



EMBRACING THE PAST,  
ENHANCING THE FUTURE:

# PLANNING SPACES

THROUGH INTERCULTURAL DIALOGUE



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KLARTEXT

**PERCEPTION OF LANDSCAPE CHANGE AND PROSPECTS FOR FUTURE DEVELOPMENT IN HISTORIC ARTAS VALLEY/PALESTINE**

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**Introduction**

Historic Palestine has been conquered and ruled by different occupiers and rulers since the time of the Pharaohs; these include the Canaanites, the Romans and the Ottomans; it later came under British mandate, Jordanian rule, and is now under Israeli occupation.

The most obvious landscape contention may have been witnessed in the early twentieth century, more specifically during the British Mandate between 1917 and 1948, resulting in encounters between two peoples who each claimed the same land. This is a landscape that remains a symbol and a battle standard for Palestinians and Israelis alike (Benvenisti 2000). These different eras have resulted in a contested landscape; a landscape that has been transformed by wars and destruction. It has also added historic values to different areas of Palestine, mainly spring and stream areas and many of the villages that exist near springs. The village of Artas represents one such area of Palestine.

Artas has been inhabited since the Roman Times and has been visited and described by many travellers. Colonel Sir Charles Wilson described the Artas Valley in his 1880 book 'Picturesque Palestine' as a spot of great historic and archaeological interest, particularly the Etam and Solomon Pools. He also detailed what he witnessed as the abundance of vegetables shaded by orchards of apricots, mulberries and peaches, with vines and olives on the steeper slopes (Wilson 1880). In addition to its historic value, Artas has ecological agricultural and recreational values which afford it great potential for development. One needs to know about the past of a place to predict its prospects for future development (Antrop 2005). This can be achieved by studying the perception of the people within such an area, how it has changed and how it could be developed to fulfil their needs.

When studying perception it is worth indicating that the European Landscape Convention Article 1, states that landscape means "an area as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (European Landscape Convention 2000: Article 1a).

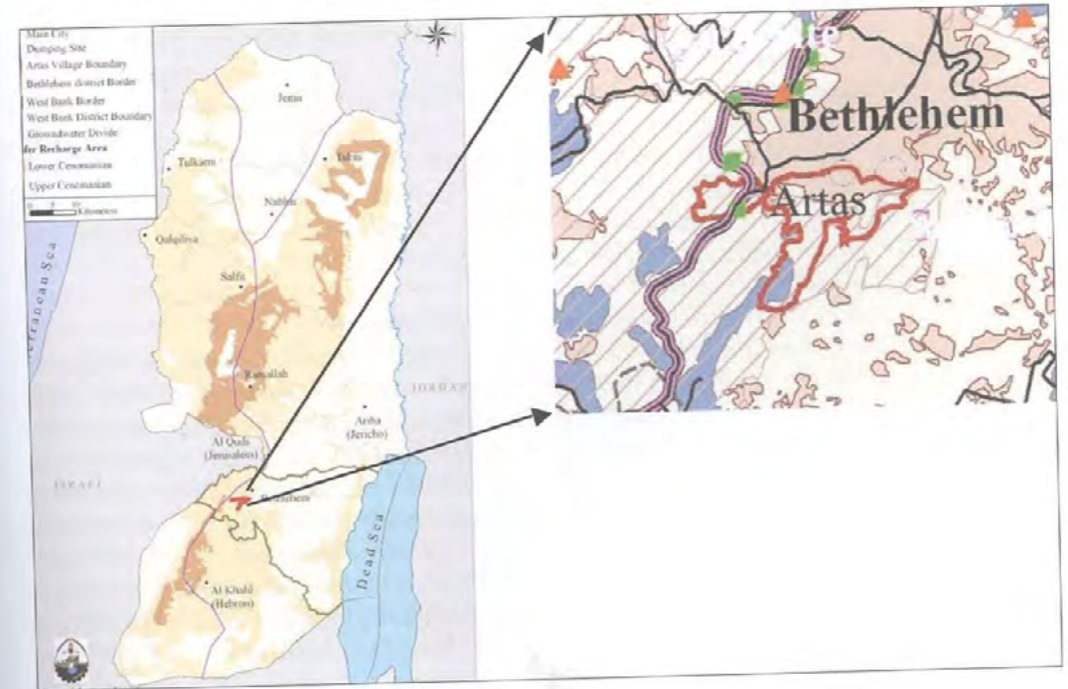
Generally speaking landscapes are subjected to a dynamic process of change and as a result are continually affected by different driving forces. These forces have been discussed by a number of scholars; the main factors affecting landscape change are attributed either to natural processes or human activities (Antrop 1998, Burgi et al. 2004, Green and Vos 2001). There are a variety of driving forces related to human activities that affect landscape change such as socioeconomic, cultural, political and technological activities (Burgi et al. 2004, Gobster and Rickenbach 2004, Nüsser 2001). Driving forces of landscape change include rising property and land value (Burgi et al. 2004), needs, motivations and desires (Gobster and Rickenbach 2004) and globalisation and technology (Gobster and Rickenbach 2004, Antrop 2005, Burgi et al. 2004). Urbanisation and accessibility are also drivers of landscape change (Antrop 2004, 2005, Burgi et al. 2004).

Perception of landscape change is influenced by different variables. Many studies have discussed the perception and the mediating variables that affect the perception of landscape change such as political, social, cultural and economic factors as well as experience, familiarity, sensation, and personal attributes like age and gender (Bell 1999, Gobster 1998, Sell and Zube 1986, Tuan 1974, Zube 1987). Sell and Zube (1986) reviewed literature related to perception of environmental change in urban and rural areas. They found that change in the environment is physical as well as economic, social and political. They also emphasised that individuals' perceptions of change is a result of their experience of their environment. Zube (1987) studied the way people perceive land-use patterns and values. He found that land form and landscape patterns provide important information on the process of perception.

These patterns are perceived differently by different individuals, depending on their experiences, needs and desires, personal utility functions and socio-cultural contexts. Gobster (1998) has conducted research on people's perceptions of the Chicago River and their views on its future. He found that people's perceptions changed over time. He also summarised people's priorities as the need to increase safety and reduce crime, to reduce the numbers of children falling into the river, to increase access, to improve maintenance and cleanliness of the river and the need to take into consideration the ecological diversity of the corridor in future development.

Perception of landscape change is related to changes in the quality of the landscape; similarly landscape quality is related to its value (European Landscape Convention 2000). The

scape quality such as its respect for nature, aesthetics, identity, coherence, stewardship, biodiversity, cleanliness etc. The quality of the landscape can be measured by the perception of individuals or by professional judgment. Landscape quality assessment is based on the inherent quality of the physical landscape (Lothian 1999, Perelman 1980) or as the landscape quality is constructed in the human mind where it is perceived by 'the eyes of the beholder' (Lothian 1999, Meinig 1979, Perelman 1980). What is perceived is based on memories, associations, narratives and symbolism of the landscape (Lothian 1999, Said 1999). It is worth mentioning here that most of the literature found tackled the perception of the visual quality of the landscape rather than the quality as a whole; examples of studies related to perception of visual quality of landscapes



01 Location of Artas on the West Bank

European Landscape Convention identifies different levels of value of the landscape that can contribute to cultural, historic, ecological, social, aesthetic and political value (Yusim et al. 2002). A range of literature discusses aspects that can be seen as parameters of land-

are Appleton 1975, Bell 1999, Gobster 2001, Gobster et al. 2007, Kaplan and Kaplan 1989, Lothian 1999, Lowenthal 1997, Palmer 1997, Palmer 2004, Tveit et al. 2006, Zube 1980a, Zube 1980b, Zube 1984.

The landscape of Palestine has always been subjected to dynamic processes of change. Almost all areas are faced by a wide range of threats, varying from poor agricultural practices and overgrazing to quarrying which is carried out without any constraints. Construction and domestic waste are also major causes of landscape deterioration; random urban development sprawls outwards from existing settlements. The situation is further aggravated by the Israeli settlements which cover large areas along with their associated infrastructure (roads).

Assi (1998) compared the difference in perception of different urban settings (old and new) between laymen and professional Palestinians in the city of Nablus. The results showed that interpretation of urban landscape is influenced by expectations, values, cultural norms, previous experience and needs and desires. Assi's findings showed that there were differences in opinion between lay people and professionals, with a conclusion that people's involvement could be useful in enhancing the quality of the built environment (Assi 1998). Gasteyer (1998, 1999) carried out field research on perceptions of landscape change in the southern West Bank. He interviewed different groups of farmers, Bedouins, Palestinian scientists and Israeli scientists some of whom worked with Palestinians. The conclusion was that the perception of nature and landscape differs among different people and is influenced by the prevailing interaction with the landscape, political beliefs and group affiliation.

The objective of this paper is to investigate people's perception of landscape change and the change in the quality of the landscape as a whole in Artas Valley, as well as their beliefs in its prospects for future development.

**Methods**

**The study area – Artas Valley**

The Artas Valley is one of the most significant sites in Palestine. People of Artas depend on agriculture for their living as well as other jobs. The Artas Valley is also famous for its archaeological and historic sites, the variation of land use, the variety of vegetation and the area's beautiful scenery. The diversity in his-

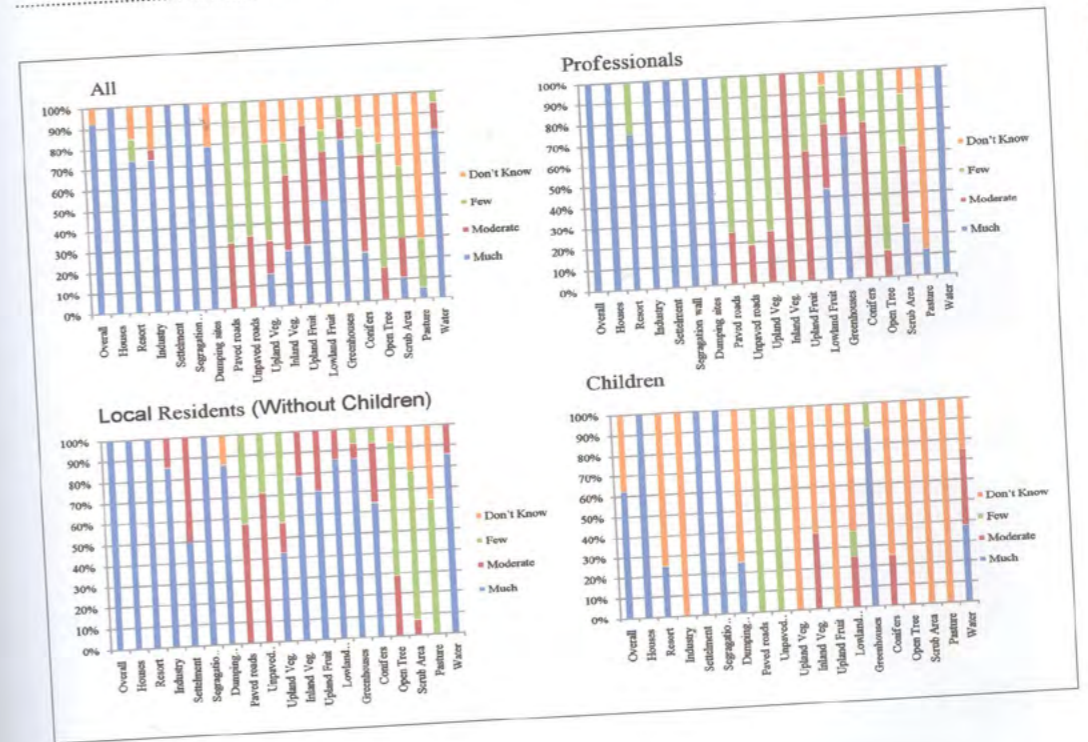
torical, agricultural, ecological and recreational aspects are all elements which made Artas a representative area to investigate people's perceptions towards changing landscapes and their beliefs in the area's prospects for future development. Under examination will be the period 1967 to 2006, regarded as a transition period following the Arab-Israeli war of 1967, which resulted in drastic natural and cultural landscape changes.

The Artas Valley is an area of approximately 9,740 km<sup>2</sup>, located 2 km south of Bethlehem City and 15 km south of Jerusalem (figure 1). The valley lies in the central mountain chain of the West Bank and slopes towards the east, with an average elevation of about 700 m above sea level (Barghouth and Jaradat 2002). Parts of the mountains are terraced and cultivated with olive groves, vineyards and rain-fed barley and wheat. The Alluvial Valley is cultivated with irrigated vegetables and fruit trees. The climate of the Artas Valley ranges from arid to semi-arid, typically with rainy winters and dry summers (ARIJ 2002). There are five main springs in the Artas area. Most of the land of the Artas Valley is privately owned. The population of Artas village was 3552 inhabitants in 2005 (PCBS 2006).

**Data collection**

A qualitative humanistic approach has been adopted to conduct this research. Field visits, meetings and interviews were carried out from May to December 2006. This method provides sufficient material to study the interaction and transaction between people and their surroundings. Secondary data was obtained from old documents, maps and photographs from different institutions and ministries' archives of the Palestinian Authority.

The perceived change has been investigated through in-depth interviews conducted with a number of Artas residents and some professionals (expert and local). The interviews covered a sample of 38 persons of which 22 were local inhabitants from the Artas village, including males and females of different ages and 16 professionals from different disciplines: architects, ecologists and environmentalists.



02 Perception of magnitude of landscape change

The snowballing, purposeful sampling technique was adopted for the selection of local inhabitants (Creswell 2005). Questions were asked in a relaxed manner to allow people to express their views and experiences in their own way. Questions included those related to: interviewees' use of different areas and open spaces and how they experienced these open spaces; the change in the landscape and its quality; as well as their opinion on the prospects for future development of the area. Content analysis was carried out by organising the substantive content of the interviews. This was carried out in two steps: firstly, identifying substantive statements and secondly, classifying them into categories (Gillham 2000).

**Results and discussion**

The results revealed that landscape perception can be grouped into three main categories: the perception of change in landscape element, change in activities and change in the quality of the landscape. In addition the result showed people's opinions of the prospects for the future development of Artas Valley.

**Perception of change in individual landscape elements**

The general perception of the interviewees was that the whole area had undergone a considerable and drastic change, but the perception of change in individual elements of the landscape varied from considerable, moderate to few changes, depending on different reasons stated by the interviewees. These changes have been divided into four main sub categories: the change in built-up areas, agricultural land, green structure and water body.

**The built-up area**

All the interviewees felt that the Israeli activities, including the construction of the Efrat settlement, military bases and the segregation wall caused a drastic change in the landscape (figures 2 and 3). All respondents felt that the construction of these landscape elements took up a large portion of the agricultural land. Their perception is based on the area of land that was confiscated for those purposes (figure 3b and 3d). The increase in the Palestinian residential area was also perceived as a



(a) The dense residential area of Artas village.

Source: Folklore centre, Fadi Sanad



(b) Efrat Israeli settlement on top of mountain of Aras Valley.



(c) Greenhouse in the alluvial valley

Photo: Samar Nazer



(d) Excavations for segregation wall.

Source: ARIJ records

03 Photos showing some disturbances to landscape

considerable change by all the respondents due to population growth and the scarcity of land, which has forced people to expand their buildings either at the expense of the open spaces surrounding them, or to construct new buildings on top of old houses. Children also talked about the change and the current situation. They expressed dissatisfaction with the status quo because of the chaos, the disorder, the dirt and the lack of open spaces for them to play outdoors. Most of the interviewees, with the exception of the children, who were unaware of it, mentioned that there was a considerable change caused by the construction of the resort centre. The adults and professionals felt that a considerable change was caused by the stone cutting factory that now exists in the Artas Valley; again the children's

opinions were different as most of them were unaware of its existence. Most of the respondents mentioned that the dumping site is something new; it was not there ten years ago and it constituted a large change (figure 2). Only two of the children knew about the dumping site and believed it had made a large difference. Most of the respondents mentioned that the number of roads, both paved and unpaved, have increased since 1967, with the feeling that there has been a moderate increase in the number of paved streets and a few interviewees mentioning an increase in unpaved streets (figure 2).

#### Agricultural land

The feelings with regard to the extent of changes in the agricultural land of the mountains

(high land) varied, with some respondents observing a considerable change and others observing little change. People whose land was confiscated by Israelis and were consequently deprived of farming or developing their land felt there had been a lot of change; they had lost their olive groves and vineyards. Others who did not lose their land did not have such a strong sense of change. However, they all agreed that the Israeli activities had altered the agricultural landscape of the mountains considerably (figure 3c). Regarding the perception of change in the Alluvial Valley (capital if it's a name, otherwise lower-case) (lowlands), elderly people in particular recalled that the valley used to be full of fruit trees, mainly apricots. Currently a large part of the valley is covered with vegetable fields. However, the valley is currently interrupted by greenhouses, which disturb the view; this therefore meant it was perceived by all interviewees as a considerable change.

Respondents also linked the shift from fruit trees to vegetable cultivation in the lowlands to changes in agricultural practices from the traditional to the modern. This has led to an increase in their income and quality of life.

#### Green structure

Both professionals and residents were worried about the extent of the decrease in the coniferous forest near the Solomon Pools. On the other hand, the open tree plantation which contains scattered trees was perceived by the respondents as unchanged, with only two of them commenting that a few changes have occurred in this type of landscape. Most of the interviewees did not notice any significant change in the actual size of the scrub area (natural area); this can be attributed to the fact that they do not benefit from it, as it is not suitable for agriculture. However, the respondents including the professionals felt that there had been a loss in the density of natural shrubs and herbs, which was due to the harvesting of herbs for commercial purposes and overgrazing by Al Ta'amreh Bedouins. Regarding the pasture area, which is a newly designated land use element in the landscape,

most of the people either had not noticed any change or simply stated that there are new pasture areas. This can be attributed to the fact that many of them do not differentiate this area from the scrub area; they consider both areas as natural. In addition, the people of Artas do not traverse that far because they no longer have large flocks and no longer feel safe from the Israeli settlers and soldiers. Concerning the professionals, some of those who knew the area said that this pasture area was part of the scrub area.

#### Water bodies (the Solomon Pools)

Most of the interviewees mentioned that the water bodies have experienced considerable change; specifically they mention that the Solomon Pools have dried up.

#### Perception of change in activities

The people of Artas talked about their memories and experiences of using the landscape. The two main uses of the Artas Valley are agriculture and recreation, in addition to other activities related to cultural practices. Generally speaking many of the previous practices and activities have been subjected to change, with some of them diminishing and new ones appearing.

#### Recreation

The general perception held by the Artas people, especially the elderly and the professionals, is that the areas were used for recreation more in the past than they are now. There were various areas that were used for recreation, in particular historic areas such as the mountains and their surrounding fields the Solomon Pools and the forest and the Convent of the Nuns. According to respondents, there are many reasons why people rarely visit these places today: changes in the landscape have rendered the places less comfortable and more noisy; the dry Solomon pools have made the area less interesting; the existence of the Israeli settlers has made the area unsafe; the solid waste which is scattered in many places is detrimental to health; finally management and maintenance of the area is not sufficient.

Interviewees recalled their memories of how they used to enjoy the nature of the area: its forests, mountains, and the wealth of activities that were once possible there.

Most of the respondents said that there is a new linear recreational function in Artas (trail) that is being used for hiking. They mentioned that the agricultural footpath was set up for recreational use when the Palestinian Authority controlled the area (figure 4c).

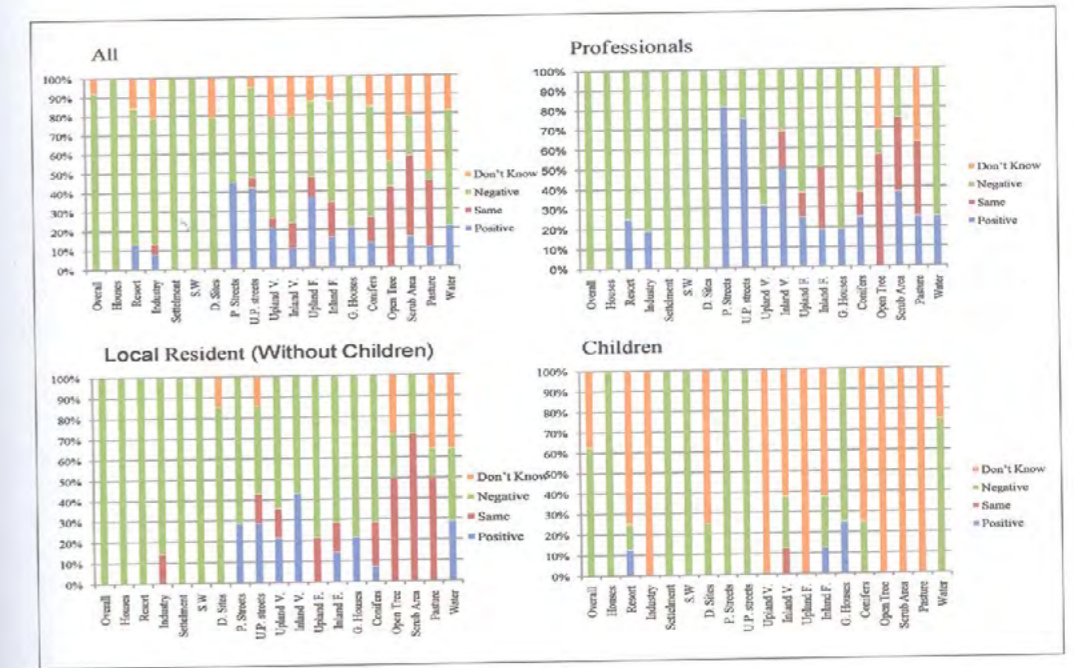
**Agricultural activities**

Most of the respondents, both locals and professionals, mentioned that the people of Artas worked in the agricultural industry until 1967. Afterwards, people began to gradually shift from work in agriculture to other jobs in diffe-

rent parts of the world especially Israel (in construction and agriculture), the Gulf countries, and Jordan. In 2000, after the second Intifadah, only few Palestinians worked in Israel due to severe restrictions being placed on their entrance, thus encouraging farmers to return to agricultural activities in the Artas Valley. The fact that farmers had gained experience from agricultural work in Israel helped them to introduce new technologies to the village (i.e. fertilizers usage, pesticides, drip irrigations, etc.). According to the respondents, the shift from traditional to modern agriculture was the reason that the fruit tree cover decreased rapidly within the valley, which led to the consequent expansion of vegetable cultivation areas. Most of the children mentioned that they helped their



04 Lettuce Festival activities and Rehlet Al Rabee' (a) Folklore dancing (b) People watching (c) Trail (d) Woman in lettuce field



05 Perception of change in the landscape quality

parents to carry out agricultural work. The boys help in ploughing, irrigation and harvesting, while the girls help in harvesting. When asking about changes in agricultural practices, the children's answers were mostly "don't know", yet two mentioned that agricultural practices are deteriorating. This is what they have heard from adults. In the past, the people of Artas used to raise animals and to keep them in the front yards of their houses. They used to graze their flocks either in their fields where they grew clover or they took them to the mountains for grazing. These days, few people raise animals.

**Children's games**

In the past, the children of Artas played traditional games like 'Kalosh', 'Dahleh', 'Shoha', 'Sideh' and marbles which usually require open outdoor space. They also used to play on the roofs of houses and in the streets. The empty fields after harvest time were ideal for such activities. According to the respondents these games are rarely played nowadays, as children spend most of their time watching television and playing games on their computers. The loss of open spaces also prevent them from playing outside.

**Festivities, events and rituals activities**

Before 1967, people used to come from many places in Palestine as well as from Jordan and Lebanon to celebrate Christmas in Bethlehem and Artas. Yet many of the Christmas and St. Mary's Feast celebrations took place outdoors, mostly in the streets. After the Israeli occupation and until recently, these celebrations stopped or were restricted to a minimum. Outdoor activities like the circumcision ceremony, marriage celebrations, the fetching of spring water by women and children and other associated activities such as gathering and chatting were important. Nowadays they too are reduced to the minimum.

Some of the new activities that take place in Artas in spring are the Spring Trip (Rihlet El Rabee') and the Lettuce Festival. For the Spring Trip, people gather near the historic Solomon Pools to learn about the history of the area and then embark on a walk up the hilly trail, reaching the Convent of the Nuns and the village and visiting the Folklore Centre, the museum and the mosque along the way. This trip normally takes an hour. The long path continues to Mount Herodion or what

is a known as 'Fredees Mount'. This extended trip takes between four to five hours. The Lettuce Festival, on the other hand, is usually organised around the Solomon Pools or in the valley. During this activity, women prepare traditional foods and juices for visitors, traditional songs and dances take place and agricultural products are sold particularly lettuce. In this event people are invited to walk along the valley to enjoy the scenery and witness the village's historical and archaeological sites (figure d).

**Perception of change in the landscape quality**

The general feeling of the interviewees was that the quality of the landscape in the Artas Valley had changed for the worse in most cases (figure 5). They talked about a wide range of impacts on landscape quality as being linked to the landscape change, owing to the activities practiced in the landscape. The people of Artas judged the change in quality of landscape on the basis of a variety of aspects: visual quality, character, biodiversity, historicity, accessibility, safety, cleanliness and economy. These were found to be the most important considerations when the people of Artas considered the quality of their landscapes.

Interviewees also indicated that changes in certain elements of the landscapes had an impact on what gives the landscape its high quality. The elements that constitute the people's perception of landscape quality are:

**Perception of change in historicity**

Historicity is the historical significance of a place. All the respondents negatively perceived the changes in historic and archaeological sites in Artas. They indicated that they have been under threat in recent years mainly due to the debris thrown from the Israeli settlements and the construction of the resort centre.

**Perception of change in visual quality (scenery)**

Most of the respondents mentioned that the scenery of the landscape as a whole has been negatively affected by the changes in the landscape of the Artas Valley. These can be mainly

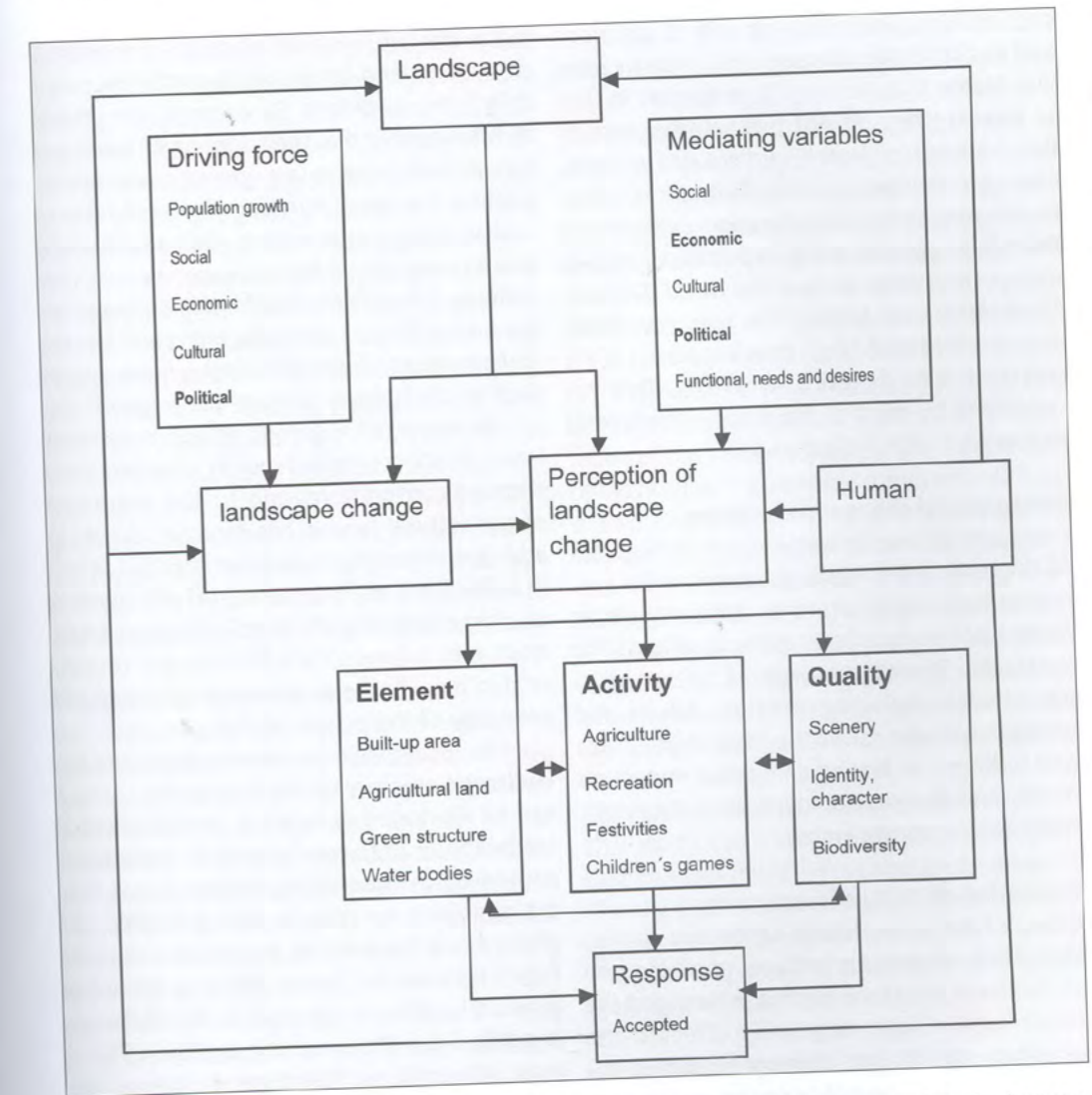
attributed to the expansion of the built-up Palestinian area, the existence of Israeli settlement and military bases, the construction of the segregation wall, the greenhouses and the loss in forest area. In addition, respondents cited the change in building materials and architectural style, all of which have created chaos, disorder and a lack of harmony and coherence in the landscape. Elderly and middle-aged respondents with past experience of the area emphasised that the view of the village used to be more beautiful than it is now. The children in the age group 13 to 18 talked about the current scenery and thought it was chaotic when they compared it to the cities of Bethlehem and Ramallah.

**Perception of change in identity or character**

Artas is unique because of its character, its richness in natural and cultural heritage, its topography, its agricultural patterns, and its terraced olive groves. Most of the respondents, including the professionals, mentioned that the changes affected Artas character negatively. This is attributed mainly to increases in residential areas and the construction of the resort centre, as well as the introduction of modern building materials and styles, all of which have changed the character of the traditional village. The Israeli settlements have also had a negative impact on the character of the place due to their architectural style and use of red bricks, which differs from the style of the traditional village.

**Perception of change in vegetation and wildlife (biodiversity)**

Adult interviewees of Artas used to see wild birds, gazelles, hyenas and foxes in the past. These days they only see small numbers of wild rabbits and birds. They also mentioned the presence of a variety of migrant birds, but added that these too are now rarely seen. Discussions with interviewees also revealed that wild plants such as hyssop, mint, camomile, sage, wild almond, poplar, willow and pear are less common now than they were in the past. However, most of the adults and professionals attributed the loss of vegetation and



06 The relation between humans and the landscape, the physical landscape change and the perception of and response to landscape change in the Palestinian context.

wild life habitat to the expansion of the residential area, the dumping site and the construction of Israeli settlements and military bases. The loss of vegetation was also attributed to bad practices such as the cutting of wild herbs and new agricultural methods. Many of the professionals focused more on the effects of the segregation wall and its impact on the wildlife of plants and animals than the Artas people did. The wall will negatively affect biodiversity by affecting the connectivity of habitat, the movement of animal species, the pollination of wild plants and by blocking the natural water drainage system.

**Perception of change in accessibility**

Although there are more roads these days than there were in the past, respondents believe that bypass roads, settlements and the segregation wall hinder accessibility to some places, especially agricultural lands.

**Perception of change in safety**

Some of the interviewees mentioned the village (the residential area) is currently safer from the threat of wild animals than it was before. With the rise in the number of houses and the increased light at night, animals

such as foxes and hyena, as well as scorpions and snakes have disappeared. Interviewees also stated that despite the reduction in these threats, they do not feel safe because of the presence of Israeli soldiers and settlers. Owing to the special political situation, a quite different safety consideration exists in the Palestinian context compared to that found in studies from other parts of the world (Gobster 1998, Nassauer 1995). The Solomon Pools area is safer for children now because it is dry and there is no danger of drowning. This was confirmed by most of the Artas interviewees and most of the professionals.

**Perception of change in cleanness**

Discharge of waste water, random disposal of domestic solid waste, dust and noise were the main issues raised by Artas people as factors adversely affecting the quality of the landscape. These issues were addressed by all interviewees including children. Adults and professionals also raised the issue of pesticides and fertilizers as having a negative impact on health and the environment since they contaminate the spring water.

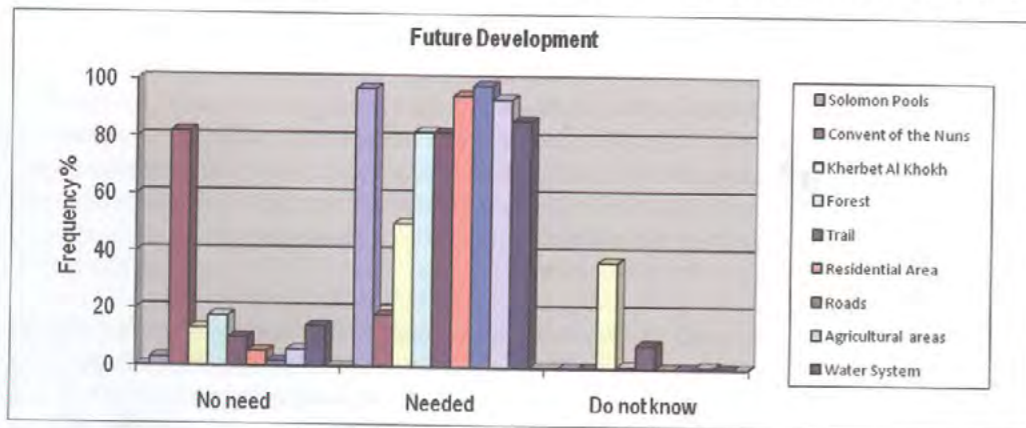
**Perception of change in economy**

Many of the respondents agree that the introduction of new agricultural practices, the existence of the stone cutting factory and the resort centre have negatively affected the landscape quality and scenery. However, some believe that these changes have contribu-

ted to the improvement of people's economic conditions, and have consequently improved their living conditions. For example, the people of Artas believe that the adoption of new agricultural technologies (e.g. greenhouses, drip irrigation, the use of fertilizers and pesticides, as well as changing crop types and patterns from tree to vegetables) has increased people's income and therefore consider this a change for the better. Stone cutting factories and the resort centre would provide employment opportunities as stated by some of the respondents.

However, all respondents concurred that Israeli practices have severely affected their economic conditions due to the reduction of agricultural land it has brought about. In addition, these practices have resulted in the isolation from and the cutting off of a number of archaeological and natural sites from Artas, leading to a downturn in tourism and tourist-related activities, also adversely affecting the economy of the people of Artas.

The relationship between humans and the landscape processes in the Palestinian context can be illustrated in figure 6. Actual physical landscape change can be seen to have been caused by the prevailing driving forces that are perceived by people. This perception of change is influenced by mediating variables. Figure 6 shows the factors affecting the actual physical landscape; the main factor of change is political (i.e. the Israeli occupation). The most influential mediating variables of perception of landscape change were found to be the



07 Need for future development

political situation, economic development and age group. The perception was found to be in the change of elements, activities and the quality of the landscape. Each of these three was also found to influence the perception of change in the other (suggesting one is a mediating variable of perception of change of another).

The perceived change in quality was found to be a change in scenery (aesthetic quality), identity and character, historicity, biodiversity (vegetation and wildlife), accessibility, safety, cleanliness and economy. These aspects have been addressed before by other scholars as receptors of change (Tveit et al. 2006, Gobster 1998, Sell and Zube 1986). However, it is obvious that these factors have a reciprocal relation, a receptor and a driving factor for landscape change. The responses to these changes range from acceptance and adaption to rejection.

**Prospects for future development**

All interviewees expressed their interest in developing Artas for tourism activities. They believed that this would be of great benefit for both the village itself and the city of Bethlehem. They also expressed their wish for the development to take into consideration the richness of historic and archaeological sites and the natural beauty of Artas, which many described as a sort of natural museum.

Most of the respondents stressed the need for development of the historic Solomon Pools area, including the forest, for recreation. They wanted the pools to have recreational facilities and provide services such as seating areas. They also wanted them to be cleaner and safer. Some of the interviewees mentioned that the pools should be re-filled with water and be used for swimming, taking into account safety measures that should be implemented. Most of the respondents indicated that the Solomon Pools are in need of conservation and preservation.

The conservation of historic and archaeological sites was an issue raised by many residents of Artas, as well as by the professionals. Among these sites were the Solomon Pools, Kherbet Al Khokh, Kerbet Olaya and Deir Al-banat and old houses in the village.

Most of the respondents said that roads need development and rehabilitation and that the residential areas need development and planning. They also mentioned the need to develop the agricultural areas and the water system. Most of the respondents indicated that the Convent of the Nuns does not need development because it is already developed and maintained. Quantification of respondents' views of the development of different areas of Artas Valley are shown in the figure.

Furthermore, respondents, including most of the children, stressed the need for rehabilitation of the residential area and the protection of old houses. The residential area and old houses were considered to be important because it was thought they should be consistent with the natural and historical importance of the area. All respondents emphasised the need for basic infrastructure and services (i.e. solid waste collection, street lighting, play-grounds, etc.) as well as applying strict regulations to prevent the random expansion of the residential area.

**Conclusions and recommendations**

This study has shown that perceived significant changes occurred in some areas, whereas few changes occurred in other areas. This has influenced the perception of landscape quality. The following provides a summary of the main findings and conclusions of the study:

- The main factors affecting landscape change were the growth of population, people's needs, and social, economic, cultural and political aspects.
- The area was better in the past than it is now as perceived by the people who see med to be nostalgic about the past.
- Landscape elements, ongoing activities and perceived quality of the landscape influence and mutually affect one another.
- Agricultural practices have shifted from the traditional to the modern, producing a negative effect on the physical landscapes.
- Outdoors recreational activities have decreased, and recreational areas have deteriorated.

- The most perceived 'considerable change' was related to the activities of the Israeli occupation. Responses towards these activities were met with total rejection and were therefore perceived as negative in terms of their effect on the quality of landscape.
- It was found that the built-up area in Artas has changed significantly as a result of the increasing demand for new houses to accommodate people. These changes have negatively affected landscape quality perceived by the people.
- Changes in elements related to people's needs varied between negative and positive, depending on how much individuals benefited from the landscape aesthetically, economically, etc. Elements related to agriculture were perceived as moderate positive changes.
- The quality of the landscape, as regarded by the people of Artas, was found to be based on the aesthetic quality, character, historicity, biodiversity, accessibility, safety, cleanliness and economy. All were affected negatively by changes, with the exception of safety and economy.
- The main mediating variables that influenced the perception of change were social, economic, cultural, people's personal attributes and experiences, their knowledge and familiarity of the place and their proximity to the place. The place where the interviews were held was also a noted variable, specifically whether they were outside or inside.
- Age was found to affect perception since it is linked with past experience and memories.
- Professionals were closer in their opinion to the adults of Artas people than the children.
- The general feeling regarding development was the need for the protection and conservation of historic sites, the importance of developing the area for recreation and the importance of improving the residential area and its agriculture.

As a main recommendation, involving people in the planning and development process is of great importance. During this study it was clear that the respondents cared about the protection of their historic sites, as well as for the development of their village so that it may provide them with a better quality of life. There is a need to introduce landscape education within the Palestinian curriculum to increase awareness, knowledge and understanding of the landscape and the natural resources of Palestine. The scope, extent, and content of the educational material need to be carefully considered. There is a need to integrate different disciplines of landscape architecture, other forms of architecture, geography, sociology, ecology, etc. There is also a need to establish certain legislations and regulations that can help preserve Palestine's landscape and at the same time cater for future development. There should be a more coordinated effort between relevant agencies and ministries, to ensure that national policies are in accordance with the protection and management of the landscape and the environment. A capacity-building process for officials and staff representing these ministries is recommended to enhance their involvement and skills in the management and planning processes and interventions. The government should seek to reflect the above-mentioned priorities in its development plans by earmarking special budgets for the preservation of natural resources and landscape elements. This would signal a clear message to the community on the importance of the landscape, hence generating necessary community participation and intervention. This could take the form of a Landscape Improvement Fund to provide grants for innovative ideas for intervention leading to that effect.

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Sustainable Planning needs dialogue – not only between sectoral departments and among stakeholders, but between spaces, between citizens and politicians, between different needs and development goals. In today's globalised world dialogue becomes more important.

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