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## DEGRADATION OF ENVIRONMENT BY AJANTA TOURISM CENTRE IN MAHARASHTRA, INDIA

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### Abstract

Tourism has become one of the important sectors and plays an important role in overall development of the country. This sector reflects many socio-cultural aspects as well as identity of the country. But tourism industry is directly related to the environment. The qualities of environment depends on natural and man-made factors of tourism. The positive and negative impacts of tourism on environment are the objective of this study. The study has been conducted mainly on the basis of literature survey, primary interviews and secondary data. Various seminars, papers, summary of the discussion, government reports and research journals on environmental impacts of tourism have been surveyed for the purpose of the study. Data depend on tested methods of surveys and interviews of tourists, houses, businessmen and people of the surrounding tourism center. Out of the total houses and people of Ajanta 5 percent sampling was taken to survey in January 2020. However, more rapid development is responsible to the degradation of the place. At Ajanta tourist centre, 28.33 percent of the people agreed in favor of discouraging the growth of tourists. 39.17 percent of the people the growth of tourism which is detrimental to the environment are discouraging tourism. But 18.33 percent of the people disagreed that, rapid growth of tourists degrades the environment. But awareness of tourists and government agencies are about tourism industry positively impact or negative on environment at Ajanta.

**Keywords:** tourism, recourses, environment, pollution, distraction, protection, conservation

## DEGRADACJA ŚRODOWISKA SPOWODOWANA PRZEZ OŚRODEK TURYSTYCZNY AJANTA W MAHARASHTRA, INDIE

### Abstrakt

Turystyka stała się jednym z ważnych sektorów i odgrywa ważną rolę w ogólnym rozwoju kraju. Sektor ten odzwierciedla wiele aspektów społeczno-kulturowych kraju i jego tożsamość. Ale przemysł turystyczny jest bezpośrednio związany ze środowiskiem. Cechy środowiska zależą od naturalnych i antropogenicznych uwarunkowań turystyki. Przedmiotem badań jest pozytywny i negatywny wpływ turystyki na środowisko. Badania prowadzono głównie na podstawie przeglądu literatury, bezpośrednich wywiadów oraz danych otrzymanych pośrednio. W pracy wykorzystano różnorodne źródła: seminaria, artykuły, wnioski z dyskusji, raporty rządowe i czasopisma naukowe, na temat oddziaływaniu turystyki na środowisko. Dane opierają się na sprawdzonych metodach badań i wywiadów z turystami, właścicielami domów, przedsiębiorcami i ludźmi związanymi z ośrodkiem turystycznym. W styczniu 2020 r., spośród ogólnej liczby domów i mieszkańców Ajanty, do badań włączono 5%. Jednakże bardziej gwałtowny rozwój odpowiada za degradację środowiska. W ośrodku turystycznym Ajanta 28,33% osób

zgodziło się z tym, że powinno się zniechęcać do dalszego wzrostu liczby turystów. Aż 39,17% osób uważa wzrost turystyki za szkodliwy dla środowiska i zniechęca do rozwoju turystyki. Ale 18,33% osób nie zgadza się z tym, że gwałtowny rozwój turystyki szkodzi środowisku. Świadomość turystów i agencji rządowych na temat przemysłu turystycznego mogą wpływać pozytywnie lub negatywnie na środowisko Ajanty.

**Słowa kluczowe:** turystyka, zasoby, środowisko, zanieczyszczenie, zniszczenie, ochrona, ochrona przyrody

## 1. INTRODUCTION

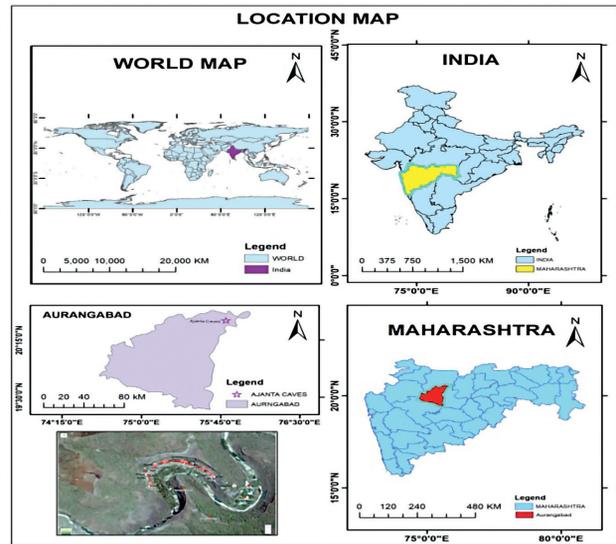
Large number of tourists poses potential threats to many environmental areas around the world. It can put heavy pressure on environmental resources because of different types of the surrounding of the tourist place. Tourist use the resources when they come at the tourist place; they use roads for transportation, hotels for accommodation. Much water, land, electricity, food and other natural resources are misused by tourists [1].

Tourism has the potential to create beneficial effects on the environment by contributing the environmental protection and conservation. Various studies in recent years have examined the impact of tourism on the natural environment. But the effects on the environment are of two ways namely positive and negative. Tourist and local people misuse the resources. The adverse impact the tourism in Ajanta area can have on the environment and the basic resources heavily affects non-tourist activities. To avoid these adverse impacts, tourism industry needs to be planned, managed and undertaken in a way that is environmentally sustainable, socially beneficial and economically viable. Adverse impact from tourists occurs when the level of tourist pressure is greater than the environment's stability to cope with this pressure within acceptable limits of change.

## 2. STUDY AREA

Ajanta tourist place is located at a distance of 15 km from Ajanta village and 101 km in the northern direction of the Aurangabad city and 55 km from Jalgaon. It is also the nearest railway station. Ajanta tourist center is conveniently accessible by a road from both Aurangabad and Jalgaon. The geographical location is Lat.  $20^{\circ}33'12.30''N$  and Long.  $75^{\circ}42'01.70''E$  (Fig. 1).

The total area of the Ajanta village is around 1148 hectares and Ajanta cave area is about 500 hectares. According to the data of 2011, the population of the village was 16266, 8339 males and 7927 females, living in 3116 houses.



**Fig. 1.** Ajanta tourist place location map

**Ryc. 1.** Mapa pokazująca lokalizację ośrodka turystycznego Ajanta

The objectives of the work was:

- to study environmental degradation by tourist activity at Ajanta,
- to discuss various preventive measures for negative impact on environment,
- to analyze positive sides of tourism on environment.

## 3. DATA COLLECTION AND METHODOLOGY

The study has been conducted mainly on the basis of literature survey and secondary data (Fig. 2). Various reports of research organizations, journals, government reports and some periodicals of socio-cultural impacts of tourism have been collected for the purpose of the study. Government, socio-cultural survey regards the tourism industry should also be observed in the research paper. Achieving the desired result of the study depends on tested methods of surveys and interviews of tour-

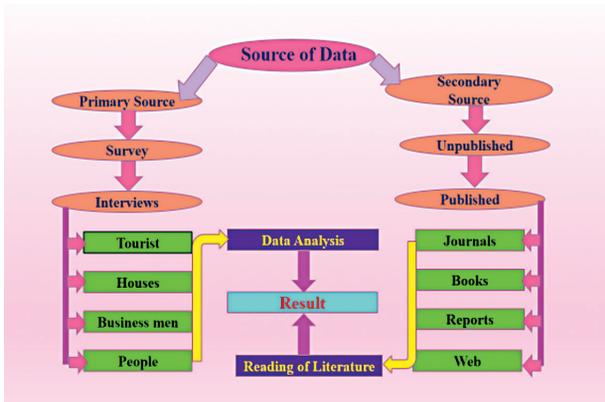


Fig. 2. Source of data

Ryc. 2. Źródła danych

ists, houses, businessmen and people of the surrounding tourist center. Out of the total houses and people of Ajanta 5 percent samplings were taken to survey, in January 2020 at Ajanta. It means that, 105 houses and 675 people were involved in the sampling survey. Also 25 percent tourists and 100 percent businessmen were surveyed for this research. It means that, 750 tourists were surveyed per day for sampling and 72 were taken into considering in the sample for research

#### 4. DISCUSSION AND RESULTS

Tourism is considered to be an important vehicle for economic and social development. The tourist industry has significant environmental, cultural, social and economic effects, both positive and negative. Tourism can be a major tool for economic development but, if not properly planned it can have destructive effects on biodiversity and pristine environments and can result in the misuse of natural resources such as fresh water, forest and marine life. On the hills of the Ajanta tourist spot, tourists are constantly wandering in the surrounding forests in the hilly region. The adverse effects are also seen here. Some tourists are also coming for research as well as enjoying the place. Erosion of rocks while walking causes cracks in the rocks and also destroys the original appearance of the tourist spot and creates environmental issues. Gradual disappearance is due to the water seeping into the caves from the place, where the top shell of the hill is visible. The planet's natural resources are consumed or contaminated by its human population. Human survival needs drinkable water, breathable air and usable biological diversity.

Natural ecosystems are the world's primary reservoirs for each of these [2].

#### 4.1. Effect on vegetation

Environmental damage is one of the ugly faces of tourist activities. Tourism is continuously causing sufficient damage to the natural environment of popular tourist destination. Tourism can dramatically increase transportation services and deforestation, which can result in air and water pollution. The growth of infrastructure eventually destroys the natural environment of the tourist spot, if not controlled by the rules and regulation in the form of environmental protection acts, vegetation will be destroyed day by day in future (Fig. 3).

Damage to vegetation from visitor activities is not just limited to grassland and shrub land, but has also been found in different types of forests in north Queensland where day-use and camping reduced canopy cover and decreased cover of seedlings compared to controls, with the extent of damage varying among rainforests, wet sclerophyte forest and littoral rainforest in the Wet Tropics World Heritage Area. These types of activities (camping and trampling) often result in changes in species richness, with make ecosystems more susceptible to damage. Some species are lost from a community, but others are able to colonize disturbed sites. Trampling on the fragile forest vegetation



Fig. 3. Ajanta view in summer season

Ryc. 3. Widok na Ajantę w sezonie letnim

**Table 1.** Opinion of the people about the effect on vegetation**Tabela 1.** Opinia ludzi na temat wpływu na roślinność

| Sr.No. | Opinion of the people/ Opinia ludzi             | Number of People<br>Liczba respondentów | Percentage % |
|--------|-------------------------------------------------|-----------------------------------------|--------------|
| 1      | Strongly agree/ Zdecydowanie zgadzam się        | 71                                      | 10.52        |
| 2      | Agree/ Zgadzam się                              | 120                                     | 17.78        |
| 3      | Neutral/Neutralna opinia                        | 50                                      | 7.41         |
| 4      | Disagree/ Nie zgadzam się                       | 279                                     | 40.33        |
| 5      | Strongly disagree/ Zdecydowanie nie zgadzam się | 155                                     | 22.96        |
|        | Total/ Razem                                    | 675                                     | 100          |

along the highest mountain ridges in Australia resulted in a decline in native species richness on the track compared to adjacent vegetation, as well as decline in the abundance of species [3].

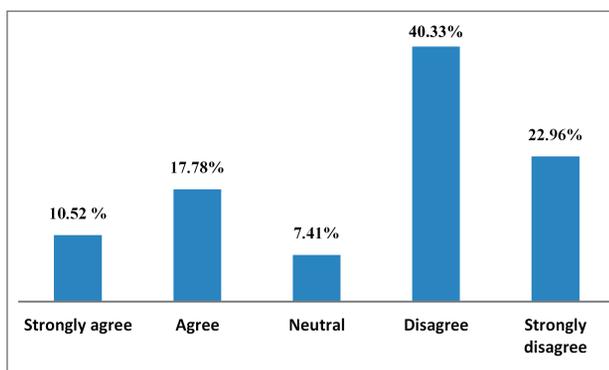
Natural vegetation is the soul of tourism. Natural plants add value to the beauty of nature. But the influx of tourists adversely effects on the natural vegetation here. Many tourists come for study and research. They cut the leaves, flowers and fruits of the plant. Many tourists are come to the tourist destination with their vehicles. It means that, air pollution has been increase due to vehicles. It is also an adverse effect on plants of Ajanta tourist center. According to, about 63 percent of the locals, Ajanta tourism does not have any adverse effect on the vegetation near Ajanta caves, because there is a legal ban on deforestation in the surrounding forests in Ajanta. 28 percent of people think that tourism affects the vegetation around Ajanta Lena because the locals in Ajanta are illegally cutting down vegetation for tourists. However, it is very low proportion (Table 1). The

number of tourists visiting Ajanta is also huge. It also appears to have an adverse effect on the plants.

According to (Fig. 4), 10.52 percent, people strongly agree that, tourism is degrading the vegetation in the area around the tourist center of Ajanta. 17.78 percent, people agree that tourism is degrading the vegetation in the area around the tourist center of Ajanta. As more people gather the environment is stressed to meet its needs. 7.41 percent people have no idea about the stress on plants due to tourism. 40.33 percent people are of the opinion that, due to the influx of tourists, vegetation is destroyed at the Ajanta tourist center. The Archaeological Survey of India has set up a plant conservation facility at the site of Ajanta center as a tourist destination. Dattawadi Fardapur, Ax ban have been imposed on all the villages on the hill of south of Ajanta caves. 22.96 percent people also strongly disagree that the vegetation in Ajanta is destroyed due to the influx of tourists.

#### 4.2. Sound Landscape

It is an important concept in city architecture that invisible, but only audible events, have an importance in terms of tourism. The sonic environment heard, felt and interpreted by an individual or a community is defined as sound landscape. The place, the sound, the listener and the human as the source of the sound constitute the acoustic communication. These acoustic experiences exhibit a dynamic structure that affect and shape these relations which constitute the behavioral relations of individuals with their environment. Rapid increase of the population, industrialization and immigration disturb the natural and cultural balance of the cities. Social, cultural, economic and ecologic destruction of the cities

**Fig. 4.** Effects on vegetation**Ryc. 4.** Oddziaływanie na roślinność

turns them into environments that are insufficient for human life [4].

When examined the relation between sound pollution and tourism, it is possible to say they both affect each other. Especially with the development of mass tourism, people travel in crowded groups; intensively use land, air, sea, and rail transportation vehicles. In this context, tourism causes negative effects and in particular the sound pollution, one of these effects, is significantly felt in tourism centers. There are studies conducted in this field in international literature. In a study conducted in Bhojur, a significant tourism destination of India, it was stated that the traffic and crowd caused by tourism produced a sound pollution, and the residents of the city were disturbed of this.

The pleasant sounds have been used for therapeutic purposes for ages. In addition to music, psychotherapists use sound such as streams, waterfalls, winds, waves and birds that exist in nature. Such sound is effective in reducing depression and stress. Noise affects human health negatively, regardless its level and exposure period. Negative effects of sound pollution on human health can be divided in two groups as physiological effects and psychological effects. It is clinically demonstrated that sound, physiologically, can cause transient or permanent loss of hearing, impaired heart rhythm, difficulty breathing, increased blood pressure, and sleep disorders. Psychologically, it can result in behavioral disorders such as stress, lack of concentration, decrease in job performance and anxiety.

The tourist sector should be sound free. In ancient times, religious tourism, ecological or nature-based tourism were chosen for this purpose to bring peace of mind. A very quiet tourist area used to go to the community. But with the recent increase in traffic and con-

gestion, most of the world's tourist destinations have become noisy. The sound pollution has also affected tourists, from the destination and animals and birds in the environment. Due to the constant flow of tourists, the people living in the surrounding area have become very distressed. Many vehicles also come to Ajanta tourist spot. Many tourist groups come. Sound pollution is caused by the vehicles and the sound of tourists. Tourists come to enjoy the tourist spot. Singing loudly on it has an adverse effect on the people around it, on the animal birds. 16.74 percent of tourists, traders and locals in Ajanta agree that sound pollution is caused by the vehicles of tourists visiting Ajanta tourist spots. Some tourists make loud sounds when they come to Ajanta. If you make a sound inside the cave, it makes noise. People make loud sounds there to enjoy it. Therefore, sound pollution has an adverse effect on the animals and birds in the surrounding forest. As shown in Table 2, 37.33 percent of the people are also agreeing with the opinion that sound pollution caused by tourist vehicles and tourists has adverse effects on the surrounding citizens, animals and birds. 14.22 percent people do not express any opinion on sound pollution caused by tourists. 17.48 percent of people disagree that sound pollution is caused by tourist tourism in Ajanta. 14.22 percent people strongly disagree that sound pollution is caused by tourist tourism in Ajanta. However, more and more people are of the opinion that tourists, their vehicles and sound cause sound pollution in Ajanta. About 54.08 percent people agree that tourism in Ajanta causes noise pollution. Because of many tourists bringing their own vehicles, when they arrive, the loud sound of the loudspeakers in the vehicle creates sound pollution. Tourists also make loud sounds due to the vibration of sound in the caves at Ajanta. However, 32 percent disagree (Fig. 5).

**Table 2.** Opinion of people about sound

**Tabela 2.** Opinie ludzi na temat hałasu

| Sr.No. | Opinion of the people / Opinie                  | Number of People / Liczba | Percentage % |
|--------|-------------------------------------------------|---------------------------|--------------|
| 1      | Strongly agree/ Zdecydowanie zgadzam się        | 113                       | 16.74        |
| 2      | Agree/ Zgadzam się                              | 252                       | 37.34        |
| 3      | Neutral/ Neutralna opinia                       | 96                        | 14.22        |
| 4      | Disagree/ Nie zgadzam się                       | 118                       | 17.48        |
| 5      | Strongly disagree/ Zdecydowanie nie zgadzam się | 96                        | 14.22        |
|        | Total/ Razem                                    | 675                       | 100          |

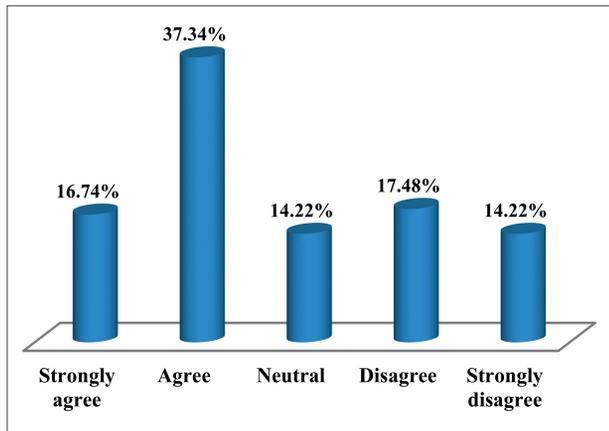


Fig. 5. Sound landscape

Ryc. 5. Graficzne zestawienie odpowiedzi na temat hałasu

#### 4.3. Protection and conservation of environment

Tourism can play a significant role in contributing for the protection of environment, conserving and restoring different biological diversity and sustainable use of natural resources. Due to presence of attractiveness, pristine sites and natural areas are identified as valuable and the need to keep the attraction alive can motivate in creation of national parks and wildlife parks. For example, in India, new laws and regulations have been enacted to preserve the forest and to protect native species. The coral reefs, which are around the coastal areas and the marine life that depend on them for survival are also have been protected by the government of India [5].

Tourism has the potential to create beneficial effects on the environment by contributing to environmental protection and conservation. It is a way to raise awareness of environmental values and it can serve as a tool

to finance protection of natural areas and increase their economic importance. In a number of destinations, tourism helps to ensure higher water quality and better protection of nature and local natural resources. It can generate additional resources to invest in environmental infrastructures and services. Tourism can contribute directly to the conservation of sensitive areas and habitat. Revenue from entrance fees and similar sources can be allocated specifically to pay for the protection and management of environmentally sensitive areas. Special fees for operations or conservation activities can be collected from tourists or tour operators.

Tourism is a phenomenon that can bring happiness in a stressful human life. Tourism brings about socio-economic as well as some environmental changes. Sometimes these changes are positive and sometimes they are negative. Both of these effects are reflected in the environmental effects. Tourism also brings some benefits to the environment. The Ajanta tourist center has also seen some benefits to the environment. In a way, it also protects the environment. It is controlled by the local government. The government enacts laws and regulations to protect the environment in tourist destinations that benefit the environment. Special efforts have been made for environmental protection at Ajanta. Logging has been banned, in Ajanta to protect the environment. Similarly, special arrangements have been made to prevent air pollution, noise, solid waste and water pollution at the Ajanta tourism center. A tourist vehicle depot was constructed 4 km away from the Ajanta caves. Food shops are also far away to prevent solid waste pollution. Care is taken to ensure that, there is no pollution in the caves. Regular cleaning is done. Care is taken to ensure that no harm is done to the environmental component.

Table 3. Opinion regarding protection and conservation of environment

Tabela 3. Opinie dotyczące ochrony i zachowania środowiska

| Sr.No | Opinion of the people / Opinie ludzi            | Number of People / Liczba | Percentage % |
|-------|-------------------------------------------------|---------------------------|--------------|
| 1     | Strongly agree/ Zdecydowanie zgadzam się        | 192                       | 28.44        |
| 2     | Agree/ Zgadzam się                              | 174                       | 25.78        |
| 3     | Neutral/ Neutralna opinia                       | 67                        | 9.93         |
| 4     | Disagree/ Nie zgadzam się                       | 130                       | 19.26        |
| 5     | Strongly disagree/ Zdecydowanie nie zgadzam się | 112                       | 16.59        |
|       | Total/ Razem                                    | 675                       | 100          |

Taking into account the views of tourists, businessmen and the people around Ajanta tourism center, table 3 shows that, 28.44 percent people strongly agree that tourism in Ajanta is bringing various benefits to the environment. Environmental protection laws are enforced in the surrounding villages. Care is also taken to ensure that no damage is done by the tourists. 25.78 percent people also agree that tourism protects the environment to some extent. 9.93 percent people do not express any opinion; they are ignorant about the relationship between environment and tourism. 19.26 percent of people disagree that tourism is good for the environment, but to some extent it is bad for the environment. No matter how many laws are enacted, it directly harms the environment. 16.59 percent disagree. This is because the tourists are not the same as the surveyors or even the tourists have to create facilities by ignoring the environment, which is detrimental to the environment. The Ajanta tourist center is surrounded by hills. In ancient times, there were dense forests here. Wide varieties of medicinal and important plants are found in the area of the tourist center, 54.22 percent agree that Ajanta tourism protects and nurtures the vegetation of the surrounding forest. This is due to the fact that plants are protected and nurtured through the Ajanta tourism center administration, the Archaeological Survey of India and the tourism association. Plant conservation is done by enacting various laws and replanting plants. Even so, 35.85 percent of the people say that tourists and locals cut down plants. Researchers pick the components of flowers, leaves, fruits, and bark of plants for study (Fig. 6).

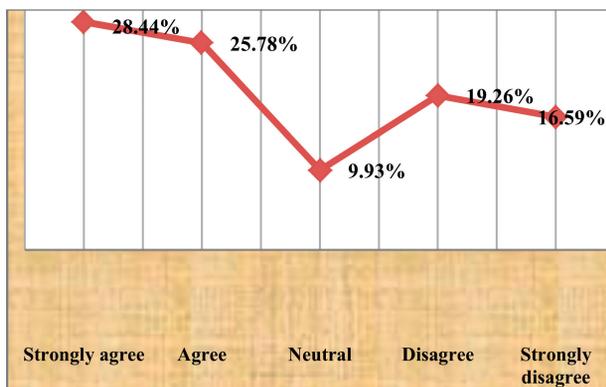


Fig. 6. Protection and conservation of environment  
Ryc. 6. Ochrona i zachowanie środowiska

#### 4.4. Incentives for the conservation of natural resources

Tourism provides some concessions for conservation of natural resources, mainly water supply, road transport facilities, financial provision for conservation of natural resources. The government of any country makes such arrangements. Another complementary opportunity for generating revenues from tourism for protected areas are the creation of mechanisms and funds to capture donations from visitors, who wish to contribute more than the entrance fee. In Mexico, for example, tour operators collect donations from their clients for investment in the conservation of the areas.

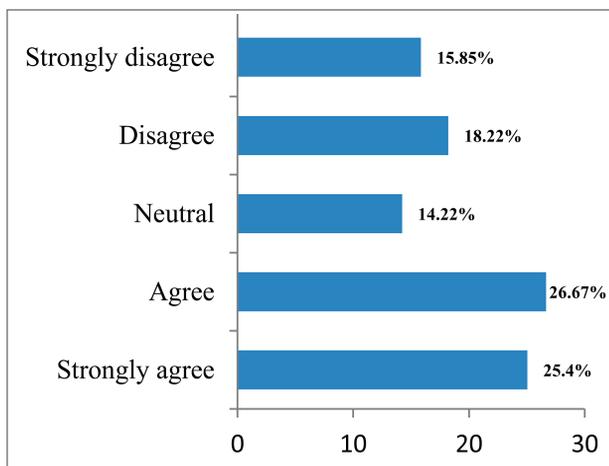
Environmentalists often fear that tourists will trample all over sensitive natural resource areas, but tourism may bring the needed and only economic incentives to help in conservation; tourism and natural resource conservation already have a mutually beneficial relationship, that is ideal for creating a sustainable partnership. Tourism and natural resource conservation: The 'potential' for a sustainable symbiotic relationship. Protected area agency managers rarely have all the resources they need to fully manage their protected area networks or to address the range of threats and challenges they face. This has been recognized as a major impediment to the successful implementation of the convention on biological diversity. Protected areas need to justify themselves to communities and political leaders and biodiversity conservation alone is no longer a sufficient reason for national governments to maintain large tracks of land as parks. Protected areas do provide a wide range of benefits, but often these are underestimated and poorly articulated.

Incentives for natural resource conservation are provided by the government. The revenue collected by the government is a natural resource used for wealth conservation. It is spent on drinking water, soil quality and conservation of natural plants, new plantings. National parks, zoos, sanctuaries and tourist centers are in a way incentives for natural resources. Tourism provides incentives for conservation of rare animals, rare plants, and water resources. Such natural resources are also conserved in Ajanta. According to table 4 indicate that, 25.04 percent of people in Ajanta agree that tourism is helping to preserve its natural heritage. The tourist center at Ajanta was not well developed before the

**Table 4.** Opinion about incentives for conservation of environment**Tabela 4.** Opinie na temat stosowania środków finansowych na rzecz ochrony środowiska

| Sr.No | Opinion of the people / Opinie ludzi            | Number of People / Liczba | Percentage % |
|-------|-------------------------------------------------|---------------------------|--------------|
| 1     | Strongly agree/ Zdecydowanie zgadzam się        | 169                       | 25.04        |
| 2     | Agree/ Zgadzam się                              | 180                       | 26.67        |
| 3     | Neutral/ Neutralna opinia                       | 96                        | 14.22        |
| 4     | Disagree/ Nie zgadzam się                       | 123                       | 18.22        |
| 5     | Strongly disagree/ Zdecydowanie nie zgadzam się | 107                       | 15.85        |
|       | Total/ Razem                                    | 675                       | 100          |

Japanese government funded it, so the number of tourists was also limited and there were no incentives to protect the natural resources. But natural resources are being conserved through incentives provided jointly by the Government of Japan, the Archaeological Survey of India and the Government of India. 26.67 percent people also agree that natural resources are being conserved through tourism incentives. 14.17 percent people do not have any opinion on this issue. However, 18.22 percent people disagree that natural resources are being conserved through tourism incentives. 15.85 percent people strongly disagree. The role of government is very important in the development of tourism. The place of environment is very important in tourism. The role of government in conservation of environment is important for the development of tourism. 51.71 percent people agree that the government provides incentives for the conservation of the environment for tourism.

**Fig. 7.** Incentives for conservation of nature.**Ryc. 7.** Środki finansowe na rzecz ochrony przyrody

Because of the government is conserving the environment for tourism. The government implements a number of environmental conservation schemes. In Ajanta also the environment is protected by ban on ax, ban on cattle grazing, ban on entry of private vehicles (Fig. 7).

#### 4.5. Destruction of natural environment

The growth and development of tourism helps in the development of infrastructure. The growth of tourism means the growing number of tourists. As the number of tourists increases, so many facilities have to be created for it. Roads, transport facilities, water supply facilities, electricity supply, accommodation and recreational facilities for tourists have to be constructed. The creation of these tools degrades the natural environment. Deforestation has to be done. The natural state of the land has to be change. Ultimately water supply is under stress. Buildings have to be built for various reasons, thus destroying of the natural environment is unavoidable.

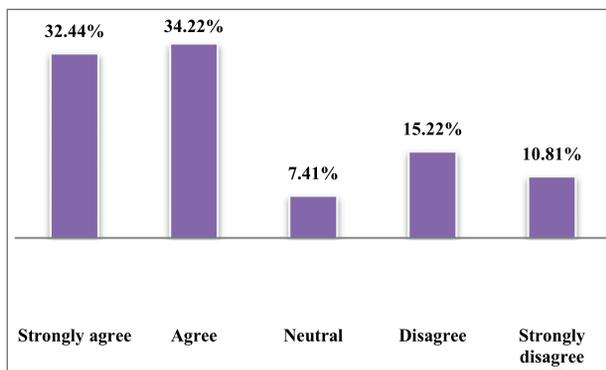
Construction of restaurants, accommodation and facilities frequently requires clearing forested land. These activities can cause severe disturbance and erosion of the local ecosystem, and even destruction in the long term. Furthermore, extraction of building materials such as hinterland forests, leads to erosion and destruction of habitats. In the Philippines and the Maldives, dynamiting and mining of coral for resort building materials has damaged fragile coral reefs and depleted the fisheries.

Land grabbing, and deforestation have adverse effects on the environment in terms of providing accommodation, hotels, water supply, restaurants, roads and recreational facilities for the development of tourism

**Table 5.** Opinion about destruction of natural environment**Tabela 5.** Opinie na temat niszczenia środowiska przyrodniczego

| Sr.No | Opinion of the people/ Opinie ludzi             | Number of People | Percentage |
|-------|-------------------------------------------------|------------------|------------|
| 1     | Strongly agree/ Zdecydowanie zgadzam się        | 219              | 32.44      |
| 2     | Agree/ Zgadzam się                              | 231              | 34.22      |
| 3     | Neutral/ Neutralna opinia                       | 50               | 7.41       |
| 4     | Disagree/ Nie zgadzam się                       | 102              | 15.12      |
| 5     | Strongly disagree/ Zdecydowanie nie zgadzam się | 73               | 10.81      |
|       | Total/ Razem                                    | 675              | 100        |

in a place. Excavation of land for construction of hotels, erosion of natural forests leads to degradation of natural environment. Table 5 shows that 32.44 percent of people strongly agree that the development of the environment degrades the natural environment. Buildings have to be built for tourist accommodation. 34.22 percent people also agree that buildings have to be constructed for tourist accommodation. Construction has to be done for water supply. It degrades the natural environment. 7.41 percent people do not express any role in this matter. Fifteen percent disagree, saying that buildings have to be built for tourist accommodation. Construction has to be done for water supply. It does not cause much damage to the natural environment. 15.12 percent people strongly disagree that buildings have to be constructed for tourist accommodation. 10.81 percent people strongly disagree that buildings have to be constructed for tourist accommodation. Construction has to be done for water supply. It does not cause much damage to the natural environment. Tourism is a great way to enjoy life. While tourism sometimes causes un-

**Fig. 8.** Destruction of environment**Ryc. 8.** Niszczenie środowiska przyrodniczego

intentional damage to the environment, sometimes tourists do it deliberately. This is because of many tourists disturb the plants, wild animals and birds in the environment or these animals are disturbed by the actions of the tourists. Constructing buildings, roads, and other facilities is detrimental to the environment. Only 25.93 percent people do not think that tourism brings destruction to the environment (Fig. 8).

#### 4.6. Degradation of environment

After the Industrial Revolution, various modes of transport were developed, which gave impetus to the development of tourism. The development of tourism has been so rapid that it has never been noticed that it has led to environmental degradation. The growth of such degrading, tourism is discouraging the development of tourism. The negative environmental impacts of tourism are substantial. They include the depletion of local natural resources as well as pollution and waste problems. Tourism puts enormous stress on local land use, and can lead to soil erosion, increased pollution, natural habitat loss, and more pressure on endangered species.

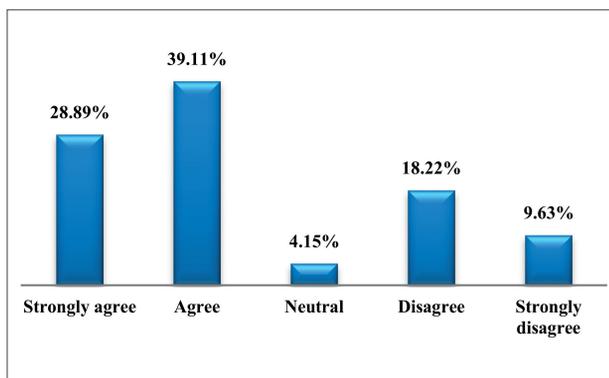
As people do not tend to be flexible, when it comes to implementing rules and regulations, especially when visitors are on holidays, Author B. Wheeler describes in his words: And what sort of touristic approach is needed for tourism at one with nature; non-consumption, non-exploitative, avoiding degradation and destruction of the 'environment', but rather tourism in harmony, in balance with nature [6].

The following views emerged after seeking the views of tourists, traders and locals at the Ajanta tourist center on the growth of tourism which is detrimental

**Table 6.** Opinion regarding degradation of environment**Tabela 6.** Opinia dotycząca degradacji środowiska

| Sr.No | Opinion/ Opinia                                 | Number of People/ Liczba ludzi | %     |
|-------|-------------------------------------------------|--------------------------------|-------|
| 1     | Strongly agree/ Zdecydowanie zgadzam się        | 195                            | 28.89 |
| 2     | Agree/ Zgadzam się                              | 264                            | 39.11 |
| 3     | Neutral/ Neutralna opinia                       | 28                             | 4.15  |
| 4     | Disagree/ Nie zgadzam się                       | 123                            | 18.22 |
| 5     | Strongly disagree/ Zdecydowanie nie zgadzam się | 65                             | 9.63  |
|       | Total/ Razem                                    | 675                            | 100   |

to the natural environment. As per the table 6, shows that 28.89 percent of the people agree that the growth of tourism, which is detrimental to the natural environment, is discouraging the growth of tourism. 39.11 percent people also express the view that the growth of tourism, which is detrimental to the environment, is discouraging due to tourism. 4.15 percent of people do not have any opinion on this issue. 18.22 percent people disagree that rapid growth of tourists degrades the environment and discourages growth. Even 9.63 percent of people strongly disagree. According to a survey conducted by locals in Ajanta, 68 percent of the respondents are of the view that the environment is deteriorating due to overcrowding of tourists as tourists use the natural environment in various ways. Tourists also use all the elements of the environment like air, water, and land. Environmental degradation occurs when tourists use the environment beyond its capacity. Only 27.85 percent people think that tourists in Ajanta do not degrade the environment due to overuse of environment (Fig. 9).

**Fig. 9.** Degradation of environment**Ryc. 9.** Degradacja środowiska

## 5. PROTECTION OF SUSTAINABILITY

Some countries derive a large income from tourism. However, it is necessary to protect the natural environment visited by tourists, including natural ecosystems and local often unique in global biodiversity. Therefore, part of tourism revenue is spent on protecting the visited natural and biological environment. Therefore, techniques for nature conservation and natural ecosystems should be constantly improved. In the course of developing operating activities, it should save energy as much as possible, educate tourists with the reasonable and effective methods, help tourists to unconsciously have environmental awareness, and make them bear the obligation to realize the sustainable development of tourism. There is no matter from travel agency or Tourism Company they shall adopt environmental protection measures to protect tourism environment and promote the sustainable development of tourism.

It need, to request functional units in the area to regularly check and supervise the observance of regulations on tourism environment protection security, and order, promptly detect and strictly handle justify the acts of violation of the provisions of law. Intensify propaganda and mobilization of organizations, individuals and communities to strictly implement environmental protection at tourist sites and areas in their respective localities. Besides, the system of restaurants, hotels, and amusement parks have sprung up quickly to meet the needs of tourists, but the control system of state management agencies and the industry have not kept up with many opportunities. The new construction service business still lacks, a waste treatment system to protect the environment, making the process of environmental degradation faster.

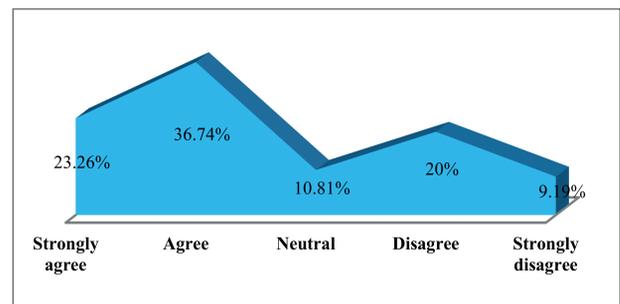
**Table 7.** Opinion of protection of environment for sustainability**Tabela 7.** Opinia na temat ochrony środowiska na rzecz zrównoważonego rozwoju

| Sr.No | Opinion of the people Opinion/ Opinia           | Number of people | Percentage |
|-------|-------------------------------------------------|------------------|------------|
| 1     | Strongly agree/ Zdecydowanie zgadzam się        | 157              | 23.26      |
| 2     | Agree/ Zgadzam się                              | 248              | 36.74      |
| 3     | Neutral/ Neutralna opinia                       | 73               | 10.81      |
| 4     | Disagree/ Nie zgadzam się                       | 135              | 20         |
| 5     | Strongly disagree/ Zdecydowanie nie zgadzam się | 62               | 9.19       |
|       | Total/ Razem                                    | 675              | 100        |

A lot of comments are made to improve the environment in Vietnam, including the opinion that local governments need to step in more strongly. The provincial and city government agencies direct the agencies to plan and arrange for daily-life of solid waste gathering in tourist sites, cultural, historic sites and tourist accommodation establishments. Investigate and establish polluted tourist environment in the area [7].

Tourism is an important industry for the development of the country. The environment is an important component of tourism. The cleaner the environment, the more it attracts tourists. Environmental diversity is more important for tourism. Only when this diversity needs to be maintained can sustainable development of tourism take place. Environment needs to be protected for development and growth of tourism. The responsibility for the protection of the environment lies with all sections of the society. Government, social organizations, citizens, traders and tourists should protect the environment. Doing so without human intervention in the natural environment disrupts the basic circulation of the environment. Once the chain of the environment is broken, all the elements of the environment are affected. When plants are damaged, the habitats of animals and birds are destroyed, so they move from their habitat to human habitat. Along with plants, animals and birds are also important for tourism. Therefore protection of the entire environment is important for tourism. The Government of India, Archaeological Survey of India, and Tourism Development Corporation of India, Maharashtra, Tourism Corporation are all working together for the protection of the environment for the development of Ajanta tourism and various laws have been enacted for this purpose.

The table 7 indicate that, 23.26 percent traders, citizens and tourists in Ajanta strongly agree that tourism is protected by the government as tourism organizations and tourists strive to protect the environment. Deliberate efforts are made to increase tourism. Plants, animals and birds are protected in the environment. More and more plants are planted. 36.74 percent citizens also agree that tourism protects the environment. 10.81 percent people, however, do not express any opinion about it. 20 percent of people disagree because tourists cause some environmental degradation. Many tourists deliberately cut down ornamental plants in the environment. Rare animals and birds are harmed. 9.19 percent of the people strongly disagree. In the vicinity of Ajanta caves, some trees have been cut down while constructing steps for tourists to see the caves. While creating facilities for tourists, the environment is being destroyed to some extent. Such an environment should also be developed. It requires a sustainable environment. The environment must be maintained through tourism. Special efforts are being made to preserve the environment at Ajanta.

**Fig. 10.** Protection of environment for sustainability**Ryc. 10.** Ochrona środowiska na rzecz zrównoważonego rozwoju

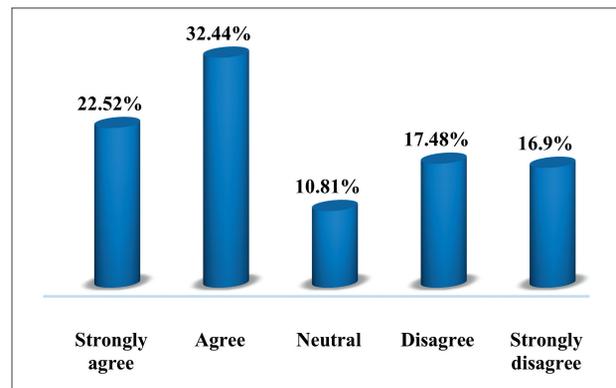
60 percent of the people agree that special efforts are being made to preserve the environment in Ajanta. Because of in Ajanta, new trees are planted, the existing trees are protected, and various laws are enacted to preserve the environment (Fig. 10).

## 6. DISTRACTION OF ENVIRONMENT

The existence of tourism depends on the health of the environment. That is why, the people around try to keep the environment good for tourism. But tourists often harm the environment, which affects the people around them. Tourists stay in tourist places for a few hours, few days, but the people around them have to stay around the tourist center permanently. If tourism continues to harm the environment, the people living in the area will have to suffer a lot. Drinking water problems, traffic jams, various types of pollution problems are caused by tourists. As tourism threatens the very existence of the original environment, alternatively the tourism business, itself is in danger, so the people in the vicinity begin to bring control over the growing tourism. Sustainable tourism development (STD) is the long-term approach toward tourism growth and development without harming any aspect of the destination, local residents, tourists, and stakeholders, while simultaneously ensuring equal and fair distribution of tourism products, resources, costs, and benefits. To ensure responsible and sustainable tourism development at any destination, tourists, local residents, and stakeholders need to work together, take collective decisions about tourism development, and strictly follow sustainable tourism practices [8].

The environment around us is the environment and the environment and tourism are closely linked. Tourists

are attracted by the attraction of fresh air, water, land, animals and plants in the environment. Natural, historical monuments, attractive caves are the tourist attractions. Sometimes it is the tourists who attack the tourist attractions, so it has an adverse effect on the environment and tourism. As a result, tourism is controlled by the locals. In Ajanta also environmental pollution is created by tourists. Table 8 and figure 11 shows that, 22.37 percent of people strongly agree that tourism destroys the environment and therefore, restricts the growth of tourism. 32.44 percent of people agree that tourism destroys the environment and therefore, restricts the growth of tourism 10.81 percent people have no opinion on this. According to 17.48 percent people, however, tourism does not cause much damage to the environment and therefore tourism is not controlled. 16.90 percent people also disagree that tourism destroys the environment and tourist has not controlled it. Tourists go for tourism to maintain their physical and mental health. A tourist is



**Fig. 11.** Views of distraction of environmental health by tourist  
**Ryc. 11.** Wykres na temat opinii turystów o zdrowiu środowiskowym

**Table 8.** Views of distortion of environment health

**Tabela 8.** Poglądy na temat zniszczenia środowiska

| Sr. No. | Views of People Opinion/ Opinia                 | Number of people | Percentage |
|---------|-------------------------------------------------|------------------|------------|
| 1       | Strongly agree/ Zdecydowanie zgadzam się        | 151              | 22.37      |
| 2       | Agree/ Zgadzam się                              | 219              | 32.44      |
| 3       | Neutral/ Neutralna opinia                       | 73               | 10.81      |
| 4       | Disagree/ Nie zgadzam się                       | 118              | 17.48      |
| 5       | Strongly disagree/ Zdecydowanie nie zgadzam się | 114              | 16.90      |
|         | Total/Razem                                     | 675              | 100        |

looking for a good environment for tourism. It develops only when the health of the environment is good. 54.81 percent people agree that the health of the environment in the tourist area is deteriorating due to the influx of tourists. This is due to the tourists who come for tourism is spoiling the health of tourism in various ways. They pollute the environment by polluting water, land, and air. Forests are destroyed to create various facilities in the tourist spot. In Ajanta, the health of the environment is being threatened in a similar manner. 34.38 percent people, however, do not think that tourists are harming the health of the environment.

## 7. CONCLUSIONS

Tourism can become the backbone of economic development if planned properly. But many tourists cause loss to the plants. It means they make the nature ugly. Their vehicles create air pollution in the serene and peaceful land of Ajanta. It is world famous tourist spot. So the number of visiting tourists is large. The sound landscape being an important concept comprises of invisible audible events in natural resources. The sonic environment is disturbed by the modern evils like industrialization, population, immigration etc. noise pollution and the tourist center, both affect each other. The natural sounds are suppressed by the talks, vehicles, shouts, etc. from the tourist. The evil hurts both man and nature. The friendly audible sounds from natural factors turn into unwanted and unbearable sounds. The negative and psychological effects on humans are fatal. Actually in ancient times such tourist spot were religious, ecological and natural places. They were for the peace of mind.

As a result deforestation occurs. This is a great environmental loss. Hotels, residences, and parkings grab the land, tourists hurt the trees by plucking leaves, flowers and help is the destruction. National parks and sanctuaries protect the forests, but in the name of infrastructural development, rain water and forests are being threatened.

One cannot ignore the fact that making the facilities available degrades the natural environment, because

creation of accommodation facility requires clearing of forests. The more rapid development the more degradation is bound to take place. In the survey of Ajanta tourist conducted on this topic, 28.33 percent of the people agreed in favor of discouraging the growth of tourists. 39.17 percent of the people agreed that the growth of tourism which is detrimental to the environment and are discouraging tourism. But 18.33 percent of the people disagreed that, rapid growth of tourists degrades the environment.. It should not occur that in the name generating more revenue from the tourist centers, environmental issues are not taken into deep consideration. Generation of revenue and protection of the environment should go side by side. We need functionaries to regulate both issues. Supervising the proper observance of laws and regulations regarding the protection of the environment should be flawless. The acts of violation should be punished immediately.

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