disparate nature of the population may also have been why the village seemed especially open to outside influences: it was the only village of the five studied where a substantial mosque was being built, and there was a strong Christian element (although split into two factions) in addition to the Hindu and Muslim groups. These factors may have contributed to the strong degree of reflexivity demonstrated by the community to counter outside forces which threatened to remove an important source of income from their grasp.

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6 One family encountered included adherents of all three faiths.
Moving on to the fourth village, Wonokitri, the largest of the five studied, this was different again from the three discussed so far because although it was an older, settled community, it had already proved its openness to new influences and ability to assimilate these without losing its traditions or sense of identity. As mentioned above, it was one of the first Tengger villages to accept the modernising influence of the Balinese-led Hindu reform movement in the early 1960s, by which time the village was led by the outstanding headman mentioned in Chapter 6. Under his leadership, Wonokitri became known for its forward-thinking health and social welfare programmes, and it could be expected that the reaction to tourism would be similarly resolute and coherent. This did, indeed, prove to be the case. Wonokitri hosts a good deal of tourism to Bromo, at least in a transitory fashion, and steps had been taken early on in the development of the modern (post-1970) tourism industry to enable the village to benefit from its proximity to Bromo.

The main element of this was the construction of a road to the summit of Mount Penanjakan, one of the principal viewpoints around the Tengger Caldera, and down the Caldera wall into the Sand Sea. It took several years to build this road (from 1969 to 1975) and it was created mainly with manual labour. It was adopted by the local government in 1988. While access to Mount Bromo from the north-west had previously only been possible on foot or on horse-back, the road gave access by vehicle, so that tourists could now visit the volcano from this side with just an overnight stay. The effect had been to foster tourism from this side, allowing a large hotel (the Bromo Tosari) to flourish and the development of accommodation and transport services within Wonokitri. Thus, in 1995/96 just over a quarter (27.5 per cent) of visitors to the national park entered via Wonokitri (DepHut, 1996), a total of 35,515 people - which, as shown in Chapter 5 when methods of ‘hiding’ visitors and evading the entry fee were described - is certainly an under-estimate. These numbers indicate that in terms of the TALC model tourism to

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7 One informant related how, when his father was involved in building the road down the steepest section of the caldera wall, the men had to fix themselves with ropes to trees above where they were working in order not to fall off (Dharsan, 1997).

8 Opened in 1991.
Wonokitri has moved into the third, or ‘development’ stage, with “large numbers of visitors now arriving, at peak periods equalling or exceeding the number of local inhabitants” (Cooper et al, 1993:91). This is considerably further along the TALC curve than Ranu Pani, and it would be interesting to discover whether the characteristics of the response to tourism in Wonokitri bore any resemblance to the nascent ones seen in Ranu Pani. An indication of a similar vein of reflexivity was demonstrated by the fact that the growth of tourism in the north-west was in large measure due to Wonokitri’s initiative of building the road in the first place: it was, therefore, not too surprising to find that ways of ensuring that tourism wealth remained in the village had also evolved.

Just as in Ranu Pani, where Mount Semeru was the main attraction and tourism facilities had developed in response to the needs of Domestic Economy and Economy Plus and International Explorer tourists, in Wonokitri the facilities had developed in response to the characteristics of the tourists who came here. These were in two main groups. Indonesian tourists were the most obvious presence in Wonokitri itself, consisting mainly of Family & Incentive or Economy Plus groups. Here was demonstrated the trend identified in Chapters 3 and 5 towards an increasingly differentiated domestic market. The other principal category, who barely impinged upon Wonokitri itself, were International Mass and General Interest tourists who stayed one night at the Hotel Bromo Tosari and were transported early in the morning to Mount Penanjakan and Mount Bromo.

The fact that there were no public transport services to Wonokitri (local bus lines ended at Tosari, about 2 miles away) meant that tourists either had to have their own transport or hire an ojek (motorcycle taxi) or locally-owned jeeps. This was a deterrent to Domestic Economy and Mass Budget tourists and to International Backpackers, for whom the cost of chartering transport not only to Wonokitri but on to Mount Penanjakan and Mount Bromo was prohibitive. The provision of accommodation was, as a consequence, orientated towards the wealthier end of the domestic market. There were two purpose-built guest-houses, both owned by local people, but most tourist
accommodation was in private homes – although there were actually rather few homes where tourists were found to lodge, even occasionally, with only 3 of the 58 households interviewed (5 per cent) putting tourists up from time to time, and these were amongst the wealthier inhabitants.⁹ There was a high level of co-operation between accommodation owners in that they had grouped themselves into an informal organisation and agreed to let rooms for a standard rate of Rp.25,000 per room.¹⁰

An effort was made to determine whether the provision of rooms used by visitors was purely a response to tourism or whether they would have been built anyway. The conclusion was reached that there was an element of both. In 1995 the residents of Wonokitri were encouraged by the Kabupaten administration to provide tourist accommodation (Sri Supiani, 1997), and some residents appeared to keep their better rooms entirely for visitors while themselves occupying warmer rooms at the rear of the house, or even in a different house entirely (Giman, 1997; Sri Supiani, 1997). However, it was also reported by several people that surplus disposable income was used to upgrade their homes and not necessarily in order to provide accommodation for tourists (Jumahi, 1997; Suersan, 1997; Wartono, 1997). It therefore seemed that the construction of better-quality houses could only be partially attributed to tourism.

As with the co-ordination over room-prices, there was co-operation between owners over tourism transportation. As mentioned above, tourists without their own transport had to hire ojeks and jeeps driven by local owners. Taking the case of the ojeks (a well-established system all over Java) first, it was found during the survey that 14 per cent of respondents in Wonokitri had a motorbike which they used for ojek rides. The drivers had agreed standard fares amongst themselves, and rides from tourists were described as a useful addition to their income, although it was not the main source

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⁹ Whereas destinations popular with International Backpackers throughout SE Asia are characterised by low-cost rooms and an idealised style of architecture based on wood and bamboo, as discussed in Chapter 2, the rooms at Wonokitri were more sophisticated and of rather good quality in Indonesian terms, with concrete and plaster walls, tinted glass windows, and sprung mattresses.

¹⁰ This was perceived as expensive by many Backpackers, who were used to paying about Rp.10,000 per room/night.
While a reasonable level of income was needed to buy a motorcycle in the first place, the *ojek* system constitutes an opportunity for middle-income families to expand their normal range of economic activity and, as with portering in Ranu Pani, it offered a way of distributing income from tourism through an activity which required only pre-existing skills.

Some families with more capital at their disposal had bought jeeps in order to transport package tour groups staying at the Hotel Bromo Tosari and other tourists to Mount Penanjakan and Mount Bromo. This was again well organised, with jeep-owners belonging to an association of about 60 members, around a third of whom (18) lived in Wonokitri and the remainder in other villages nearby. The secretary of the Jeep-Owners’ Association and his assistant lived in Wonokitri. The number of jeeps required each day to take tourists to Mount Penanjakan in time for sunrise was relayed each evening from the hotel to the association, and members were called upon in turn to provide transportation (Tamsis, 1997; Dharsan, 1997). In contrast to the *ojeks*, whose owners said that tourist rides formed only a fairly minor part of their income and that they would have bought the motorbikes anyway, the purchase of jeeps appeared to be much more closely related to tourism. One informant said that his jeep was used on average twice a week for tourists, and at busy times (for instance Idul Fitri) he could get as many as two or three rides per day, earning over a million rupiah in less than a week. This particular respondent reported that the jeep was also important for his own transport, although in general owners said that tourism had provided the stimulus for buying the jeep (Giman, 1997; Syukur, 1997). Jeep and *ojek* ownership together involved around 17 per cent of the households.

In order to try and determine whether there was any correlation between tourism and use of the resources of the national park, a comparison was made between the households which had some involvement in tourism (through accommodation provision or vehicle ownership) and use of firewood or other fuels. It was found that families which had substantial involvement in tourism were indeed more likely to use fuels other than (or
in addition to) wood, but since these families appeared generally to be better off, it was not certain that lower use of fuelwood could be attributed to tourism rather than to other forms of prosperity. It was however strongly indicated that greater wealth led to reduced use of wood and increased use of paraffin or charcoal, which is an important point for future planning in and around national parks in that it may be the case that policy objectives should focus on raising income by any means, whether through the encouragement of income-generating schemes or the 'direct payment' methods outlined in Chapter 3, if pressure on them is to be relieved.

In terms of wider conclusions from tourism provision in Wonokitri, the fact that ownership of tourist-related transport and accommodation resided with middle- and upper-income families seems to support the suggestion in Chapter 2 that the benefits of tourism are subject to élite capture and prone to reinforcing local hierarchies. On the other hand, this was not the case in Ranu Pani, where the opportunities for making money through tourism accrued largely to the poorer sections of the community through portering and performances of horse-trance dancing. This difference is largely explained by the different manifestation of tourism in the two villages, with less wealthy and less demanding groups forming the bulk of visitors to Ranu Pani and wealthier ones with higher expectations in the majority at Wonokitri.

It is interesting, however, that in both cases, the facilities and services provided depended on pre-existing skills and abilities. This helps to explain why outsiders may find it easy to move into the gap left by an absence of local skills, and it also has important implications for the establishment of tourism (and other income-generating projects) around protected areas, in that the abilities of the intended beneficiaries should be taken into account so that they can participate in such schemes - and see the financial benefits - immediately. In the longer term, of course, skills training can encourage local involvement, but this process may take so long that the benefits to local communities will not become apparent within the life-span of a planned development programme. If this happens, people may become disheartened, feeling that promises have not been fulfilled,
and may revert to their former exploitation of the protected area - if indeed they ever ceased this in the first place. As discussed in Chapter 3, the Brandon and Wells 1992 report on income-generating schemes around ICDPs found that local people tended to see these as an addition to their normal source of income rather than an alternative to it. It was mentioned in Chapter 1 that few human societies have shown themselves willing to forego opportunities for enrichment, and it may well be that some development projects around protected areas, however well-intentioned, have been misguided in assuming the readiness of intended beneficiaries to exchange one form of near-subsistence existence for another. It will be seen in the discussion of Ngadisari below that the alternatives to resource exploitation have to be very substantial before the intended objective of alleviation of pressure on resources takes place.

In connection with this point, an attempt was made in Wonokitri (as in the other villages) to determine whether involvement in tourism affected attitudes to the national park. It was noted in the previous chapter that utilisation of fuelwood from the forest appeared to be lower in Wonokitri than in any other village except Ngadisari. As far as perceptions of the national park were concerned, however, the same confusion as to what the *taman nasional* actually was existed in Wonokitri as in Kandang Sari, Ngadas and Ranu Pani. Again, it was more effective to talk about the 'protected forest', since awareness of this was universal, with all respondents to this question (49 out of 58 households) having heard of it. When asked what it was for, over half the respondents to this question (28, or 57 per cent) cited an ecological function of some kind, while only 10 (20 per cent) ascribed a touristic function to the forest. Only one person used the term *taman nasional* spontaneously and said that it was important for tourism and for enhancing the prestige of the village (Suharjo, 1997). In general, people did not associate the protected forest with the tourist sites of Bromo and Penanjakan, seeing these as a separate entity and here again, as with Ranu Pani, it seemed that an opportunity for linking conservation of the national park with the income-generating possibilities of tourism had been missed.
To conclude the discussion on Wonokitri, it was found that although tourism had clearly passed into the third stage of the TALC, it had been incorporated into the existing village economy and local people had taken responsibility for developing services with a high degree of enterprise and co-operation and with considerable ability to profit from the opportunities offered. One reason that they had not allowed themselves to be marginalised by an influx of outside entrepreneurs may be the particularly strong self-identity of the Tenggerese in Wonokitri, bolstered by the significant role that good leadership had played in the village's post-Independence history. However, although this strong leadership had included attention to erosion prevention and to developing a tourism infrastructure, it had evidently not extended to linking the preservation of the natural heritage in the form of the national park with tourism. If awareness of the need to protect the park because of its income-generating potential was to be found anywhere, it seemed likely that it would be in Ngadisari, where the majority of tourism to Bromo Tengger Semeru takes place, and we now turn to an examination of this village.

As Ngadisari was the most popular destination in the national park, involvement in tourism by local people was expected to be higher than in the other villages. Before the field-work, however, desk research and interviews with conservation and tourism officials had suggested that the Tenggerese had little interest in tourism, preferring to concentrate on their agriculture (Subjanto, 1996; Dolly, 1996), and although a draft management plan produced by the national park office stated that a majority of people in Wonokitri and Ngadisari worked in tourism transportation, this was said to be only supplementary to their main occupation as farmers (DepHut, 1995a). The field research in Wonokitri had already contradicted part of this assumption by showing that, far from a majority involvement in tourism, only 17 per cent of households were involved in tourism transportation and 5 per cent in accommodation (with some overlap between the two). It would be interesting to see whether the point made about Ngadisari was any more accurate. In the event, it was obvious within a day or two of arriving in Ngadisari that tourism was far more significant to residents than assumed by government sources. In fact, it was discovered that
participation in tourism was extremely high: only 6 out of the 38 households interviewed (16 per cent) had no engagement in tourism and of these, half either intended to become involved or had been in the past. The principal channel for this very high level of participation is ownership or management of the horses used for rides to Mount Bromo, with two-thirds of households (66 per cent) owning or managing a horse, and in some cases more than one. Other forms of involvement were through the provision of accommodation (19 per cent), ownership of jeeps (8 per cent), and employment in other aspects of tourism-related work (11 per cent), such as driving trucks to bring water to the hotels or as parking attendants. Some families participated in tourism in more than one way. The case of horse ownership will be treated first as this is the most significant, followed by ownership of other forms of transport and provision of accommodation.11

There were over 450 horses servicing the tourist demand for rides to Mount Bromo in 1997, and the horsemen had no difficulty in getting a fare at least once a day. The work pattern for the horsemen was to go out very early to take tourists to the crater for sunrise, after which they worked in their fields for a few hours. Most horsemen went out on 5 to 7 days per week and got at least one fare, while at weekends and other busy periods they could get three or four customers a day. The men earned Rp. 11,000 per ride on average, so even at a low calculation of one fare per day on five days, Rp. 55,000 per week could be earned - an important sum in local terms, while at busy times much larger amounts could be earned.12

The cost of owning a horse is relatively small: initial purchase is around Rp. 1,000,000, and the horses have a working life of 12-18 years. Some are given dedak, or rice chaff, and sugar-cane residue as a food supplement, at a cost of around Rp. 1000 per day, and they otherwise eat grass which is collected by the horse-owning family or bought in. Even taking the cost of fodder into consideration, the amounts earned from this aspect of tourism are very substantial.

11 As mentioned in Chapter 4, the village of Ngadisari consists of an upper part (Cemoro Lawang) and a lower part (Ngadisari). Most tourism activity takes place in the upper part.
12 One man said he had taken Rp. 600,000 in rides over a 10-day period around Idul Fitri in early February, 1997.
There were several interesting features of the way the horse-rides were organised. One was a determination to maintain local control over tourist services through the establishment of a Horse-Owners’ Association (the organisers of which were all Tenggerese). As with the Jeep-Owners’ Association in Wonokitri, this acted as a clearing-house for requests for rides from large tour groups, tried to allocate the rides fairly, and had standardised the fare at Rp.12,500 per ride. This maintained prices for the common benefit of all the horsemen while assuring the tourists of a fair service. On the other hand, the standard fee was displayed only on two rather discreet notice-boards and in Indonesian only. Northern tourists were generally aware of the standard fare and sometimes managed to bargain the horse-men down to Rp.10,000 if business was slack, while many Indonesian visitors chose to walk to the crater for reasons of economy. In the case of the East Asian tourists, however, who as described in Chapter 5 arrived in large Mass tour groups, the horse-men frequently managed to extract up to Rp.25,000 per ride from individual visitors until the guides accompanying these groups reached a comprehensive arrangement with the Horse-Owners’ Association.

Another interesting point is that Rp.1,500 of each fare was paid out in various village taxes and subscriptions, including a small amount to the Horse-Owners’ Association, which also paid for street-sweepers to clean up the horse manure (Pujiadi, 1997; Biandi, 1997).

The case of non-horse transportation at Bromo also shows the ability of the Tenggerese to shape their own destiny. Of the households surveyed, 8 per cent owned a jeep or minibus (3 households), but income from jeep ownership had declined substantially in the three years preceding the survey because in 1993 a government-funded road with attendant public transport services was constructed all the way to Cemoro Lawang, enabling visitors to arrive within a couple of hundred metres of the Caldera rim by public transport. Before this, tourists had to disembark from their cars or buses at the lower part of the village and either walk or hire a jeep for the final kilometre or so. When the new road was constructed many jeep owners were initially forced out of business, but jeep-owners had also been able

13 The new road had impacted on the accommodation sector too, in that tourists could now go straight to the upper part of the village for the night before their pre-dawn trip to Bromo, by-passing the lower part. Some jeep and accommodation owners resented the way that the benefits of tourism had thus been
to transfer their business to taking tourists down into the Sand Sea and up Mount Penanjakan, while others benefited from tourism in other ways by owning a horse used for rides to the crater. Information obtained after the survey period also indicated that local men were again working together to capitalise on tourism, clubbing together to collect the capital necessary to buy a jeep and taking tourists more widely afield in East Java (Fleming, 2003).

From the description of tourism in Ngadisari, it will already be clear that the village is well into the fourth, or consolidation, stage of the TALC model, with a well-established tourism infrastructure. Moving on to accommodation provision, the way this has evolved at Ngadisari demonstrates how difficult it can be for local actors to retain their stake in tourism once larger numbers of people with higher expectations start arriving. In 1977 fifty-six households in Ngadisari provided board and lodging for tourists (FAO, 1977), at which time most visitors stayed with villagers as there was only one hotel. During the late 1980s and most of the 1990s – the most energetic growth period of Indonesian tourism - accommodation provision grew rapidly: by 1990/91 two more hotels had opened and by 1997 there were four hotels, six guest-houses and 20-25 cafés, restaurants and mobile food-stalls, with several more hotels located outside Ngadisari but catering to visitors who focussed on Mount Bromo. With the increasing availability of purpose-built lodgings tourists stayed in the villagers’ homes less and less, by the time of the research generally only doing so when the hotels were full. The high volume of tourists still meant that provision of accommodation represented a major source of income, with almost a fifth of households (19 per cent) involved in this in some way. When the ownership pattern of the hotels and guest-houses was investigated, however, it was found that there was considerable participation by outsiders.

In fact, this process had been continuing for some time in recognition of the long-standing popularity of Mount Bromo. The first hotel in Ngadisari was built in 1974/5 on removed from them, demonstrating the conflict that can arise within communities as a result of unequal distribution of advantages – but even one of the people who complained of the decline in tourism in the lower village volunteered the view that the new road had been good for tourism generally (Pujiadi, 1997; Yachya, 1997; Jatung, 1997).
land leased from the Ministry of Forestry, and was owned by a businessman from outside the area while, as described in Chapter 5, the owner of one of the popular budget hotels and a newer, more upmarket hotel had come to the area as a PHPA ranger. All three of these hotels employed about half their staff from the village, with the remainder – including the managers and other senior staff – from elsewhere. Only one hotel in Ngadisari was owned by a Tenggerese man, although again, the manager and many other staff were not from the Tengger villages. There were two budget hotels about 5-6 kilometres from Ngadisari, both owned and run by non-Tenggerese, and about 20 kilometres away was a large, 3 star hotel which catered to International Mass and General Interest tourists (mainly East Asians) and was owned by people from Jakarta.

The existence of these hotels was, of course, due to market demand, and here an interesting point relating to the authenticity desired by tourists was illustrated. It was suggested in Chapter 2 that tourists’ actual desire to experience local culture is less than their professed desire, and during the visitors’ survey and more in-depth interviews with foreign tourists a strong preference was found for hotels in exogenous ownership rather than Tengger houses and locally-owned guest-houses. According to foreign tourists (who were unaware of the ownership of the hotels), the former were preferred because they offered a more comfortable, cleaner and more private environment, and they were the most highly recommended in the guide-books (Anderson, 1997; Eckhardt, 1997; Parreaux, 1997). The two most popular budget hotels had created a congenial and fashionable ambience through the use of ‘ethnic’ materials and a menu which transformed locally-available ingredients into dishes acceptable to the Northern palate. The significance of this is that, as pointed out in Chapter 2 on sustainability in tourism, foreign tourists require facilities and services of an international standard. The quality of accommodation in indigenous ownership was too low to satisfy the aspirations of the International Backpacker, Backpacker Plus and General Interest tourists and the Domestic Family & Incentive groups who form a major part of visitors to Bromo, while the Northern tourists had in effect propagated in Bromo the mock-authentic, pan-South East Asian model of tourist accommodation mentioned in
Chapter 2 by preferring this to the dour welcome and uncertain hygiene of local homes. At the same time, some local guest-house owners actively discouraged foreign tourists and targeted the budget end of the domestic market instead. As one man put it:

“local tourists sleep in a room with several people and only want one blanket, and also they don’t ask for a cheaper rate. European tourists want to pay less for the room and only sleep two to a room with a blanket each” (Sunawar, 1997).

It seemed clear, then, that as in the other four villages, involvement in tourism in Ngadisari was chiefly successful where abilities were pre-existing or needed little adaptation, such as with the horse transportation, whereas the provision of accommodation (for wealthier tourists, at least) necessitated a higher level of education and skills than was locally available; a background in farming and the reticence of the Ngadisari Tenggerese are not conducive to success in the hospitality industry. Confirming this, a senior member of staff at the large 3 star hotel commented that:

“When we started here, about 70 per cent of our staff were local, but the gap between what we needed and the skills available locally was too great, so now only about 40 per cent of a total staff of 180 are locals. These are mostly employed in capacities with little contact with guests, for instance as gardeners and room-boys. If local people who apply to us have done an English or hotel/tourism course after SMA [senior high school] then they get a priority interview, but just going through SMA isn’t enough.” (Sujarwontoko, 1997)

The propensity for education was discussed in Chapter 6 in relation to the difficulty many Tenggerese experienced in appreciating the complicated interdependencies of the natural and agricultural ecology. In Kandang Sari, Ranu Pani and Ngadas participation in education above primary school level was low, partly because the facilities were not present and partly because there seemed (to the villagers) little need for education. In Wonokitri and Ngadisari, however, far more respondents reported that they or their children had gone through high school or were intending to do so: in both places half of all households were in this category. In Wonokitri the interest in more education seemed to be part of the

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14 In Wonokitri and Ngadisari 50% of households reported at least one member having gone through high school or further education or intending to do so, whereas in Kandang Sari, Ranu Pani and Ngadas only 13%, 20%, and 23% respectively were in this position. This was not due to the difference in educational provision available as there were no high schools in any of the villages.
generally greater desire for community and individual advancement demonstrated there, but in Ngadisari the interest in education was apparently influenced by tourism, as several interviewees explained that they (or their children) wanted to have more qualifications so that they could get a better job in tourism (Jono, 1997; Pujjadi, 1997; Sukaro, 1997; Ernisasi, 1997; Rusti, 1997). If this tendency translates into a greater number of Tenggerese at ownership and management levels in tourism, it will certainly help to counter the trend towards marginalisation of local people generally predicted by the TALC model and borne out by current ownership patterns of accommodation in Ngadisari. It is also extremely relevant for the long-term prospects for sustainable tourism, since few Tenggerese are currently involved in tourism at a policy-making level, and better education would seem to be an essential pre-requisite for this.

Returning to the core question of this investigation, which is whether tourism to a national park can help to conserve its resources, the effect on the Tenggerese of their involvement in tourism in terms of their utilisation of natural resources now needs to be considered, especially in the light of the TALC model which suggests that “with increasing numbers and popularity the destination may suffer problems of overuse and deterioration of facilities” (Cooper et al. 1993:91).

As far as the relative importance of tourism-related income is concerned, it has been shown that involvement in tourism was significant and affected a high proportion of the villagers. The income gained through tourism was particularly important since - as in the other villages - the potato and cabbage crops in Ngadisari had been failing for some years. One respondent voiced the opinion that: “if it wasn’t for tourism we would be in a bad state; tourism has gone a long way towards replacing the lost income from farming” (Atem, 1997). Another said that the income from horse-rides was used to cover daily needs such as food and other household expenses, while the income from crops represented a form of savings, in that the money for them was realised in lump sums. If the crop failed, then the returns were very poor, so the income from the horses was even more important (Rusti, 1997). Yet another farmer, whose leg injury had prevented him from working his fields for
the past four years, said that the income from room rentals at busy periods now represented
the major source of income for the family (Ponija, 1997).

In an attempt to find some answer to the all-important question of whether tourism-
generated income was affecting the use of fuelwood, people in households which relied on
fuel other than wood for cooking and heating (56 per cent) were asked why they did not use
wood. Almost without exception, the response was that they had no time to collect wood or
that it was easier or cleaner to use other fuels. No-one suggested that they did not use wood
out of concern for forest cover in the protected area — although this may have been because
there were generally more trees on people’s own land than in other villages and so there was
simply no need to resort to the state-owned trees within the park. On the other hand, tree
cover in the protected area was certainly thinner near the boundary with the village, a fact
which one respondent attributed to wood-cutting (Arto, 1997), and other respondents also
indicated that there were incursions into PHPA land — although the incidence of these did
seem to be lower than in the other villages. No-one was actually observed to be cutting
wood in the forest during the survey period and no-one reported having done so, whereas
both were the case in the other villages. It is realised that this is not a precise measurement,
but taken together with the definite transition to convenience fuels, it seems to be an
indication of reduced pressure on the local forest.

It would be satisfying to conclude that the apparently lower use of fuelwood from the
protected area was due to greater awareness of its conservation functions and the realisation
that a great many people’s livelihood depended on its ecological integrity. In Chapter 6 it
was mentioned that 56 per cent of people in Ngadisari believed the purpose of the park was
for tourism, with 60 per cent also knowing about its conservation functions. Unfortunately,
little connection was made between the two aspects. This was shown, first, by the fact that
there was no unprompted suggestion that the park needed to be protected so that tourists
would continue to arrive, and secondly, by the fact that two other forms of exploitation of
park resources were directly related to tourism: the collection of edelweiss and grass-cutting
for the horses. The environmental impacts of these were described in Chapter 5; edelweiss
had been collected for sale to the point of rarity, while grass-cutting was also carried out with impunity. The fact that neither the inhabitants of Ngadisari nor the government showed any interest in controlling these processes seemed – as in the other villages – to indicate an important failing on the part of the authorities to link present and future economic benefits to the continued integrity of the national park’s ecology. Although the provincial government had built the new road to Ngadisari in recognition of tourism’s importance to the regional economy, other tourism developments had occurred in response to market demand rather than through any form of planned intervention. As well as being symptomatic of the paucity of human and financial resources available in Indonesia for managing natural assets, this also confirms the resistance to self-regulation within the tourism industry identified in Chapter 2: it is only when governments create a strong regulatory framework or, at the very least, introduce incentives for environmentally-responsible behaviour that the private sector is inclined to implement such measures.

This discussion will be carried forward in the next chapter, but for the moment it is interesting to consider some previously unreported side-effects of market forces in relation to tourism to Ngadisari which also concern the wider distribution of the economic benefits of tourism. While it was beyond the scope of this thesis to examine the national and regional economic impacts of Bromo tourism, it was found that it was having a wider local impact than just on Ngadisari. First, around a third of the horses were owned by families from villages other than Ngadisari, which means that the revenue from horse-rides was benefiting these villages too. Secondly, at busy times the horse-men did not have time to cut grass for their horses themselves, but instead bought it from grass-cutters from other Tenggerese villages. These men sold the grass for Rp.4,000-5,000 per load of two baskets, generally managing two loads per day.15 Finally, as the income from operating the horses was much higher than from agricultural work, it was more profitable for land-owners to operate the horses rather than grow crops, and as most villagers owned land it was difficult to find

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15 The work is extremely strenuous: a load of two baskets weighed around 80 kg. and had to be carried up the steep Caldera wall to Ngadisari/Cemoro Lawang, but the hard work and long journey from the other villages was considered worth-while (Sujoyo, 1997; Mistono, 1997).
agricultural workers locally (Sayuni, 1997; Subandi, 1997; Susiya, 1997). To counter the labour shortage, men from mid-slope villages below Ngadisari were commonly employed, thus again redistributing tourism income over a wider area. This process parallels the use of migrant workers from Java to work the rice-fields in Bali which was mentioned in Chapter 2.

Another group of non-Tenggerese who earned a living from Bromo tourism were service providers in the catering sector. Of the 20-25 cafés, restaurants and mobile food-stalls in Ngadisari/Cemoro Lawang, around half were operated by non-Tenggerese. This, along with the presence of the non-Tenggerese land-labourers and workers in the accommodation sector, confirms one of the findings of the 1992 study by Brandon and Wells of protected areas, that income-generating projects aimed at residents often attract people from a wider area; although tourism to Ngadisari had evolved spontaneously rather than in response to a plan, the ‘magnet’ effect was the same. Brandon and Wells found that in some cases, people drawn from a wider area exacerbated environmental deterioration through pollution, wood-collection and even participation in whatever illegal forms of exploitation the income-generating schemes had been designed to prevent. It is important, though, not to be too negative: in Bromo it was not observed that the incomers were having any particularly bad effect on the environment, particularly as their numbers were relatively low compared to the tourists and the impact of these, nor that there was any animosity between incomers and residents. In effect, as predicted by the TALC model, they were simply filling niches that local people could not currently fill themselves.

In some cases – as with the PHPA man who owned two of the hotels - the incomers had married locally, which meant (either coincidentally or by design) that they then had access to land in the village. Although this might not be particularly significant in another context, it was extremely meaningful in the Tengger region, and some space will now be devoted to this point.
The Tenggerese and Land Ownership

Tourism installations need land, and at Bromo Tengger Semeru there is an effective shortage of this. One reason for this is the extremely steep gradient of much of the terrain, which presents engineering difficulties, while additional complications for hotel development were that land was owned in fairly small parcels, so piecing together enough for a large hotel would involve complex negotiations, while the water supply in Ngadisari was very limited (Sayuni, 1997; Sujarwontoko, 1997).

The main reason for the low level of development even in the most popular tourist area, however, was the difficulty of wresting land from the Tenggerese. In all of the villages studied except Kandang Sari there was a hukum adat (‘traditional law’) or a village by-law\(^1\) approved at kecamatan level which prevented outsiders from buying land (Mistuo, 1997; Subandi, 1997; Ari, 1997; Ujat, 1996; Nawawi, 1996); and underlying these laws was a much deeper reluctance to part with their land. Hefner found in the 1980s that “even those who own large land-holdings display a dogged determination to keep what they have acquired and to pass it on to their children” (Hefner, 1990:125), and this was found still to be very much the case. An older resident of Kandang Sari said that “lots of people [i.e. outsiders] want to buy land here, but people here don’t want to sell – they want to pass it on to their children so they will be looked after in their old age” (Sutandi, 1997), while a farmer in Ranu Pani commented that he did not want to sell his land because it was his children’s inheritance (Soeriatmi, 1996). A wealthy resident of Wonokitri had been offered a large sum of money for a plot with road frontage for a hotel, but he refused to sell because he was concerned about his children’s future and in case they criticised him for having sold it (Giman, 1997). Even when a Tenggerese resident of Wonokitri wanted to open a guest-house, he was unable to find anyone who would sell him land near the road (Senetin, 1997).

\(^{16}\) *keputusan desa*
There was much less reluctance to rent out land, especially in Kandang Sari and Ranu Pani, and even selling land seemed in practice to be more common than the preceding comments would suggest. Sometimes, too, outsiders had found a way round the restrictions by marrying a local person and thus obtaining the use of their land, as mentioned above. Nevertheless, the reluctance to relinquish land, coupled with the strong sense of self-identity of the Tenggerese, has clear implications for tourism development in forming a substantial barrier to outside ownership of land. For instance, the developers of the large three-star hotel 22 kms from Bromo attempted initially to buy a site in Ngadisari, but their overtures were rebuffed by the village headman (Subandi, 1997). The development company belonged to one of the daughters of President Suharto, and one person interviewed went so far as to describe her as an anak babi (‘the child of a pig’) which in a culture where criticism is frowned upon and direct insults are uncommon was extraordinarily outspoken (especially as the insult was directed towards a Muslim). By this time the Suharto regime was showing signs of weakness, as discussed in earlier chapters, so it is possible that people felt confident enough to make such remarks without fear of reprisal; but the action of the headman was an interesting demonstration of how the Tenggerese by the mid-1990s felt strong enough in terms of their local political power to withstand outside pressures.

The Influence of Tourism on Tenggerese Culture

While retaining control over the land and the horse-rides has guaranteed powerful channels for at least some of the economic benefits of tourism to continue to flow towards the Tenggerese, it was interesting to consider whether their culture was affected by the increased wealth brought by tourism or by the presence of so many visitors. As with tourism elsewhere, it would be difficult to separate out tourism influences from others, for instance television or increased contact with the lowland Javanese through trading and attending schools in mid-slope or lowland areas. It was mentioned earlier in

\[17\] Here, several respondents said that people rented out or sold their land, then worked for the person it had been sold to as a day labourer (Sun, 1996; Kimun, 1996).
this chapter that pan-Indonesian (or at least pan-Javanese) cultural norms are likely to be affecting the Tenggerese as much as any demonstration effect produced by the tourists, since they are subject to the standardised, hierarchical bureaucracy which covers so many aspects of their lives. In this context, it has already been mentioned that the former religious homogeneity of the Tengger villages was changing in the face of greater contact between the mountain communities and the lowland Javanese.

Cultural manifestations of the Tenggerese observed or heard of during the research were *kuda lumpung* (horse-trance dancing) and *ujung-ujung’an* (ritualised whip-fighting), which were common to all the villages, and *reog*, a more complex form of trance-dancing present in Ngadisari. A form of theatre called *ludruk* formerly occurred in Ngadas and Wonokitri but was no longer performed, and in fairly recent times a man from Wonokitri had learned *wayang kulit* (the Javanese shadow-puppet play). All these were forms of popular culture found throughout eastern Java, which reinforces the fact that the Tenggerese were never so isolated as to become a separate ethnic group from the lowland Javanese. The only way tourism influenced any of these seemed to be that in Ranu Pani tourists sometimes requested a performance of *kuda lumping*, normally only performed on certain dates of the Javanese calendar and other special occasions. As noted earlier in this chapter, the participants received a fee for this which they saw as a useful addition to their household income. Some respondents were asked if there were any differences between performances for tourists and those for local audiences, but this did not seem to be the case; a couple of respondents said that *kuda lumping* had in fact been dying out but that the tourist performances had revitalised it, and there were now two groups in the village with about a dozen members each (Parjono, 1996; Marianto, 1996; Rawi, 1996). This illustrates the role that tourism can play in stimulating local art forms, which was further shown by comments on art forms in Ngadas. Here, when asked why *ludruk* had disappeared locally, two interviewees responded that “it’s better to work than to dance”

18 For instance, the school syllabus, and registration of life events such as birth and marriage.
(Tumar, 1996; Payono 1996), adding that *kuda lumping* was also dying out because the participants did not get paid, while key informants said that institutional support was needed for such events and thought that an increase in tourism would help to stimulate traditional art forms (Pujiono, 1996; Matas, 1996).

The materialism exhibited in this part of the investigation was a direct challenge to the unworldliness sometimes assumed to be present amongst less sophisticated peoples, an idealised view which was questioned in Chapter 1. It was suggested then that forest-dwelling peoples often seemed ready to exploit their resources to the point of exhaustion, with the emergence only in more recent times of groups of local people able to campaign for property rights. This point was reinforced in the last chapter when research into Asian perceptions of nature was mentioned, in that traditional taboos attaching to forests or other natural areas were noted to have disappeared when economic gain could be obtained from these. Mulder (1996) remarks on the materialism which had taken hold generally in Java by 1980, and this was also noted amongst the Tenggerese by Hefner in the mid-1980s.

By the time the current research was carried out in the mid-1990s, many people had certainly lost their reluctance to give concrete expression to their wealth, the result of which was that there were now significant differences between the possessions of rich and poor, shown in ownership of goods such as motorbikes and jeeps, better household furnishings and televisions. Another noticeable change concerned hospitality customs. As mentioned in Chapter 4, the Tenggerese appear much more egalitarian and less status-conscious than the people of lowland Java, addressing each other in a local version of *ngoko*, the low-status form of Javanese, and exhibiting none of the rituals of extreme politeness and deference common in Java. For instance, guests were traditionally welcomed straight into the rear part of the house - which in most of Java would never be revealed to visitors - to sit on low wooden benches by the warmth of the stove. During the research, however, this tended to happen only in the poorer villages of Ranu Pani, Kandang Sari and Ngadas, whereas in Wonokitri and Ngadisari it was now more
common to be invited to occupy the more formal space of the front room, sitting on sofas and armchairs to chat and be served refreshments. In these households the smartly-furnished front rooms were kept mainly for the purpose of receiving visitors - as in other parts of Java - and for the use of paying guests in the villages where tourists came. The refreshments served were also more expensive in the households with better furnishings, particularly in Wonokitri and Ngadisari, more often consisting of shop-bought drinks and sweetmeats than home-made ones.  

Whether such changes are due to tourism is a question which has exercised commentators since the early days of mass tourism (for instance de Kadt, 1979; Young, 1973), as mentioned in Chapter 2. It was said above that in Wonokitri, the construction of better-quality houses and purchase of jeeps and, to a lesser extent, motorbikes seemed due in part to tourism, and in Ngadisari too it seemed that purchasing consumer goods was also related to tourism, in that the jeeps had been bought specifically for tourism, while residents bought convenience fuels because they had more disposable income and less time for wood-cutting. On the other hand, the waning interest in traditional art-forms demonstrated in Ngadas, together with the decline of adherence to Hinduism in Ranu Pani in favour of Islam and the generally increasing interest in material possessions noted by Hefner in the early 1980s, seemed to indicate an underlying attitudinal shift towards a desire for the accoutrements of late 20th century lifestyles which had nothing to do with tourism. Indeed, rather than tourism being a negative force for change, it has been shown in other places (for instance Bali, as discussed in Chapter 2) that it can go a long way towards countering the decline of traditional arts, and although this has only been shown in the Tengger region with the kuda lumping performances in Ranu Pani so far, there were also moves in Ngadisari by hoteliers to foster local art forms (Anan, 1997; Helliger, 1996). In general, tourism observers agree that it is preferable for cultural activities to

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19 This was almost certainly not because I was a European, as Agus also reported on this difference during household visits he conducted alone.

20 Another motive for the hoteliers was to increase the length of stay of the tourists.
take place in a tourism-related context than to die out altogether, and that tourism can indeed revitalise interest in traditional arts and make them relevant to current society (Prentice, 1993, Wahab, 1997).

It seems to be the case, then, that tourism is having a positive impact in encouraging some cultural manifestations of the Tenggerese, while any 'demonstration effect' whereby the local people might aspire to the possessions or lifestyle of the tourists is of less significance than a more general loss of traditional cultural values. A further indication of the beneficial effect of tourism is that, in Ngadisari at least, tourism may well have helped to reinforce the Hindu faith of the villagers. The religion is used as a promotional feature both by foreign and domestic tourism writers as one aspect of Bromo's 'unique selling point' (Dalton, 1991; Diparda, n/d, Oey, 1991; Travel Indonesia, 1996), and although this can only be done at a superficial level in tourist literature, the mere fact of its high profile in this context may help to reinforce the value attached to the religion by the Tenggerese themselves.

Furthermore, the considerable economic importance of Bromo tourism to East Java may be responsible for the Tenggerese creating a higher profile for themselves within the Javanese polity than the size of their community warrants. This point is made in the light of the discussion in Chapter 2 on the way that the Balinese have repositioned themselves vis-à-vis the Indonesian polity (Picard, 1996 and 1997) and that the Torajanese have done in relation to the Buginese majority of South Sulawesi (Adams, 1997). Although there is little evidence currently to show that the Tenggerese are having any direct influence over tourism policy in the region, the fact that the attempt to accumulate land by a daughter of Suharto could be resisted indicates the community's determination to avoid being sidelined and their awareness of the importance of tourism in their area to the provincial (and national) economy.

The issue of changes in religious and cultural values may not seem directly related to the core question of this thesis as to whether tourism around protected areas can support their conservation. However, it was established in Chapter 2 that an essential
condition of sustainable tourism is that the presence of visitors should not undermine the host society and culture, so this element needs to be considered when looking at the overall picture of tourism and assessing its success. Before tackling the over-arching question of how tourism around Bromo Tengger Semeru is affecting the natural resources of the protected area, the findings of this chapter will now be summarised and broader issues thrown up by comparing the five villages highlighted.

Discussion

It was found that although superficially there were many similarities between the Tenggerese villages studied, there were also considerable disparities between and within them which resulted in differences in the nature and level of their participation in tourism. It was also found that there appeared to be some relation between involvement in tourism on the one hand and levels of utilisation of the resources of the national park and attitudes to it on the other — although use of convenience fuels seemed to be related to any form of prosperity rather than specifically to tourism wealth.

The religion of the Tenggerese, which over the centuries had given rise to some separation of identity between the Tenggerese and the lowland Javanese, did not seem to constitute a particularly strong bond between the five villages. It had become subject to fragmentation into traditionalists, who clung to the nomenclature of Buda Jawa, and modernists, who called themselves Hindus and aligned themselves more closely with Balinese Hinduism. Both factions of the religion were under pressure from Islam, which was becoming a strong presence in three of the villages through Muslim incomers, through the proselytising efforts of settlers or converts, and through the perceived attractiveness of Islam in relation to the somewhat incoherent and diffuse nature of the customary religion, especially its traditionalist branch. Christianity had also gained a minor foothold in at least two of the villages.

The serendipitous location of the outstanding scenery of Mount Bromo, Mount Semeru and the Tengger Caldera close to large centres of population and to overland routes through Java had allowed a substantial tourism industry to evolve over the course of the 20th
century, and the more forward-looking villages of Wonokitri and Ngadisari were the best placed geographically to take advantage of this. Ranu Pani was usefully situated on the main route up Mount Semeru, and was thus well-placed to take advantage of tourism to this part of the national park. Neither Kandang Sari and Ngadas, however, was at all involved in tourism, despite optimism on the part of the residents, and while in Ngadas there seemed to be some potential for future involvement, an endogenous impetus for participation did not seem to be present. In all five villages, the response to tourism was found to be generally reactive rather than proactive, with villagers taking advantage of opportunities presented to them rather than actually creating these opportunities. The exception was Wonokitri, where the road built by the villagers into the Caldera had facilitated an important growth in tourism which was of economic benefit to them.

Whether presented with or having created the opportunities to profit from tourism, then, the Tenggerese were not slow to develop these. It was instructive to compare the three villages where tourism was present with the model of the Tourist Area Life-Cycle in order to determine at what point along the curve each village lay, and to use this as an indication of how tourism might develop in the future. Ranu Pani was found to be moving from the second to the third stages of the TALC curve, in other words from involvement in tourism to its development, and Wonokitri to be already well into the developmental stage, in both cases with a concomitant increase in purpose-built facilities - but, again in both cases, with a marked reluctance to allow the marginalisation of local inhabitants predicted by the model. Ngadisari was clearly by now well into the fourth, or consolidation, stage of the model, with a well-established tourism infrastructure. Although ownership of some tourism facilities here (particularly accommodation) had passed from local hands, the Tenggerese had succeeded in retaining a firm hold over other essential parts of the tourism product, in particular the ownership of the horse-rides and the land.

In all three villages where tourism was present, rather than passively allowing themselves to be sidelined by the tourism industry, the Tenggerese have been able to invoke the entrepreneurial skills they had previously demonstrated in horticulture. They had also
capitalised on their separate identity from the lowland Javanese to maintain a cultural
distinction between their two groups – and make money from them. Instead of allowing the
Javanese (or other outsiders) to wrest the economic fruits of tourism from them, they had
succeeded in exploiting all four principal categories within the growing market for domestic
tourism, i.e. the Economy, Economy Plus, Mass Budget and Family & Incentive groups,
while at the same time – although with the help of outsiders in accommodation provision -
they had also managed to satisfy the aspirations of four important categories of International
tourists, i.e. Backpacker, Backpacker Plus, Mass and General Interest tourists. They had
done this in several ways which, taken together, formed an interesting example of how a
reflexive strategy can be created around and enhance local strengths.

First, within their separate villages, they had overcome or minimised differences of
opinion or tensions between individuals or factions by forming organisations designed to
standardise the services and prices offered to tourists (a Guides & Porters Association in the
case of Ranu Pani, Accommodation and Jeep-Owners Associations in Wonokitri, and
Horse-Owners and Jeep-Owners Associations in Ngadisari). Secondly, they had clung
tenaciously to a principal ingredient necessary for tourism development: ownership of the
land, which was particularly important in Wonokitri and Ngadisari where pressure by
outsiders to build hotels was greatest. Third, they had also managed to exclude outsiders
from participation in another essential part of the mechanism of Bromo tourism, namely the
horse-rides, which for many tourists were a key part of the Bromo experience.

In the horse rides, as with their other means of engagement in tourism such as
portering, mountain-guiding, horse-trance dancing and the provision of transportation and
accommodation, the Tenggerese were utilising pre-existing skills. Through these, they
were increasing their income and enabling themselves to participate in modern
Indonesian society, for instance purchasing manufactured household items and sending
their children away to high school. The increasing reliance on tourism was causing a shift
amongst the Ngadisari Tenggerese away from a purely agricultural economy to a more
diversified one, and with their tourism-related higher income seemed to have come a
corresponding shift away from dependence on the natural resources around them. The people of Ngadisari appeared to be much more likely to purchase goods and services from outside their immediate territory, one aspect of which was a diminished reliance on self-gathered wood for cooking and heating and a greater inclination to buy other fuels such as paraffin, charcoal and electricity. It did seem, then, that tourism was having a positive effect on the resources of the national park. But how significant, really, was this effect in terms of the protected area as a whole? What are the implications of current Bromo tourism for the long term participation of the Tenggerese and for the environment? What are the key factors and processes which have led to any partial success in tourism’s support for conservation, and what weaknesses are there which might mean the long-term prospects are poor? Can any lessons be learned from Bromo Tengger Semeru which could be applied elsewhere, or is the Bromo case so unique that they are only applicable here? An attempt will be made to answer these and other questions at the heart of the debate on whether tourism can contribute to the conservation of protected areas in the next and final chapter.
Chapter 8 - Tourism, Conservation and Sustainability

The investigation into tourism in the Bromo Tengger Semeru National Park was intended to advance the debate on whether tourism in a protected area can support its sustainable management. In order to examine this in a field context, four research questions were prepared, focussing on the tripartite relationship between the local people, the tourists, and the natural environment of the national park together with its administration.

The field research was guided by a number of theoretical concepts. Chief amongst these was sustainability, since the objective of the study was to determine whether tourism could make a contribution to sustainable development in a particular location and, if features of the particular could be extrapolated to the general, perhaps more broadly. The concept of sustainability emerged because of concern about the over-use of the world's resources and in response to the failure of the market economy to internalise the environmental costs of production. The ideals and challenges of sustainability were examined in Chapter 1 and were related to tourism and protected areas management, subsequently discussed in Chapters 2 and 3. Tourism and protected areas management are similar in some respects in that both encompass elements of development and connect local spheres of activity with the global, but they differ in the fundamental sense that tourism is driven by market imperatives while protected areas management is driven, ultimately, by ethics. In tourism to a national park, the two fields connect; indeed some would say they collide. A close focus on the interface between these two activities might thus help to clarify some of the hazier aspects of sustainable development, and this was also a key factor in the design of the field study.

Contextual awareness was a strong epistemological concern because the principles of sustainability and the practices of tourism and protected areas management are heavily dependent on the social, cultural, economic and political circumstances within which they occur. Accordingly, features of Indonesian socio-political organisation were discussed in relation to economic development, tourism and protected areas management. Similarly,
the salient characteristics of the Tenggerese, who live around Bromo Tengger Semeru, were important to the investigation since, again, these were likely to affect the outcome of conservation-related policies and the way tourism takes place. As a relatively marginalised group who nevertheless have a strong sense of self-identity, the exogenous and endogenous influences the Tenggerese are subject to affect their responses to tourism and utilisation of the natural resources around them. These aspects were also an important focus of investigation during the fieldwork.

This chapter will bring together the principal theoretical and methodological framework for the study (discussed in Chapters 1 to 4) and the findings of the field research (Chapters 5 to 7). A discussion of the findings in the light of policy and ethical developments in the relevant subject areas will then be undertaken. Finally, an attempt will be made to suggest ways in which the conclusions reached could be relevant to other areas of Indonesia or other attempts to operationalise sustainable development in protected areas, with suggestions as to how the principal features of tourism in Bromo Tengger Semeru might be fed back into the theory of sustainability to make it more applicable and operational, at least in the context of nature tourism in developing countries.

Theory and Methodology

Sustainability is now so widely accepted as a guiding principle of economic development that it affects many areas of government policy-making (at least on paper). Over the decade and a half or so since the concept first came to popular consciousness it has been refined and re-defined on numerous occasions. As with most concepts in the social sciences (or indeed in the sciences generally) there can be no objective, definitive definition of sustainability: it is not an end product but a process, and its interpretation depends as much on the stance of the observer as on any positivist appreciation of its manifestations. One of the most useful distinctions is between strong and soft sustainability: proponents of the former argue that the world’s stock of natural resources
should not be irreversibly altered, while adherents of the latter believe that substitution of one form of natural or created capital for another is acceptable.

The arguments of this thesis are based within the latter, more pragmatic paradigm, in the belief that a balance between human welfare and environmental conservation should provide the target for human endeavour. This 'balance', of course, is itself a subjective ideal which depends on the viewpoint and circumstances of the observer. In the main, proponents of any form of sustainable development already enjoy a good 'quantity' of life; in other words their basic needs are already provided to a high standard, which is why they can afford to worry about the quality of life, both now and in the future. In other societies, the long-term needs of the environment or future generations of people are less pressing than the immediate requirements of daily life, but it has been shown that even in countries with high living standards the ideals of sustainability are very hard to achieve: indeed, there is a worrying paradox wherein the affluent preach the principles of sustainability whilst their life-styles and consumption patterns are often the principal cause of unsustainability.

Several approaches to development have been pursued since the mid-20th century, of which the most consistently successful in terms of economic growth and social welfare have been policies planned and implemented within the paradigm of the market economy and neoclassical economics. In the last couple of decades, however, under the influence of greater awareness of the finite nature of the world's resources and the ecological damage inflicted by the unadulterated processes of commerce, the rationalist stance of neoclassical theory has been tempered with attempts to incorporate environmental considerations into economic practices. This is also partly because concerns about the unequal distribution of the environmental and social costs and benefits of economic globalisation are becoming more prominent. Efforts to alleviate these inequalities have, equally, evolved: the belief that major (paternalistic) infrastructural interventions would engineer development has been overlaid with attempts to involve poorer peoples in participatory schemes designed to empower them and help them obtain a greater share of
development benefits. Unfortunately, many development policies have been overly normative, narrowly focussed and poorly contextualised, with the result that they have not achieved the expected results. In Asia, for instance, many societies are strongly hierarchical, and attempts to introduce more democratic and participatory systems have not always been well received. More recent development strategies which take into account the broader structures of society, such as the sustainable livelihoods approach, may offer a more realistic way of reducing inequalities.

An acknowledgement that the processes of the market economy and neoclassical economics have often been a positive force for welfare comes in the general acceptance now that social and economic progress can be achieved through commercial enterprise. One of the largest global business sectors is tourism, and over the last three decades the industry has received considerable attention from academics and policy-makers, ranging from market analysis to anthropological studies. Because of its high profile and wide-ranging influences, the spotlight of sustainability has been turned on tourism by development practitioners, who have instigated the concept of Pro-Poor Tourism (PPT) as a specific form of the sustainable livelihoods approach. This recognises that the context of a destination has to be considered in addressing distributional inequalities or the marginalisation of host communities. The fact that people experienced in tourism have helped to formulate the concept offers some encouragement for its potential success. A particularly useful model for analysing tourism developments is the Tourist Area Life-Cycle (TALC), which was used throughout the Bromo Tengger Semeru study to help understand the processes occurring at the destination. In addition, a typology of tourists to national parks was developed in order more fully to understand the market segments which visit Bromo Tengger Semeru. The absence of a suitable pre-existing typology indicates how, although the broad interdependencies of tourism with society and the environment are fairly well understood, there is still a dearth of sound information relating to more specialist forms, including the growing sector of nature tourism.
This was further confirmed during preparation for the research, when it was found not infrequently that the processes of tourism had been poorly understood, particularly in protected areas. This is partly because tourism planning has sometimes been attempted by protected areas specialists, which seems to have been comfortably accepted in the past (although the reverse situation, of tourism experts being asked to plan for the ecological management of national parks, is unlikely). One result of this is that overly optimistic assumptions have sometimes been made about the potential positive impact of nature tourism on the quality of life of host communities and on environmental conservation, meaning that nature tourism projects have sometimes had disappointing results.

This is also because the rationale of protected areas in developing countries has sometimes been misconceived. The conservation of important ecological habitats through setting them aside from human exploitation is one example of the drive to protect the Earth's resources – but these areas are generally designated as important by a Northern review process, while the management philosophy has paralleled the Northern-led development policies of top-down, planning-heavy and participatory strategies. While some development efforts and most tourism enterprises are market-led, this cannot apply to protected areas, which rarely produce obvious or short-term financial benefits. The long-term or wider benefits to society may sometimes be clearer, for example if the protected area safeguards an important watershed, but often the preservation of natural habitats rests simply on an ethical concept of the intrinsic value of the diversity of life. This is very much a construct of Northern societies, where the overall attitude towards nature has turned from one of exploitation to stewardship – although, as with sustainability generally, there is a significant dichotomy between the avowed intention to protect natural ecosystems and the continuing exploitation of the Earth's resources in the pursuit of greater prosperity. This is, of course, one of the challenges at the heart of the debate over how to achieve sustainability.

Despite this unresolved question, the emphasis on stewardship has had a considerable influence on the management of protected areas over much of the globe, but
as with nature tourism and development generally, protection strategies have often been inadequately contextualised. The result is that protected areas are often poorly accepted by the people who live in and near them, which is understandable given that they are expected to forego the individual advantages of exploiting the natural resources around them (albeit with ambiguous rights of access) in order to safeguard a global common good. So far, no successful way has been found of addressing this, in other words of integrating the cost of protecting biodiversity into global market mechanisms. Aid projects such as the one under which the original network of Indonesian national parks was designed in the 1970s provide for some transfer of funds from North to South, but little (if any) of the financial benefits reach the people most affected by protection of the area. The more wide-ranging approach of ICDPs was an attempt at reconciling conservation and development which appeared to have a better chance of success, but shortcomings in project design led to limited achievements.

How, then, can conservation be achieved? Do we just accept that people in some parts of the world are unlikely ever (or at least in the short term) to have the desire or the prosperity-induced freedom of choice to protect their environment? Does each country not have a sovereign right to exploit its resources according to its own ends, and is not the desire of Northerners to intervene on behalf of the natural environment in the South as paternalistic as overt (neo)colonialism? For some, the answer to these last two questions may simply be 'yes', on the grounds that Northerners have no right to impose their world-view on other people. It must be stated at this point, however, that the investigation of this thesis was undertaken in the belief that there is an absolute moral imperative to preserve the world's fauna and flora, and that this can only be properly done through the conservation of the natural habitat. Several well-rehearsed arguments could be trotted out in support: remedies for otherwise incurable diseases may be discovered in hitherto undescribed plants; global weather systems may be irretrievably altered by excessive deforestation; intensive agriculture may affect hydrological cycles so that initial gains are reversed. In fact, though, most of these impacts do not depend on biodiversity: most
medical cures are developed in laboratories; climate change could be resolved by international negotiation and concerted political will, while a much reduced number of tree species would have the same effect on weather cycles as the extraordinarily diverse tropical forest; and hydrological stability can be tackled with technological and technocratic approaches which, again, depend on political will and good governance. So far, destruction of species and change of habitat has not caused a major breakdown of ecological processes. Of course, it could be argued that we have simply not yet destroyed enough species for widespread effects to be felt; but it is an escapable fact that even the major alteration of the natural habitats of Europe over the last millennium has not resulted in lower standards of living for Europeans – indeed, exactly the opposite has occurred. The arguments for preserving the diversity of species are, therefore, largely ethical ones which Northerners are in the fortunate position of being able to consider.

Taking a global overview, the idea of preserving nature and individual species for their own sake is a minority view (even in the North), and it is accepted that it is argued from a particular cultural viewpoint. While an unapologetic stance may be taken on the objective of conservation, however, the means of achieving this are much more open to question, even amongst people who believe in the importance of biodiversity conservation. As discussed above and in the body of this thesis, many efforts to bring about conservation have been unsuccessful because of poor policy formulation or implementation. The importance of context has been highlighted as one of primary significance: without acknowledging the strengths and challenges of this, policies formulated in different socio-cultural circumstances from where they are applied are almost certain to fail. One reason why it was decided to observe at first hand the interface between tourism and protected areas management was to investigate why this happens.

The research was carried out within a qualitative framework since this lends itself best to the kind of exploratory, post-positivist investigation required to answer the core research question, particularly as the research was to be carried out in Java, where meaning can only be extracted from the complex, obscure and even ambiguous cultural
signs through a qualitative approach. The standard social science research tools of semi-structured interviews, household sampling and observation were used, informed by an awareness of positionality and the ethical aspects of doing research amongst the community selected.

Findings of the Field Research

In order to try and find some answers to the research questions, five villages around the Bromo Tengger Semeru National Park, in East Java, were studied for similarities and differences in utilisation of and attitudes towards the resources of the national park by the residents, while their involvement in tourism was also investigated to try and determine whether this affected their use of the resources. Bromo Tengger Semeru was chosen principally because it hosts large numbers of tourists, which meant that their impacts should be at discernible levels. Non-touristic aspects of the communities were investigated to see if any strengths and structures would be revealed which might help to foster sustainability in tourism.

The villages were selected on the basis that they all had similar underlying cultural and geographical characteristics, but it was found that although people in the different communities shared some cultural attributes, in that they mostly still professed the traditional religion of Hinduism and they were nearly all farmers, they were by no means a completely homogeneous group. The villages were administered under four different kabupaten, which meant that for bureaucratic purposes people tended to look to their kabupaten town, and trading was carried out through the nearest market town in the mid-slope region, with little inter-village trading since all the Tengger villages produced roughly the same goods (although tourism had generated some inter-village trade and employment). For any education above primary school level children had to go to schools outside the Tengger villages, where they were inevitably subject to other influences. There was no effective pan-Tengger co-ordinating agency, and people’s sense of identity centred on the villages where they lived rather than on the Tengger region as a whole. The somewhat fragmentary nature of their loyalties and the outside influences to which
they were subject meant that in some villages there were increasing numbers of converts to Islam and even Christianity, while Tenggerese Hinduism was evolving into two forms (or at least it had two names).

Another factor which had created (or exacerbated) differences between the villages was tourism, in that there was substantial variation in touristic involvement between them. The investigation showed that, when measured against the TALC curve, one of the villages (Ngadas) was barely at the ‘exploration/discovery’ stage, while another (Kandang Sari) would probably never attract visitors. Two others (Ranu Pani and Wonokitri) were at the ‘development’ stage, with facilities beginning to pass out of local control, while Ngadisari had passed well into the ‘consolidation’ stage. Some resentment had been caused by this, although jealousy seemed to be directed against Wonokitri rather than the more obvious target of Ngadisari. It may have been felt that Ngadisari’s position in hosting the major part of tourism was simply serendipitous, whereas Wonokitri had somehow transgressed social norms by deliberately setting out to facilitate tourism. The survey also revealed tensions and differential access to resources within the villages, with involvement in tourism apparently reinforcing existing wealth hierarchies in that - as found in other studies – wealthier people had the capital necessary to provide tourism facilities. On the other hand, where levels of tourism were reasonably high, there were opportunities for involvement for many sectors of society because of the nature of the tourism product, which was based on providing relatively unsophisticated services.

The high but previously unremarked level of participation in tourism by the Tenggerese was one of the interesting findings of this study; far from tourism being the adjunct to agriculture it was believed to be by government authorities, it was in fact a major component of prosperity in parts of the region. Mount Bromo is the largest single attraction for foreign visitors in East Java and one of the biggest for domestic tourists, and the Tenggerese are an essential element both in the promotion of the area and in the product itself. This had raised the profile of the Tenggerese within Java and, although they had yet to capitalise on this position to any great extent, it had helped them to
withstand incursions from outsiders keen to take up entrepreneurial opportunities in the area, which is important for sustainability. It may also have a wider role to play, as it can only be by a strong sense of cultural identity that the Tenggerese are likely to survive as a discrete group, and tourism may be able to help to reinforce this identity.

Returning to the economic significance of tourism to the Tenggerese, a central part of this investigation was to ask what relation this had to the conservation of the national park. It was found that the direct and indirect ecological impacts of tourism were relatively minor, although the Javan Edelweiss was probably being harvested at unsustainable levels. As far as the induced effects were concerned, it appeared that in terms of strong sustainability, tourism at Bromo Tengger Semeru is not helping to preserve existing natural or cultural capital – although the attrition of this is not actually due to tourism. Particular aspects of how things were changing were the apparent erosion of the traditional religion and customs; poor understanding of modern agricultural techniques, resulting in ecological degradation of farmlands; an over-reliance on wood from the forested areas; and low awareness of the functions of the national park. This last point was exacerbated by weak governance, expressed in the apparent neglect of the national park by officials of the government authority responsible for it, the PHPA, which should be the medium of intervention necessary to counter the free interplay of market forces if environmental sustainability is to be achieved. Without this intervention, it is unrealistic to expect market forces to succeed in preserving environmental integrity, since Bromo Tengger Semeru is perceived as a ‘free’ good both for tourism and other purposes and is exploited as such, and there is no mechanism for internalising the cost of preserving the national park.

From a standpoint of soft sustainability, tourism to Bromo Tengger Semeru can be seen only in a slightly more positive light. It is providing improved livelihoods for many people with little input cost or planning other than infrastructural improvements and some marketing and promotion. It also appears to be reducing direct pressure on the national park to some extent because increased income in Ngadisari seems to be creating a higher
propensity to use convenience fuels instead of wood — although in overall environmental terms the benefits are not great because the environmental costs of heating and cooking are simply transferred to a more indirect source in the production and consumption of paraffin, charcoal and electricity (the alternative fuels used). In fact, it might well be argued that it would be better to concentrate on creating sustainable fuelwood plantations instead of encouraging a switch to fossil fuels. It should also be said that the reduced use of fuelwood is due not just to tourism but to increased prosperity generally, since in Wonokitri (where income from tourism is not very significant) convenience fuels were also more widely used than in the remaining three villages.

However, the benefits of tourism are more limited than they could be. In the first place, they affect only a relatively small proportion of the total population around Bromo Tengger Semeru. Apart from a small amount of spontaneous redistribution of tourism-earned income through the buying-in of goods and services from other Tengger villages (for instance grass for the horses), there is no mechanism whereby tourism income can benefit the population around the national park as a whole. It seems reasonable to assume that people who do not benefit from tourism have little incentive to protect the resources of the park, particularly as the message that tourism and conservation are linked is not being promoted by government institutions. The tourists are also not necessarily motivated to support protection of the national park: most tourists, especially those who visit the area just once, have only a short-term interest in the attraction they are consuming at any one time, and in any case it is a spatially limited part of the park which is being consumed. The fact that Bromo Tengger Semeru is a designated ‘national park’ is significant for some Northern tourists in that the phrase holds connotations of wilderness and is in itself a form of communicative staging: but tourists are at the national park on holiday, not to carry out an ecological investigation, and because the principal attractions at Bromo are scenic ones, it would matter little to most visitors if the entire area out of sight of the tourist frame of view was devoid of interesting plant and animal life or covered in tea plantations. This is even more the case for Indonesian tourists, many of
whom are culturally inclined towards accepting the external appearance of a situation rather than enquiring about possibly unpleasant aspects lurking beneath the surface.

Another limiting factor on the potential economic value and benefits of tourism is that there is currently little appreciation of the different market segments and their needs. In fact, there are considerable opportunities for diversification here: for International tourists in the Backpacker, Backpacker Plus and more adventurous General Interest categories, the national park could be positioned as a prime and easily accessible ecotourism destination, given the magnificent scenery and the wonderful possibilities for hiking, mountain-biking and pony-trekking afforded by the cool uplands with their variety of grassland, forest and farmlands linked by a network of tracks and paths and complemented by an interesting local culture. As Indonesia’s middle class increases in size and the nascent Economy Plus domestic sector grows, it is likely that there will also be increasing interest from this group in better-organised ‘soft’ adventure tourism facilities. To facilitate this kind of development, outside intervention may be desirable in the form of planning, training and advice; this is needed because whether international or domestic tourists are targeted, skills and perceptual gaps will need bridging through cross-cultural awareness.

Although prescriptive scenarios of this kind are normally best avoided in development planning, it is felt that such a scheme could realistically be achieved with relatively few inputs. In fact, the facilitation of ecotourism would be an ideal field of involvement by development agencies, since conservation and enhanced welfare through enterprise are neatly combined. On the other hand, given the propensity for government officials in Indonesia to put their efforts into enriching themselves rather than into carrying out their responsibilities, and the lack of controls imposed on environmentally damaging tourism elsewhere in Indonesia, the proposals may, despite their modest scale, be yet another expression of Northern assumptions of cultural norms.

Restricting a judgement solely to what was observed, then, the findings did not seem to hold much promise for developing tourism and using the park’s resources
sustainably. On the other hand, there were several indications that the Tenggerese were able to direct their own destiny in a positive direction, giving grounds for optimism that they may after all be able to benefit from tourism and foster its cultural and environmental viability. These signs of hope lie principally in their characteristics of initiative, enterprise, hard work and determination to minimise the permanent presence of outsiders, as demonstrated by their willingness to use new agricultural techniques, the increasing tendency towards higher education in some of the villages, and their cultural background, with their historical alienation from mainstream Javanese society and subsequent development of a separate identity, as well as the durability of many cultural and religious practices, which have helped them resist the pan-Indonesian influences which tend towards cultural standardisation.

One encouraging feature of tourism at Bromo overall is that it has spontaneously developed many of the elements recommended by advocates of sustainable tourism, in particular PPT. One of these aspects is that, as mentioned above, the involvement of people essential to the tourism product rests on their use of pre-existing skills as horsemen, porters, providers of accommodation and entertainers, which also means that the economic benefits of tourism were distributed fairly widely within the communities affected – although except in the case of Ngadisari, the money received from tourism was only seen as an addition to the household income rather than as a replacement for revenue from more traditional sectors. The fact that these features have arisen not because of any planned input from state or commercial sectors but as a spontaneous response to market demand may give some indication of how sustainability in tourism can be made to work, in that ownership of essential elements of the tourism product appears to be fundamental to the continued involvement of local people: here, the almost devotional attachment to their land exhibited by the Tenggerese – and the fact that they have, so far, been sufficiently wealthy not to have been forced to sell it – has meant that the incursion of incomers to their area as predicted by the TALC, with the concomitant environmental and social impacts of this, has to a large extent been resisted – at least for the moment. This study was of course a ‘snap-shot’ view
of the situation at a particular moment in the mid-1990s, and it is realised that things will change over time as tourism increases (assuming that it recovers from its post-2002 low levels).

On the other hand, control by the Tenggerese over tourism is limited in that they are not involved in promotion and have little influence over whether tourism happens or not, or over the kind of tourists who come. The skills needed to attract different market sectors, understand visitor motivation, provide for their different needs and manage visitor flows are lacking in Indonesian nature tourism generally, which may mean that in the future (as has happened at Bohorok), tourists to Bromo will arrive in numbers which overwhelm local capacities, resulting in more serious environmental and social impacts. At the moment, however, as direct negative impacts currently seem to be low, it appears that a high level of participation in the industry through ownership of facilities and the ability to profit from private enterprise, coupled with a strong local identity, are more important for success and sustainability than involvement in policy and management. Of course, every case study is an isolated example to the extent that local circumstances influence the condition of tourism, and in the case of Bromo the Tenggerese are fortunate in having a unique, world-class attraction and a strong community identity, while the national park has a relatively robust ecology.

Another important factor revealed in the investigation was that the quality of leadership in the villages had a strong influence on economic prowess and societal energies. The issue of context is again important here: Javanese society is extremely hierarchical, with great deference paid to leaders at various levels. Even though Tenggerese society was more egalitarian than in lowland Java, there was still considerable respect for the appointed leader, and when appropriate signals were not forthcoming from these people there was a reluctance to take individual initiatives. When enlightened leadership was present, however, as at Wonokitri, substantial advances had been made in the social and economic circumstances of the villagers; but it was
unfortunate for the national park that the element of leadership had not been applied to conservation.

On a national scale, too, the current leadership of Indonesia prioritises social and economic stability and development more than environmental conservation. Yet here, even though the preservation of individual species may be a matter of ethical judgement, the way Indonesia's natural resources (particularly the forests) are managed and the purpose for which they are exploited should be guided by the longer-term imperative of using the country's assets for the best advantage of all the people, in other words for the public good, rather than for individual gain which so often seems to be the case. Yet even this evaluation is prescriptive, in that it is made from a Northern standpoint of desiring more equitable use of resources: in fact the nature of hierarchy and the associated prerogatives of the élite seem well accepted in Indonesia, and it remains to be seen whether the more open discussion over political direction and the management of national resources currently taking place will result in changes to underlying cultural characteristics. In the meantime, the fact that a Northern construction of wilderness and national parks management is being imposed on an entirely different set of values has resulted in an incongruence between policy objectives and outcomes, in that the system designed to protect a representative selection of Indonesia's unique (and, again from a Northern stance) globally important ecosystems and species is failing.

Another area of investigation of the field study was into the perception of national parks held by different stakeholders in Bromo Tengger Semeru. Here, it was found that the Tenggerese, who lived in daily proximity with the hills and forests of the protected area, had a utilitarian attitude towards it, and using it for tourism was no different from using it for wood-cutting or fodder-collection. Tourism in fact is just one of the opportunities available to the Tenggerese: it may be less environmentally damaging than other opportunities, for instance agriculture or charcoal-making, but this is coincidental rather than intentional. A similar attitude seemed to exist amongst the PHPA officials, some of whom appeared to view the park primarily as a source of income, while – understandably, in the Indonesian
context of not wanting to create disharmony - others showed no desire to upset the status quo by enforcing conservation regulations. The domestic tourists were very diverse, in that some young professionals were certainly keen to encounter nature in a similarly self-conscious way to the Northern appreciation of national parks, while the principal feature of tourism to Bromo Tengger Semeru remains the mass groups of Budget tourists. It would seem to be amongst the former category that the greatest prospect for creating the sense of stewardship necessary for preserving the parks of Indonesia on a long-term basis lies, and any future development at Bromo Tengger Semeru (or at other national parks) might do well to target this group if conservation policies are to achieve more widespread support. Foreign tourism to Bromo Tengger Semeru and to other national parks is necessary for foreign exchange earnings and to help create an international awareness of Indonesia’s natural heritage, but the tourists’ perception of the realities of the national park are limited by time and by self-imposed or culturally learned experiential constraints in relation to the attractions they consume.

Towards Sustainability through Tourism

Sustainability is an extremely complicated process which does not lend itself to an easy resolution amidst the interdependencies of human and ecological interactions, and each situation is different from all others. However, over-use of the world’s resources and biodiversity loss are so pressing that we do not have the leisure to examine every situation in the detail it deserves, so attempts have to be made to produce analyses which might be applicable in different circumstances.

It is clear that there are certain features which are essential to tourism in and around national parks if success is reckoned in terms of a sustainable venture which helps to maintain biodiversity, contributes to the social and economic welfare of the local population, and continues to draw tourists. These features centre on the product consumed, the type of tourists attracted, and the local, national and international socio-political context. They can be usefully summarised in the expression $E=AMPL$, where
'E' is 'successful' Ecotourism – judged in the above terms - achieved through the interaction of the other factors. These will now be explained and discussed.

The first part of the expression is the ‘Attraction’, in other words the destination or tourism product, which includes any unique selling points (ecological or cultural), the existing or potential tourism infrastructure, and the fragility or robustness of the local environment. The second element is ‘Market’ aspects, consisting of the different market segments likely to use the attraction and the ability to communicate with these. The third element is ‘Political’ aspects, meaning the political ecology which affects the destination, including the enabling (or obstructive) environment produced by good (or poor) governance at national level and the wider international political environment, which affects security and propensity to travel. Finally come the ‘Local’ aspects of tourism provision in terms of locally-available human resources such as skills, capital availability, enlightened (or apathetic) leadership, and community identity, cohesiveness and reflexivity (or passivity).

Of course, it is realised that each one of these aspects is extremely complex. There is no wish to over-simplify the array of factors which contribute to ecotourism, while many threats to Bromo Tengger Semeru (and other protected areas) are of exogenous origin and fall outside the scope of the E=AMPL expression. However, it is argued that an outline formula for framing existing or future tourism situations may be helpful, particularly since the review of past approaches to tourism around protected areas revealed low awareness of one or more of these aspects. Some discussion of the four elements, calling on the findings of the field study and of the literature review, will now be undertaken.

As far as the ‘Attraction’ is concerned, Bromo Tengger Semeru is in the fortunate position of having wonderful natural scenery allied to an accessible location. Although not all nature tourism destinations will benefit from these features, many tourism products are experientially constructed to some degree: the successful consumption of a destination (again in terms of the 'successful' ecotourism defined above) can be
intensified by devising appropriate signs targeted to particular market segments. At the same time, the attraction cannot be simply treated as a resource to be exploited, as this would invite a 'free for all' approach, with environmental management and weaker groups of people brushed aside in an unregulated rush for revenue. An awareness of how the actual or potential impacts of tourism might affect the destination is also an important consideration here, especially in the case of ecotourism, which must have minimal negative impacts on the destination if sustainability is to be achieved.

Another aspect of destination management concerns the infrastructure, which may need improvement, and outside funding is likely to be necessary for this. External assistance is also likely to be needed to develop the 'Market' aspects of the E=AMPL expression because of the sophisticated skills required for assessing and attracting different market segments. At Bromo Tengger Semeru, little has been required so far in the way of sophisticated marketing to attract visitors since its popularity has largely grown through word of mouth and its dramatic scenery is easily 'sold', but the absence of sound market awareness and consequent ability to differentiate between existing market segments and cater to their needs hold the seeds of decline. Should the 'development' and 'consolidation' phases of the TALC process proceed untempered by market considerations, the 'decline' phase is likely to follow as the destination becomes unattractive to important market groups, while continuing to attract Mass tourists who have a heavier impact on the ecological and socio-cultural aspects of the destination through sheer numbers.

Within the market element are the tourists themselves, who are the key to the success of any tourism enterprise (since a wonderful product with no consumers cannot be held to be sustainable). Their choices and behaviour are shaped by aspirational or lifestyle pressures generated by the socio-cultural environment in their home country or region; these pressures may include affordability and the desire to accumulate empirical knowledge, self-knowledge or cultural capital, or to engage in new experiences. The type of new experience is often a subjective assessment of risks or authenticity, which can be
managed by adjusting both the 'A' and 'M' elements of the expression. Another element of market engagement is the 'internal' aspects. Just as the Indonesian government apparently focussed its promotional efforts on the domestic population once it chose tourism as an engine of economic development in the 1980s, marketing techniques could be effectively used to position a national park much more strongly in the minds of local people as a source of long-term income. To some extent, this (and other aspects discussed) depends on the next important element of E=AMPL: the 'Political' one, in particular at national and international levels.

Political actions in the context of sustainability depend on the identification of choices within the economics-environment nexus and on negotiating and operationalising these. If these choices are made in favour of supporting tourism in a natural area, then a whole array of other political aspects enters the picture. In the first place, a regulatory and institutional framework for supporting tourism is essential, particularly in marginalised areas where, according to the TALC processes, local people are likely to be alienated from tourism in the absence of countervailing inclusionary measures. Appropriate legislation and enforcement depends on political strategies concerning the problematising and resolution of conflicts over environmental resources, particularly (in this context) the relative importance of long-term environmental protection over people's short-term needs.

This again returns us to the dilemma at the heart of sustainability: when political choices prioritise economic development over the environment, which seems generally to be the case, then biodiversity conservation is unlikely to be achieved. The situation is exacerbated if, as in Indonesia, the political will to identify and resolve the true issues which hamper development and underlie resource mismanagement is absent. One aspect of this is the failure to control infringement of regulations designed to ensure resource conservation, while another is the abuse of position by those who hold power. The framework for issue-identification depends on the cognitive approach taken, however, and there are two relevant angles to this. First, and most significant, the failure to take
'responsible' measures is partially due to the lack of conservation consciousness amongst the Indonesian population, which means that the administrators who should implement the regulatory framework have little deep-rooted appreciation of the need to do so, while stakeholders of an ecotourism venture (or other natural resource-dependent activity) are less likely to be concerned about its long-term environmental sustainability. Secondly, if the cultural lens through which a situation is seen is informed by a view of centre-periphery relations which disadvantages the periphery - which in the case of nature tourism is usually the economically and socially marginalised groups living around a protected area - then there is little chance that political decisions which specifically benefit them are likely to be taken. The Tenggerese are doubly affected by this in that not only do they reside on the fringes of Javanese society geographically, but for historical reasons they are set apart from it culturally and come low down in the all-important hierarchies of power and bureaucracy.

This leads on to the 'Local' aspect of the expression, in that the local politico-cultural situation has a considerable influence on the success of tourism. It was seen at Bromo Tengger Semeru that, despite some fragmentation due to external pressures, the Tenggerese still have a strong sense of identity and are taking steps to preserve this. Tourism has developed in symbiosis with their abilities, in that it both lends itself to and has been shaped by their capacity to become involved, at least in a reactive sense - although the extent of their true 'participation' is questionable. Although the human and capital resources which allow a high degree of involvement will not always be available locally, attempts can be made to address this aspect through developmental or managerial inputs, which is especially important because of the cross-cultural nature of tourism. An essential way of using these inputs is to apply them through local centres of power, especially in the hierarchical context of Java. Of course, if enlightened and respected leaders are not in already in place, then it is unlikely that any outside force will be able to change this: the situation will have to be accepted for what it is, rather than making unrealistic assumptions about it. Other socio-cultural aspects will also have to be
considered — local people may simply not want the disruptive influences of tourism, or they may not have the skills which would enable them to participate other than as part of the attraction. In this case, of course, it would probably be less damaging to permit no tourism at all, or at least only with the conscious and assenting involvement of local people in this role — and their appropriate recompense.

Another important aspect of local involvement in tourism is that the industry has to be sufficiently large compared to the population if it is to generate enough income to alleviate pressure on environmental resources (depending on the extent of the problem). An unwanted consequence of this may be, of course, that if there is a thriving industry, it may attract outsiders whose presence (added to that of numerous tourists) will intensify pressure on these resources. It is difficult to see how this can be countered other than by a positive regulatory framework which reinforces local positions, such as the by-laws in the Tengger region which prevent outside ownership of land.

The elements of the AMPL expression are interdependent: none can bring about a successful ecotourism venture in isolation from the others — although they do not all have to exist in equal weight, even if it were possible to measure them. For instance, a strong attraction may compensate for poor market awareness or promotion, while a good politically enabling environment may neutralise weaknesses in local leadership. Some of the elements can be amended through suitable inputs. The identification of these essential features does not of course mean that if one is missing (or so inadequate as to be effectively non-existent) it will be impossible for any form of tourism to take place, but it does mean that success in economic terms is likely to be short-lived, while it is unlikely that sustainability will be achieved in terms of its long-term contribution to societal advances or biodiversity conservation.

It is hoped that using the shorthand expression E=AMPL may help to frame potential or actual nature tourism ventures elsewhere in Indonesia and perhaps in other developing countries, and perhaps even lead to enhancing tourism's contribution to conservation by helping to identify areas where assistance is needed. The expression also
goes some way towards answering the central question of this thesis, which was whether tourism to protected areas in developing countries can contribute to their conservation. The answer is a qualified 'yes', in that if the four essential elements are present, or at least capable of being addressed, then tourism may be sustainable, but that if any of them is seriously deficient or acts as a negative rather than a positive force, then there are unlikely to be long-term conservation or social and economic benefits – in other words, the venture is unlikely to be sustainable.

In the case of Bromo Tengger Semeru, the 'Attraction' is obvious and strong, while the relatively robust ecology of the national park and society of the Tenggerese seemed able to withstand the impacts of tourism (at the time of the study at least). Failings were identified in the 'Market' aspects, although it is argued that these could be addressed with fairly low inputs to make the experience of visiting the national park more satisfying for a greater range of market segments. The 'Political' element, however, was clearly very weak, in that few resources were allocated to managing the park for its long-term ecological well-being. Unless there is a radical change in attitudes towards conservation in Indonesia, this will present the greatest challenge to the successful development of ecotourism for the foreseeable future. Even though at Bromo Tengger Semeru there are strong 'Local' elements which have led to socio-economic advances through tourism, and the large scale character of tourism has encouraged some villagers to move slightly away from direct dependence on the park’s resources, the weak regulatory capacity and poor enabling environment for conservation means that nature tourism is not having a generally beneficial effect on the protected area.

Given that this is the case, and looking at the broader picture of efforts to preserve biodiversity through protected areas management, it would seem that many development inputs intended to achieve this are rather wasted. What is needed if species loss is not to continue at its present rapid rate is to engineer a shift in cultural norms towards conservation. While accepting that this is a Northern stance which could be dismissed as an unwelcome desire to interfere in other countries’ sovereign affairs, it is argued that
species and habitat biodiversity are a global heritage which the global community has a responsibility to protect. Efforts to engender a greater conservation consciousness have in fact already been happening on a small but persistent scale for decades, for example through bilateral co-operation between natural science institutions and individual involvement in conservation programmes. In Indonesia, at least, the outcome has been a greater interest in conservation, even though the indications of this are rather tiny compared to the scale and power of the forces which allow (or encourage) species loss to occur.

This returns us to the broad underlying theme of this thesis, which is how to achieve sustainable use of the world’s resources. In just this one field of tourism and conservation there are many further avenues of research which need to be explored if greater understanding of the relevant social, economic and ecological interdependencies is to be achieved. Longitudinal studies are more instructive than ‘snap-shot’ views in evaluating the long-term dynamics of tourism and conservation, and it would be very interesting to have a later assessment of tourism at Bromo Tengger Semeru, either in the light of the decline in visitor numbers since the political and economic instability of the last few years, or when (and if) tourism returns to its former prominent position in the local economy. Additional strongly contextualised studies of tourism in and around protected areas would also be very welcome, since with an increased spread of information from different parts of the world it might be possible to highlight common or replicable features.

In any case, it is probable that over the decades to come the doctrine of sustainability will continue to be refined, with the more idealistic elements sidelined in favour of a pragmatic approach which seeks to continue to improve the quality of life for most of the world’s population in the 21st century. The optimistic viewpoint is that the Boserupian (as opposed to the Malthusian) scenario will prevail, with human inventiveness able to ensure more efficient use of the Earth’s resources. Plant and non-human animal species are, however, certain to suffer from the increased consumption which improving the lot of humankind is bound to entail, and the importance of
successful conservation measures, including the sound management of protected areas, will gain increasing significance in consequence. It is hoped that this study of the relationship of tourism with conservation in one particular protected area, Bromo Tengger Semeru National Park in East Java, can contribute in some small measure to reconciling the need to achieve economic growth for social welfare with the prudent management of natural resources and the ethical imperative of preserving the diversity of the world’s plants and animals.
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Anderson, T., tourist at Ngadisari, pers. comm. 2/3/1997


Ari, PHPA ranger, Wonokitri, pers. comm. 22/2/1997


Arto, farmer, Ngadisari, pers. comm. 7/1/1997


Atan, student visitor to Ranu Pani, 6/12/1996

Atem, farmer, Ngadisari, pers. comm. 3/3/1997


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Djojono, dukun (priest) of Wonokitri and provider of tourist accommodation, pers. comm. 25/2/1997


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Ismandi, farmer and Acting Village Secretary, Mororejo/Kandang Sari, pers. comm. 15/2/1997


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Jono, farmer and horse operator, Ngadisari, pers. comm. 7/1/1997


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Manang, farmer, Wonosunkoro, pers. comm. 17/2/1997

Mariadi, farmer, Ngadas, pers. comm. 18/12/1996

Marianto, head of village section and farmer, Ranu Pani, pers. comm. 6/12/1996

Mariarti, farmer and original settler of Ranu Pani, pers. comm. 9/12/1996

Marimoy, high school student and ojek driver, Wonokitri, pers. comm. 21/2/1997

Marmoyo, farmer, Ngadisari, pers. comm. 2/3/1997

Martunah, sweetmeat maker, Ngadas, pers. comm. 19/12/1996

Matas, farmer and village secretary, Ngadas, pers. comm. 2/1/1997

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Nawawi, village headman, Ngadas, pers. comm. 15/12/1996


Nenih, Hon. secretary of Karung Taruna (social welfare NGO), Ranu Pani, 11/12/1996


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Ngadun, day-labourer and resident of Ranu Pani, pers. comm. 6/12/1996

Ngarnin, farmer, Ngadisari, pers. comm. 3/3/1997

Ngataji, farmer, Ngadas, pers. comm. 18/12/1996

Ngatrulin, farmer, Ranu Pani, pers. comm. 7/12/96

Nguwulo, farmer, Wonokitri, pers. comm. 18/2/1997


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Pa’i, farmer, Ngadas, pers. comm. 16/12/1996

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Pasir, PHPA ranger, Cemoro Lawang, pers. comm. 6/1/1997


Payono, farmer, Ngadas, pers. comm. 19/12/1996

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Ponija, farmer, Ngadisari, pers. comm. 2/3/1997

Ponisan, farmer, Wonokitri, pers. comm. 23/2/1997


Prayoga, PHPA resort head, Wonokitri, pers. comm. 26/2/1997


Proud, K. environmental consultant, Medan, pers. comm. 18/3/1998

Pujiadi, head of village section in Cemoro Lawang (RT) and jeep owner, 4/1/1997

Pujiono, former village head, Ngadas, pers. comm. 22/12/1996

Rahmat, visitor to Ranu Pani, 7/12/1996

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Sali, farmer, Kandang Sari, pers. comm. 11/2/1997


Sasanto, head of RT (subsection of village), pers. comm., Kandang Sari, 14/2/1997


Satran, farmer, Ngadas, pers. comm. 17/12/1996


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Soetomo, farmer, Ngadas, pers. comm. 12/12/1996


Sri Supiani, shop-owner and provider of tourist accommodation, Wonokitri, pers. comm. 25/2/1997


Subandi, owner of café and guest-house (Warung Lawang Sari), Cemoro Lawang, pers. comm. 11/1/1997

Subjanto, Head of Visitor Information Service, Dinas Pariwisata (Regional Tourism Office), Malang, 2/12/1996

Sudarmadji, Director of Bromo Tengger Semeru National Park, pers. comm., 13/11/1996 and 2/12/1996

Suersan, potato trader, Wonokitri, pers. comm. 21/2/1997

Sugiharto, A., Head of Utilisation, Bromo Tengger Semeru National Park, Malang, pers. comm. 13/3/1997

Suharjo, farmer, Wonokitri, pers. comm. 26/2/1997

Suharti, wife of bird-trapper/hunter, Kandang Sari, pers. comm., 12/2/1997

Sujarso, Head of the Lembaga Ketahanan Masyarakat Desa (Village Self-sufficiency Unit) in Ngadas, pers. comm. 23/12/1996

Sujarwo, PHPA ranger, Ngadas, pers. comm. 16/12/1996

Sujarwontoko, Front Office Manager at Hotel Raya Bromo, pers. comm. 7/3/1997

Sujo, farmer, Wonokitri, pers. comm. 24/2/1997

Sujoyo, grass-cutter from Argosari, 7/1/1997


Sukaro, shop-owner, Ngadisari, pers. comm. 4/3/1997

Sukemi, farmer, Ngadas, pers. comm., 20/12/1996
Sukina, farmer, Kandang Sari, pers. comm. 13/2/1997
Sukintok, farmer and former PHPA ranger, Ranu Pani, pers. comm. 4/12/1996
Suladi, farmer, Ngadas, pers. comm. 17/12/1996
Suliono, retired school-teacher in Ngadas, pers. comm. 19/12/1996
Sumini, café owner, Ngadisari, pers. comm. 4/1/1997
Sunawar, homestay owner, Cemoro Lawang, 4/1/1997
Supak, farmer, Ranu Pani, pers. comm. 8/12/1996
Supandi, farmer and part-time PHPA ranger, Wonokitri, pers. comm. 22/2/1997
Suparman, school-teacher in Ngadas, pers. comm., 23/12/1996
Supendam, farmer, Wonokitri, pers. comm. 26/2/1997
Supiani, farmer, Wonokitri. pers. comm. 22/2/1997
Supraman, health worker, Ngadisari, pers. comm. 9/1/1997
Suroto, homestay owner, Ranu Pani, pers. comm. 4/12/1996
Susiya, café owner, Ngadisari, pers. comm. 3/3/1997
Suswo, Agricultural Engineer, Ranu Pani, pers. comm. 8/12/1996
Sutandi, farmer, Kandang Sari, pers. comm. 12/2/1997 and 14/2/1997
Sutarmi, dukun (traditional religious leader), Ranu Pani, pers. comm. 4/12/1996
Sutono, government health worker, Wonokitri, pers. comm. 23/2/1997
Suwastono, edelweiss collector, Ngadisari, pers. comm. 5/1/1997
Suwito, farmer, Ngadisari, pers. comm. 3/3/1997
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Swiyono, Christian leader, Ranu Pani, pers. comm. 5/12/1996
Syafi'i, Vulcanologist stationed at Bromo, pers. comm. 9/1/1997
Syukur, farmer and jeep-owner, Wonokitri, pers. comm. 22/2/1997
Tamsis, secretary of Jeep-Owners’ Association, Wonokitri, pers. comm. 18/2/1997


Tinayu, farmer, Kandang Sari, pers. comm. 12/2/1997


Toro, farmer, Wonokitri, pers. comm., 24/2/1997


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Tumar, farmer, Ngadas, pers. comm., 19/12/1996

Tunesri, housewife, Wonokitri, pers. comm. 20/2/1997

Tutin, PHPA volunteer, porter and farmer in Ranu Pani, pers. comm. 4/12/1996

Ujat, farmer, Ranu Pani, pers. comm. 12/12/1996

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Wandi, farmer, Kandang Sari, pers. comm. 15/2/1997


Wariamo, head of regreening group, Ngadas, pers. comm. 22/12/1996


Warsi, housewife, Wonokitri 23/2/1997

Wartini, junior high school student, Wonokitri, pers. comm. 20/2/1997

Wartono, farmer and ojek driver, Wonokitri, pers. comm. 23/2/1997


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Yani, wife of homestay owner, Ranu Pani, pers. comm. 9/12/1996

Yanto, elementary school janitor and farmer, Kandang Sari, pers. comm. 11/2/1997

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Yono, PHPA warden and resident of Ranu Pani, pers. comm. 4/12/1996

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Yoyo, farmer, Ngadas, pers. comm., 17/12/1996


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### Appendix 1

**Tourism Arrivals to Indonesia 1960-2002**

<table>
<thead>
<tr>
<th>Year</th>
<th>Visitors</th>
<th>% Increase</th>
<th>Foreign Exch. (US$ million)</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969</td>
<td>86,100</td>
<td></td>
<td>10.8</td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>129,319</td>
<td>50%</td>
<td>16.2</td>
<td>50%</td>
</tr>
<tr>
<td>1971</td>
<td>178,781</td>
<td>38%</td>
<td>22.6</td>
<td>39.5%</td>
</tr>
<tr>
<td>1972</td>
<td>221,195</td>
<td>24%</td>
<td>27.6</td>
<td>22.1%</td>
</tr>
<tr>
<td>1973</td>
<td>270,303</td>
<td>22%</td>
<td>40.9</td>
<td>49.2%</td>
</tr>
<tr>
<td>1974</td>
<td>313,452</td>
<td>16%</td>
<td>54.4</td>
<td>33.0%</td>
</tr>
<tr>
<td>1975</td>
<td>366,293</td>
<td>17%</td>
<td>62.3</td>
<td>14.5%</td>
</tr>
<tr>
<td>1976</td>
<td>401,237</td>
<td>9%</td>
<td>70.6</td>
<td>13.3%</td>
</tr>
<tr>
<td>1977</td>
<td>433,393</td>
<td>8%</td>
<td>81.3</td>
<td>15.2%</td>
</tr>
<tr>
<td>1978</td>
<td>468,514</td>
<td>8%</td>
<td>94.3</td>
<td>16.0%</td>
</tr>
<tr>
<td>1979</td>
<td>501,430</td>
<td>7%</td>
<td>188.0</td>
<td>99.4%</td>
</tr>
<tr>
<td>1980</td>
<td>561,178</td>
<td>12%</td>
<td>289.0</td>
<td>53.7%</td>
</tr>
<tr>
<td>1981</td>
<td>600,151</td>
<td>7%</td>
<td>309.1</td>
<td>7.0%</td>
</tr>
<tr>
<td>1982</td>
<td>592,046</td>
<td>(-2%)</td>
<td>358.8</td>
<td>16.1%</td>
</tr>
<tr>
<td>1983</td>
<td>638,885</td>
<td>8%</td>
<td>439.5</td>
<td>22.5%</td>
</tr>
<tr>
<td>1984</td>
<td>700,910</td>
<td>10%</td>
<td>519.7</td>
<td>18.25%</td>
</tr>
<tr>
<td>1985</td>
<td>749,351</td>
<td>7%</td>
<td>525.3</td>
<td>1.1%</td>
</tr>
<tr>
<td>1986</td>
<td>825,035</td>
<td>10%</td>
<td>590.5</td>
<td>12.4%</td>
</tr>
<tr>
<td>1987</td>
<td>1,060,347</td>
<td>28.5%</td>
<td>837.7</td>
<td>41.9%</td>
</tr>
<tr>
<td>1988</td>
<td>1,301,049</td>
<td>23%</td>
<td>1,027.8</td>
<td>22.7%</td>
</tr>
<tr>
<td>1989</td>
<td>1,625,965</td>
<td>18%</td>
<td>1,284.5</td>
<td>25.0%</td>
</tr>
<tr>
<td>1990</td>
<td>2,177,566</td>
<td>34%</td>
<td>2,105.2</td>
<td>63.9%</td>
</tr>
<tr>
<td>1991</td>
<td>2,569,870</td>
<td>18%</td>
<td>2,522.0</td>
<td>19.8%</td>
</tr>
<tr>
<td>1992</td>
<td>3,064,161</td>
<td>19%</td>
<td>3,278.2</td>
<td>30.0%</td>
</tr>
<tr>
<td>1993</td>
<td>3,403,000</td>
<td>11%</td>
<td>3,987.6</td>
<td>21.6%</td>
</tr>
<tr>
<td>1994</td>
<td>4,006,312</td>
<td>18%</td>
<td>4,785.3</td>
<td>20.0%</td>
</tr>
<tr>
<td>1995</td>
<td>4,324,229</td>
<td>8%</td>
<td>5,228.3</td>
<td>9.3%</td>
</tr>
<tr>
<td>1996</td>
<td>5,034,472</td>
<td>16%</td>
<td>6,307.7</td>
<td>20.6%</td>
</tr>
<tr>
<td>1997</td>
<td>5,185,243</td>
<td>3%</td>
<td>5,321.5</td>
<td>(15.6%)</td>
</tr>
<tr>
<td>1998</td>
<td>4,606,416</td>
<td>(11%)</td>
<td>4,331.1</td>
<td>(18.6%)</td>
</tr>
<tr>
<td>1999</td>
<td>4,727,520</td>
<td>2.5%</td>
<td>4,710.2</td>
<td>8.75%</td>
</tr>
<tr>
<td>2000</td>
<td>5,064,217</td>
<td>7%</td>
<td>5,748.8</td>
<td>22%</td>
</tr>
<tr>
<td>2001</td>
<td>5,153,620</td>
<td></td>
<td>5,400.0</td>
<td></td>
</tr>
</tbody>
</table>

Sources: Directorate General of Tourism, Jakarta; Biro Pusat Statistik, Jakarta; Ministry of Tourism and Culture, Jakarta
Appendix 2

Maps of Bromo Tengger Semeru National Park

Map 1: Location of Bromo Tengger Semeru within Java/Indonesia

Map 2: Villages visited during initial survey and selected for study

Map 3: Walking routes around Bromo Tengger Semeru

Map 4: Kabupaten divisions of Bromo Tengger Semeru

Map 5: Zones of main tourist activity
Map 2: Bromo Tengger Semeru National Park - Villages Visited
Map 3: Walking routes taken around Bromo Tengger Semeru National Park
(Ranu Pani is just off the map to the south – a map of this area was not available.)

Scale: 1:50,000
Map 4: Kabupaten divisions of Bromo Tengger Semeru

Legend
- Pink: Kabupaten boundaries
- Blue: National park boundary
Appendix 3

Photo 1 – Research amongst land-labourers working for Tenggerese farmers in Ngadisari.

Photo 2 – Research amongst Tenggerese householders.
Appendix 3

Photo 3 – The classic view of the Sand Sea (taken 1997) with Mt. Bromo (centre) and Mt. Batok (right). Note obvious footpaths and vehicle tracks across Sand Sea.

Photo 4 – Same view as in Photo 3, taken in 1983. Note more vegetation on Mt. Batok and less obvious vehicle tracks and footpaths, but more obvious natural erosion or scarring.
Photo 7 – *Bawang prei* (leeks) around Ngadas, showing deep top-soil with soil run-off in foreground and casuarina trees in the background. (Agus Wiyono is standing on the path.)

Photo 8 – Farmland around Ngadas, showing cross-contour cultivation and eroding slopes, but with terracing on slopes in the background. Note lighter-coloured sub-soil near the top of the slope in the centre.
Appendix 3

Photo 9 – Tenggerese horsemen with tourists waiting for rides (horse-park in the background).

Photo 10 – A tourist beginning the ride to the crater.
Appendix 4

Foreign Visitors Questionnaire

BROMO TOURISM STUDY

VISITOR SURVEY

We would be very grateful if you could take a few minutes to fill in this questionnaire. The survey is part of a study of tourism in the Bromo area. It has the support of the Institute for Indonesian Tourism Studies, the Directorate General of Forest Protection and Nature Conservation, and the Environmental Education Centre, Seloliman, East Java.

Location of Interview: Date: March 2, 1997 Time: 6:00 pm

(Please put a mark in the appropriate boxes, or write your comments)

1. Did you arrange your own travel here [✓], or are you on an organised tour [ ]? 
2. How many people are you travelling with? (Total number) ...
   Are you travelling with children? [No,] If yes, how old are they? ...
3. How long is your stay in the Bromo area? (in days or hours) ...
4. Is this your first visit to Indonesia? [Yes,] If no, how many times have you been here before? ...
5. How long is your total trip in Indonesia this time? ...
6. Which other places are you visiting during your holiday or journey? ...
   In Indonesia: Bali, Java, Sumatra. Others: Cook Islands, New Zealand, Malaysia, Thailand, Nepal, Egypt, Turkey, Europe
7. Why did you decide to come to Bromo? ...
8. Have you been here before? [No,] If yes, how long ago? ...
   Are there any changes since your last visit? ...
9. Please describe your feelings about the attraction I was pleasantly surprised by the quality, clean and quiet tourism. It was quiet and not at all busy.
10. Is there anything you did not like about it? [No,]
11. What interactions have you had with local people during your visit here?
   [We had a bad experience with the locals when we first arrived. Our tourist shuttle bus was 2 hours late when we arrived late at night. The bus left us at this hotel and refused to bring us to where we wanted to stay. Because it was late, we had no choice but to stay at this hotel. The people running this hotel were very rude and loud. We changed hotels today and have had very positive interactions with the staff here (Yoshi's).]
12. What attitude do you think the local people have towards tourists?

I think they see us as pots of gold and would like to scam as much money as they can off us. However, the people don't seem as aggressive as in Bali.

13. During your stay, did you:

- Go to Penanjakan at sunrise by jeep [ ]
- Go to Penanjakan during the day by jeep [ ]
- Go to Bromo crater [√] On foot [ ] By horse [ ]
- Walk around the Bromo crater rim [ ]
- Walk around the village [ ]

14. What other activities have you done in the Bromo area? ........................................................................

15. What do you understand by "ecotourism"? I see it as a way to bring tourists to the natural sights of the country while maintaining and preserving the natural environment of the sights.

16. Do the activities you have done here fit with your idea of ecotourism? Yes, the whole area near the volcano was very clean (no garbage like at other Indonesian sights), it seemed well cared for.

17. What do you think your impact or effect on the Bromo area has been? I suppose I have brought some financial aid to the area, but have probably also incited the locals to build up the area which could be detrimental to the past.

18. What kind of transport did you use to get here? Shuttle bus from Ubud, Bali.

If you used public transport, what did you think of it? ........................................................................

19. Which guesthouse/hotel are you staying in? Yoschi

20. What do you think of the facilities you have used here?

Accommodation Very nice atmosphere & friendly staff
Food Mediocre
Horse-hire N/A
Jeep-hire N/A

21. How much do you normally spend on food and accommodation per person per day when you are travelling? ~ $20. CDN (~ 35,000 Rp)

22. How much have you spent during your stay in Bromo on: Accommodation 8,500 Rp/night
Food 20,600 Rp Horse-hire — Jeep-hire — Souvenirs —
Other 2,500 Rp Entrance to park 2,100 Rp
23. Did you know that Mt. Bromo is part of a national park? Yes .......................... 

24. Have you been to any other Indonesian national parks? No ............... If yes, which ones? .................................................................

25. What images do the words "national park" conjure up for you? A natural area protected by law to ensure its conservation. Access should be regulated. .................................................................

26. Does the impression you have of the Bromo-Tengger-Semeru National Park coincide with these images? Yes - But → I was surprised that the town (Gubugklakah) was within park limits. ............

27. Did you pay an entry fee to Bromo? Yes. If yes, how much did you pay? 2100 Rp

28. Would you be willing to pay more to visit Bromo? Yes .... If yes, how much would you consider paying? Less than 10,000 Rp (including 10,000 Rp) ....

29. What do you know about the culture of the Bromo area, and where did you get the information? .... I know very little except that there is a larger proportion of Hindus compared to the rest of Java. I got this information from the Lonely Planet Guidebook and by observation ....

30. If you have any further comments about Mt. Bromo or suggestions as to how your stay here could have been more enjoyable, please make them here. I think most people come here to see the volcano at sunrise. I find they get hassled quite a bit. I would recommend people go during the day instead. You still see the crater, there's no one around and no hassle. Everyone seems to get pushed into this sunrise trip which is obviously a tourist trap.

To finish, please could you answer a few questions about yourself:

31. Nationality Canadian Country of Residence CANADA

32. Male/Female Female

33. Age group: 16 or under [ ] 17-25 [✓] 26-35 [ ] 36-45 [ ] 46-55 [ ] 56-65 [ ] Over 65 [ ]

34. Occupation Student

Thank you very much for your help!
Appendix 5
Indonesian Visitors Questionnaire

OBSERVASI PARIWISATA DAERAH BROMO

KOMENTAR PENGUNJUNG


Tempat: CEMORO LAWANG Tanggal: 02-03-97 Jam: 12.30

Silahkan menulis pendapat anda sesuai dengan pertanyaan berikut:

1. Alamat: PAITON, PROBOLINGGO

2. Pekerjaan: KARYAWAN PT. TRUMIX PAITON, PROBOLINGGO

3. Berapa orang jumlah rombongan Anda? Dewasa 3 Anak 1 Pria 1 Wanita 3

4. Umur 27 TAHUN

5. Apakah perjalanan Anda ke Bromo diatur oleh travel? Ya/Tidak

6. Apakah Anda bergabung dengan klub pencinta alam? Ya/Tidak

Kalau ya, sebutkan .................................................................

7. Berapa jam/hari Anda tinggal di daerah Bromo? ± 7 jam

8. Apa kegiatan yang Anda lakukan selama disini? REKREASI

9. Mengapa Anda memilih datang ke Bromo? UPARA, SEJUK, SUASANA TENANG

10. Apakah Anda pernah ke Bromo sebelumnya? Ya/Tidak Kalau ya: berapa kali? 3 KALI

Apakah sekarang ada perobahan? Ya/Tidak Kalau ya: apa perobahannya? PENAMBANGAN, FASILITAS, BAIK, BANGUNAN MAUPUN JALAN BARU

11. Apa pendapat Anda tentang obyek wisata ini? SANGAT BAIK UNTUK REFRESHING

12. Apakah ada keadaan disini yang mengurangi kesenangan Anda?[

Sebutkan kalau ada: KENDARAAN BELUM Boleh, MAJIK KE DEKAT LOKASI KAWAH

13. Apa pendapat Anda tentang dampak pariwisata terhadap lingkungan hidup dan kebudayaan? ADA DAMPAK POSITIF DAN NEGATIFNYA

POSITIFNYA: MENAMBAH INCOME BG PENDUDUK, SEKITARNYA
NEGATIFNYA: KADANG-KADANG MENIMBULKAN EKSES BUDAYA SETEMPAT & BUDAYA LUAR (TERUTA MA BAFAT)
14. Sejauh mana hubungan dengan masyarakat setempat selama kunjungan Anda?  
AKRAH (SELAMA DIUM PERJALANAN WISATA KE LOKASI KAWAH)

15. Menurut Anda, bagaimana tanggapan masyarakat lokal terhadap pengunjung?  
MENGHATURAPKAN BANTUAN PENGUNJUNG

16. Apakah Anda ke sini naik kendaraan umum [X] atau kendaraan pribadi [V]?
Kalau kendaraan pribadi, sepeda motor [X] atau mobil [V]?

Penginapan/hotel [X] Sebutkan namanya:  
Tempat lain [X] Sebutkan:  
Tidak bermalam [X]

18. Apa pendapat Anda mengenai sarana/prasarana disini?
Akomodasi:  
Makanan:  
Transportasi umum:  
Pemandu:  
Penyewaan kuda:  
Yang lain (sebutkan):  
Kekurangan (sebutkan):  

19. Berapa jumlah biaya yang Anda keluarkan selama kunjungan ini?  
Rp. 75.000,-

20. Apakah Anda bayar karcis masuk di kawasan Bromo? Ya/Tidak
Kalau ya, berapa harga karcis itu? Rp. 6.300,-

21. Apakah ada tempat yang Anda kunjungi sebelum atau sesudah Bromo selama perjalanan ini? Ya/Tidak  
Kalau ada, sebutkan:  

22. Apakah Anda tahu bahwa Gung Bromo merupakan kawasan Taman Nasional? Ya/Tidak

23. Apakah Anda telah mengunjungi Pusat Pengunjung Taman Nasional? Ya/Tidak

24. Menurut Anda, apa fungsi taman nasional pada umumnya? MEMPERSKENALIAN KEKAYAAN ALAM INDONESIA NASIONAL

25. Apakah Anda pernah mengunjungi taman nasional lain? Ya/Tidak
Kalau ya, Taman Nasional apa KEBUN RAYA di BOGOR (JAPAN).
Appendix 7

Administrative Structure of Ministry of Forestry, Directorate General of Forest Protection and Nature Conservation, and Bromo Tengger Semeru National Park

Ministry of Forestry (Jakarta)

- Directorate General of Forest Utilisation
- Directorate General of Reforestation and Land Rehabilitation
- Directorate General of Forest Protection and Nature Conservation
- Directorate General of Forest Inventory and Land Use

Office of National Parks

Bromo Tengger Semeru National Park Office (Malang)

- Rayon 01 Semeru Timur: Resorts (4)
- Rayon 02 Semeru Timur: Resorts (3)
- Rayon 03 Semeru Barat: Resorts (6)

Sources: DepHut, 1995; Sutito, 1994