INTRODUCTION

Originally the site of a small fort built by the Chola dynasty during the 9th century AD, Gingee Fort was modified by Kurumbar while fighting the Cholas and again by the Vijayanagar empire during the 13th century. As per one account, the fort was built during the 15–16th century by the Nayaks, the lieutenants of the Vijayanagara Empire and who later became independent kings. The fort was built at a strategic place to fend off any invading armies. It was further strengthened by the Marathas under the leadership of Shivaji in 1677 AD. He recaptured it from the Bijapur sultans who had originally taken control of the fort from the Marathas. During Aurangzeb’s campaign in the Deccan, Shivaji’s second son who had assumed the throne, Chhatrapati Rajaram, escaped to Gingee and continued the fight with Moghuls from Gingee. The fort was the seat of the Maratha Empire for a few months. The Moghuls could not capture the fort for seven years in spite of laying siege. The fort was finally captured in 1698, but not before Chhatrapati Rajaram escaped. It was later passed on to the Carnatic Nawabs who lost it to the French in 1750 before the British finally took control in 1761 despite losing it to Hyder Ali for a brief period. Raja Desinghu ruled Chenji during the 18th century.

The Gingee Fort complex is on three hillocks: Krishnagiri to the north, Rajagiri to the west and Chandrayandurg to the southeast. The three hills together constitute a fort complex, yet each hill contains a separate and self-contained citadel. Connecting them — forming an enormous triangle, a mile from north to south, punctuated by bastions and gateways giving access to the protected zones at the heart of the complex. The fort walls are 13 km (8.1 mi) and the three hills are connected by walls enclosing an area of 11 square kilometres (4.2 sq mi). It was built at a height of 800 feet (240 m) and protected by a 80 feet (24 m) wide moat. It has a seven-storied Kalyana Mahal (marriage hall), granaries, prison cells, and a temple dedicated to its presiding Hindu goddess called Chenjiamman. The fortifications contain a sacred pond known as Aanaikulam. The walls of the fort are a mixture of the natural hilly terrain comprising the Krishnagiri, Chakkiludrug and Rajagiri hills, while the gaps were sealed with the main wall that measures 20 metres (66 ft) in thickness. On the top of the hill, there are minor fortifications.

Rajagiri

The first hill, where the main fort is, is called Rajagiri. Originally it was known as Kamalagiri as well as Anandagiri. The fort was historically considered most impregnable. It is about 800 feet (240 m) in height. Its summit is cut off from communication and is surrounded by a deep, natural chasm that is about 10 yards (9.1 m) wide and 20 yards (18 m) deep. To gain entry into the citadel one had to cross the chasm with the help of a small wooden draw bridge. The naturally strong rock where the fortress is located, is further strengthened by the construction of embrasure walls and gateways along all possible shelves and precipitous edges. The citadel is reached by traversing through seven gates. This citadel contains important buildings apart from the living quarters of the royalty, like the stables, granaries, and meeting halls for the public, temples, mosques, shrines and pavilions. Kamalakanni Amman temple is present atop the Rajagiri hills. As per Hindu legend, the presiding deity, Kamalakanni, is believed to be the widow of demon king Acalamaccuran. Draupadi, a Hindu goddess, headed the hundred heads of the demon and Kamalakanni is believed to have protests that she would become a widow. Draupadi explains her similarities that she has no sexual relations, though married. This resulted in the ambiguous kanni suffix. Ranganath Temple, bell tower, watch tower, cannon and draw bridge are located atop the hill.

The lower fort consists of Arcot Gate, Pondicherry Gate, Venkataramanaswami Temple, Pattabhi Ramaswami Temple, Sadatulla Khan’s mosque, Chettikulam and Chakrakulam tanks, platform where Raja Desing was killed in a war, large stone image of Hanuman, prisoner’s well where the prisoners condemned to death were thrown and left to die of starvation. The inner fort consists of Kalyana Mahal, the royal stables, the ruined royal palace, Anaikulam tank, granaries, magazine and the shrine of Venugopalaswami. There is a site museum at the entrance of the fort set up by the Archeological Survey of India containing sculptures pertaining to periods and many dynasties that ruled Gingee. There are also guns and cannonballs made of stone, strewn about the fort.

Krishnagiri

The second important hillock with an imposing citadel is known as Krishnagiri. It is also known as the English Mountain, perhaps because the British residents occupied the fort here, for some time. The Krishnagiri fort lies to the North of Tiruvannamalai road. It is smaller in size and height compared to the Rajagiri fort. A flight of steps of granite stones leads to its top. Another fort connected with Rajagiri with a low rocky ridge is called Chandrayan Durg, Chandragiri or St. George’s Mountain. The military and strategic value of this fort has been relatively less, but it has some interesting buildings of later period.

Chakkilinya Durg

The third fort for some reason is called Chakkilinya Durg or Chamar Tikri — meaning the fort of the cobblers. It is not known why it had acquired the name. Probably the royal saddlers and military shoemakers had set up their workshops
here, as Gingee obviously was a military encampment. There is a smaller and less important fourth hill, the summit of which is also well fortified. There is nothing much left of Chandrayan Durg and Chakkilli Durg. Their flanks are now completely covered with thorny shrubs and stone pieces.11

Culture
After the fort passed into British hands, it did not see any further action. The fort at Gingee was declared a National Monument in 1921 and was under the Archeological Department. The Tourism Department of India has tried to popularise this remote and oft-forgotten fort. Gingee today, with its ruined forts, temples and granaries, presents a different picture from the glorious splendor of its bygone days. But the remains of these fortifications are a mute witness to the numerous invasions, warfare and bravery that it witnessed. The fort is maintained by the Archeological Department. An entry charge of ₹15 is charged for Indian citizens and SAARC countries and US$2 or ₹100 for all monuments inside Krishnagiri and Rajagiri forts.

Impact on Economy
The dawn of the mass tourism era in the Himalayas had an enormous influence on the local economy: with the number of visitors increasing dramatically, the total amount of money spent by these visitors increased in the same way (Table 2). In Nepal, tourism accounts for 10% of the GDP and is the single-most important source of foreign currency (The World Bank 2002b, p. 7). In India, tourism is the second-largest source of foreign currency behind the gem and jewelry business (TED, p. 8).

The money spent by the tourists has diverse effects on the local economy. It stimulates the economy and induces the so-called “multiplier-effect” – jobs are created, capital is accumulated and local workers that used to be dependent on subsistence farming start their own businesses that serve the tourists: selling or renting supplies, providing guides or selling souvenirs to the tourists. Those businesses, in turn, employ people as guides or workers, which thereby benefit indirectly of the tourist money (TED, p. 8). But a part of the money can also be used to improve the local living standards through better health care, education and building structure. The huge amount of money spent in the tourism industry makes the economy extremely dependent on the revenues out of this sector. But because the tourism sector is also an extremely sensible one, the earnings out of this sector are extremely fluctuant. This became obvious on several occasions: the Maoist insurgency that started in 1996 destabilized the tourism economy – in 1996, the yearly growth of tourist arrivals dropped 4.1% from 11.3% in 1995 to 7.2% in 1997 (Table 2). In December 1999, after the hijacking of the Indian Airlines flight, the number of tourists started to diminish increasingly. The decline was compounded by the tragic events in the Royal Family in June 2001 and the escalation of the Maoist violence. After the terror attacks in the United States in September 2001 the November 2001 tourism earnings in Nepal plummeted to 50% of the earnings in the previous year (The World Bank 2002b, p. 7).

Impact on Ecology
The most obvious and visible impact of modern mass tourism is the impact on the ecology (this is not only true for the Himalayas, but also for the rest of the world). In this chapter, the main types of ecological degradation will be described.

Deforestation:
Deforestation in general (and not only the deforestation induced by tourism) in the Himalayas has been the source of long-lasting debates. Eckholm describes the Himalayas as a fragile ecosystem, where “forces of ecological degradation building so rapidly and so visibly” (Eckholm 1975, p. 764) and adds that “the pace of destruction is reaching unignorable proportions” (Eckholm 1975, p. 765). The World Bank issued a report in 1978 that suggested that the hill areas of Nepal would be completely deforested by 1993 and, in 1987, Newsweek reported that Himalayas, once fertile and productive, could become a desert within 25 years (Walder 2000, pp. 10-11). These calculations are based on the fact that a huge percentage of the population relies on firewood as primary source of energy. With a rapid increase in the population growth, the amount of firewood needed and therefore the area being cleared will increase in the same way. This will in turn, according to Eckholm, intensify the monsoon-induced erosion and soil loss from the mountain slopes and leave these mountain slopes barren and infertile (Walder 2000, p. 10). But Eckholms theory is, according to other authors, not only oversimplified, but also “seriously distorted” (Walder 2000, p. 10; Ives 1989, p. 2). Ives and Messer showed that the deforestation in the Himalayas is not the result of a recent development, but that deforestation has been happening over centuries and that the forest cover of the Middle Hills has not changed significantly since the 1950s. Aerial photography of the Middle Hills, taken between 1964 and 1977, showed that only 1.5 of the original tree cover was lost – a rather insignificant number (Walder 2000, p. 11). Nonetheless, Walder states that “This is not to suggest, however, that the mountain areas are not particularly prone to notable deforestation. The more pragmatic view is that while there are inevitably conflicts between man's activities in the mountains and the natural ecological balance, it is the extent of the resulting problems that has been overstated.” (Walder 2000, p. 12).

Which role does tourism play in the deforestation of the Himalayas? Even though the use of firewood by trekking groups is strictly forbidden since the late 1970s, it is still done – for example, it is estimated that only 7 to 10% of the visitors to the Sagarmatha National Park used other sources of fuel than firewood (Mishra 1986, p. 320). The 1979 ban on the collection and use of firewood in the Sagarmatha National Park was not applied to the tourist lodges, what in turn led to an decrease of porter-assisted treks and to an increase of the so-called “tea house” treks. Today, lodges on average use about 75kg of firewood each day during the peak season. With an increasing number of tourists in the region, this leads to an increasing pressure on the forests close to the main trekking corridors. Walder states, “[…] while the problem of forest depletion is not widespread throughout the park area, in the main trekking corridors it is said to be severe.” (Walder 2000, p. 18).

Waste disposal:
Another severe problem related to tourists and trekking in the Himalayas is waste disposal. Again, the Sagarmatha National Park can serve as an example: Despite a law from 1979 that requires trekkers to bury or carry out their waste, the amount of Figure 3: Oxygen tanks collected in the Sagarmatha NP. waste left behind on the trails campsites is tremendous. It is estimated that one group of trekkers (consisting of 15 people) creates 15kg of waste that is not biodegradable or burnable during a 10 day trek (Walder 2002, p. 18). According to a Mountain Agenda report on the Everest region, it is estimated that there are 17 metric tons of garbage per kilometer of tourist trail – for this reason, the Everest region is sometimes labeled as “the world's highest junkyard” and the trail to the Everest Base Camp as “the garbage trail” (Mountain Agenda 1999, p. 22). Because the garbage problem in the Everest region has had a high profile and the media brought it to the attention of the people in the region, several initiatives have been started to reduce the amount of waste in the region: local initiatives that are assisted by NGOs, government initiatives, foreign initiatives like the “Everest Environmental Expedition” foreign individual volunteers. In 1984, a team of Sherpas collected and removed 1000 bags of litter from the lower parts of the mountain. Between July 1995 and 1996, the Sagarmatha Pollution Control Committee removed a total of 190 tons (650 tons of burnable and 140 tons of non-burnable) of garbage (Nepal 1997, p. 8). The disposal of human waste can also pose a threat to the environment: if not
buried at least 50 m away from water, human waste can pollute the water. But even if human waste is buried correctly in a so-called “cat hole”, the sheer amount of people having to do so is a problem: nowadays, areas in the vicinity of popular campsites look like “moonscapes” because of the amount of “cat holes” dug. (Walder 2000, p. 18).

Trail degradation:
Another problem that arises with the increasing number of tourists in the Himalayas is trail degradation. When trails are not maintained properly, soil erosion and deep ruts along trails will occur because of heavy use by tourists and local people (Nepal 1997, p. 15). These obstacles make the trails difficult to walk, thereby inducing people to seek alternative paths and leave the formal routes. These informal paths, in consequence, lead to increased damage of the vegetation cover through trampling. The damage to the vegetation cover, in turn, can lead to habitat loss and a change of species composition (Walder 2000, p. 17).

Impact on Society
A third impact of mass tourism is the impact on the local society. It has changed the structure of society itself by preferring certain groups of the population that are able to interact with the tourists and provide services to them. But tourism has also an influence on the local culture by introducing new elements and showing the people different, “modern” ways of living. The Sherpas of Nepal may serve as an example for these statements: in the early days of modern tourism in Nepal, they were the first to come in contact with foreigners (Nepal 1997, p. 17). In the following years, the Sherpas earned a reputation as sturdy, reliable guides and this image was spread in the western countries, the source of most tourists. Because of their reputation, the Sherpas were in high demand as guides and were able to earn their living with tourism-related business. Tourism made the Sherpas one of the most affluent ethnic groups in the Nepali society (Mountain Agenda 1999, p. 21). Although certain researchers suggest that in spite of the influence of tourism, Sherpas have been able to maintain their distinctive lifestyle and customs (Fisher 1990 & Stevens 1993, cited in Nepal 1997, p. 17), there are signs that this is not completely the case. Nepal states that he is somewhat skeptical of the above statements [by Fisher and Stevens]. The Rinpoche (the incarnate abbot) of Thyangboche Monastery expressed his concern for deteriorating traditional values among young Sherpas. […] during the 1970s […] many young Sherpas became drug addicts, a problem which did not exist in Nepal before the advent of tourism. Many Sherpas have married foreigners and are now living abroad.” (Nepal 1997, p. 17) Even the monks have become involved with tourism – they get a two-month leave during peak season each year to earn money with tourism – and the Rinpoche of Thyangboche Monastery himself operates a tourist lodge close to the monastery (Nepal 1997, p. 17).

But the economic success of the Sherpas led to increasing number of conflicts between them and non-Sherpa ethnic groups: the non-Sherpa groups (for example, the Rai or the Tamang) complain that they have been de-facto barred from the better-paid jobs in tourism and that the Sherpas are the sole beneficiaries of tourism. These groups do not feel that they get a fair treatment by the Sherpas, but that they are being humiliated and deprived.

Modern approaches on tourism-related issues
Nowadays, there is an increasing awareness of the effects that mass tourism has (described in the previous chapter) on the local economy, ecology and society. With this increasing awareness, the concepts of a sustainable tourism became more and more accepted (Owen 1993, cited in Eagles 1995, p.1):

- Tourism should be one part of a balanced economy.
- The use of tourism environments must allow for long-term preservation and for use of those environments.
- Tourism should respect the character of an area.
- Tourism must provide long-term economic benefits.
- Tourism should be sensitive to the needs of the host population.

Following these concepts, several codes of conduct, ethical codes and minimum impact codes which aim on minimizing the impact of tourism and raising the awareness of ecological problems have been published for tourism in general and been partially adapted to the Himalayas (Appendix A). As these codes of conduct completely rely on the acceptance by the tourist, success is not guaranteed. Therefore, other strategies must additionally be used to support the effort of creating a sustainable tourism:

- The seasonal dispersal and regional diffusion of the tourists: in Nepal in 1995, over 60% of the trekkers went to the Annapurna area and half of annual number of tourists visited in the time between October and November (Gurung 1998, p. 9). A seasonal dispersal and regional diffusion of the trekkers could help in taking pressure off the local ecosystem. This could be achieved by either regulating the number of tourists allowed in a certain area, or, by introducing a more dynamic pricing policy, creating incentives to visit less frequented areas or to visit outside of the peak season.

The promotion of alternative, fuel saving technologies: the use of alternative energy sources such as micro-hydro can help in reducing the use of firewood by locals and tourists and, thereby, reducing the pressure on local forests (The Mountain Institute Asian Regional Office 1990, p. 1; Sherpa 2002, p.2; Walder 2000, p. 20).

CONCLUSION
The creation and promotion of designated campsites: when designated campsites are created that offer certain amenities (such as washing facilities, for example), the amount of “wild” camping along the trails could be reduced. The sharing of revenues: The management of the environment can involve an enormous amount of money. The revenue from user charges and mountaineering royalties should not only help the governments, but should be shared between the governments and the areas where this revenue is created.