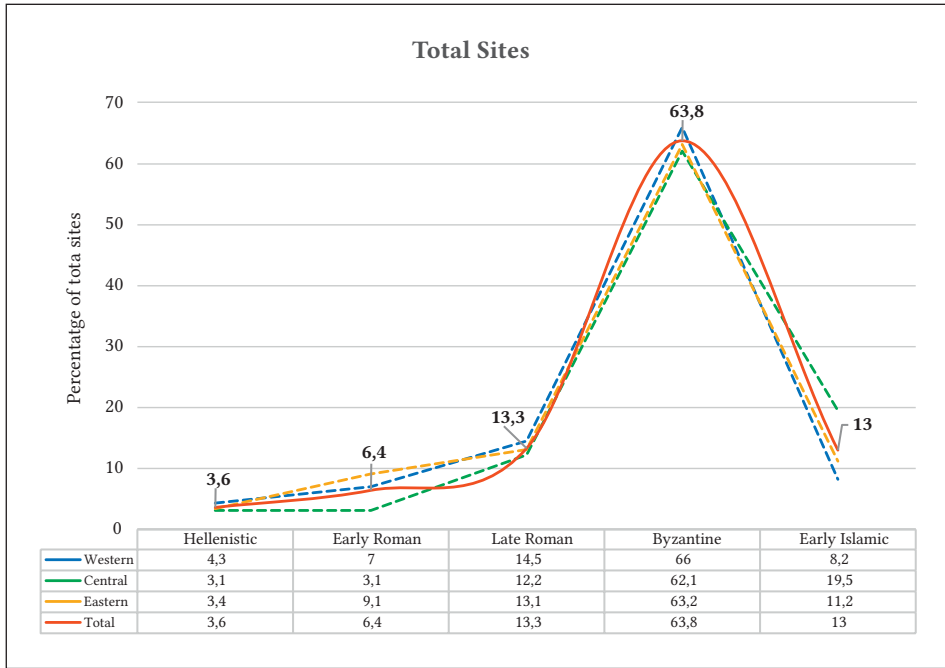


## 9 THE DYNAMICS OF SETTLEMENT PATTERNS IN THE NORTHERN NEGEV

### 9.1 Analysis of the survey samples

The settlement system of the northern Negev was dynamic and was undergoing change throughout the time periods reviewed here. In the Chapters Chapter 5–7, a settlement analysis for each study area was presented from the Hellenistic the Early Islamic period. Additionally, the connection between Byzantine population, land use, settlements in the northern Negev was examined (Chapter 8). The data consisted of synthesized survey data compiled by the ASI, excavations, as well as development surveys, test trenches and inspections. Selected excavations and numismatic data have been used to compare chronologically the survey data. The results show that the northern Negev was settled throughout the Classical period, from the Hellenistic to the Early Islamic period (Figure 9.1).

During the Hellenistic and Early Roman periods, only a few settlements existed in the area. The Great Jewish Revolt (66 to 73 CE) and the Bar Kokhba revolt (132 to 135 CE) had a strong impact on the northern Negev. All Jewish sites were abandoned the latest by the end of the Bar Kokhba revolt, such as the settlement at Rakafot 54 (Peters et al., 2020), Tel Ira (Hershkovitz, 1999: 299), Tel Aroer (Taxel, 2011: 335), or Nahal Yattir (Vainstub and Fabian, 2015). As the settlement patterns analysis showed the northern Negev was basically deserted, almost no settlements were located in the study areas (see Chapters 5 to 7). This fact is also supported by the coin finds from the study areas, as almost no coins date to this period (see 5.8, 6.8, and 7.8). In the mid-late third century a period of prosperity followed (Bar, 2004: 316), the population grew, and with it the number of set-



**Figure 9.1 Overview of the percentage of sites according to period.**

The figure shows the percentage of sites according to period, however, in between these periods the number could be higher or lower, for example between the Early and Late Roman period, there was a phase of over 100 years, between the second Jewish revolt and 250 CE with almost no settlements in the study area.

tlements. From the changes in site density, the rise of settlements from the Early Roman period to the Late Roman period is clearly evident. The growth of population and of settlements during the Late Roman and Byzantine period is impressive. Research suggests that the population of Palestine was between one and several million, reaching its peak in the mid-sixth century CE (Bar, 2004: 308). Based on the analyzed data, the population of the northern Negev in the mid-sixth century probably grew to over 100,000 people.

During the Hellenistic period (Ptolemaic and Seleucid rule), the southern boundary of *Idumaea* and the *Nabataean* kingdom crossed the Be'er Sheva–Arad valley (Avi-Yonah, 2002: 50). This is also reflected in the settlement patterns, as in the central and eastern no settlements were located south of the Nahal Beer-sheba–Nahal Malhata line, with the exception of a small settlement at Tel Aroer. In the western study area, which is located 10km further to the north, no such

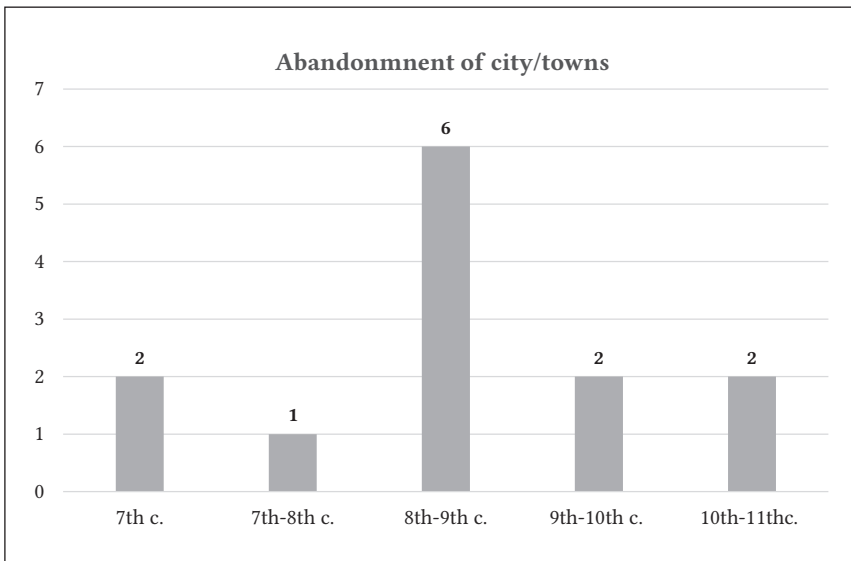
separation is visible. Settlements were mainly located around Nahal Besor and roads. It seems that in the western study area, the settlements were located at the strategically best locations, whereas in the central and eastern study area, the southern parts were deliberately left unsettled. During Hasmonean rule, *Idumaea* was annexed by Hyrcanus in 125 BCE, and Alexander Jannaeus annexed parts of the Nabataean kingdom around 100 BCE, which stretched Judaea's southern boundary to the Be'er Sheva–Arad valley (Avi-Yonah, 2002: 75). During the Early Roman period, the northern Negev was inhabited by, among others, a small Jewish population. Jewish settlements were found at different places, such as Rakafot 54, Tel Ira, Tel Aroer, or Nahal Yattir. It seems that the few Jewish settlements were relatively short-lived and were abandoned either by the First or the latest by the Second Jewish Revolt. By 106 CE the Nabataean kingdom was incorporated into the Roman empire, and the border between the provinces of *Judea Palaestina* and *Arabia* crossed through the Be'er Sheva–Arad valley (Di Segni, 2018), dividing the areas of the central and eastern study area between these two provinces. Based on the results from the settlement analysis, the settlement activity was the lowest after the First Jewish Revolt (70 CE) and 250 CE, with only few settlements existing in the northern Negev.

During the middle/late third century CE a rise in new settlements is evident as well as a rise in population. It remains unclear from where the population came, whether they moved from areas further north to the northern Negev, or if they came with the Roman military, which built several fortresses and camps in the northern Negev. The population at this point was probably practicing polytheism, although no cult sites have been discovered in the northern Negev. The Roman emperor Diocletian (284–305 CE) introduced far-ranging reforms, including the administrative transfer of the Negev, Sinai, and southern Transjordan from the *Provincia Arabia* to the *Provincia Palaestina* (Tsafirir, 1986: 82–83; Erickson-Gini, 2002: 118; Di Segni, 2018: 248). That the rise in settlements occurred during the time of Diocletian's reforms is further supported by the large number of Roman coins dating to the time period between 280 and 305 CE. Most were found in Be'er Sheva. The foundations of Classical Be'er Sheva were laid in the mid-to late third century CE, and building activities strongly increased in the early fourth century CE. Also, the foundations of many other large towns are dated to the same time period. However, the settlement patterns show that although the northern Negev saw a rise in new settlements and population, it was mainly limited to some central settlements, such as Be'er Sheva, Moleatha (Tel Malhata), and Ma'on. One of the few farmhouses/structures dating to the third century to be discovered outside a larger settlement was excavated in Khirbat Amra, where a large farmhouse, and tombs from the period were found. The late Roman period saw a Roman military presence in the northern Negev, and some researchers sug-

gest that a line of border fortresses and army camps was established to protect the border of the empire (cf. Avi-Jonah, 1966: 160; Gichon, 1979; 2002; Parker, 1986: 141; Hirschfeld, 1987: 132–41; Isaac, 1992), reaching from the Dead Sea to the Mediterranean. However, there is no evidence of such a complete line, covering the whole area, as some of the fortresses that were suggested to belong to such a *limes* system date to the mid-sixth century (Ein Boqeq and Upper Zohar), or date from the first century BCE to first to second centuries CE (Magness, 2003: 128). There are, within the study areas, several fortresses along important roads, as for example at Be'er Shema, Be'er Sheva, Tel Sheva and Tel Malhata. Fortresses at Be'er Shema, Tel Sheva, and Tel Malhata were in use in the third and (early) fourth centuries CE. The excavation of the proposed army camp in Be'er Sheva dates it to the middle of the fourth century CE. However, it remains unclear if these fortresses and camps really were part of a *limes* system or rather outpost for the protection of the important roads. A further point was the population of these third/fourth century CE fortresses. It has been suggested that these fortresses were populated by farmer-soldiers (*limitanei*), and farmhouses for their families were also established nearby (Figueras, 1980: 139–40). However, based on the analysis of the settlement patterns, in none of the study areas were farmhouses found near to fortresses dating to the late third, or early fourth centuries CE. It is possible that this was the case in a later stage; however the fortresses at Tel Sheva, Be'er Shema, and Tel Malhata, were abandoned in the early fourth century and no structures were discovered during survey or excavation dating to this time period. Furthermore, the analysis of pottery finds from many surveyed sites, which were classified as Late Roman, actually dated to the Byzantine period (see Chapter 5–7).

During the Byzantine period, the northern Negev was divided between *Palaestina Prima* and *Palaestina Tertia*. The border of these provinces followed, more-or-less, the ancient border between *Judea* and *Nabataea*. During the Byzantine and Early Islamic periods, the area south of Nahal Beersheba/Nahal Malhata as settled for the first time, although more sparsely than the northern areas. Large villages and towns were all located in the northern parts of the study areas. During the Byzantine period, a large number of Christian cult sites were built, but none below the Nahal Beersheba–Nahal Malhata line. This is only correct for the study areas because farther south, large towns existed, such as Elusa and Mamshit, with several Christian cult sites. The highest concentration of settlements existed around the fifth-sixth century CE during the Byzantine period, with the largest extension in the mid-sixth century CE. Large urban centers only existed during the Byzantine and Early Islamic period in the northern Negev. All larger urban centers in the northern Negev had their foundation in the Late Roman–Early Byzantine period, most in the mid-/late Roman period. As discussed above, settlements continued from the Byzantine to the Early Islamic

period, and only gradually declined. The date of abandonment of urban settlements varies. Within the three study areas, no difference according to area is visible. The analysis of the archaeological sites in the study areas showed that sites were abandoned between the seventh and 10th/11th centuries CE (see Chapters 5 to 7; Appendix 4—Summary of large sites, selected features and date of abandonment.). In the northern Negev, the majority of sites were abandoned during the eight to ninth centuries CE ( $n = 46\%$ ), but about 30% of the sites continued beyond the ninth/tenth century. Only 16% ( $n = 2$ ) of sites were abandoned in the late seventh century CE. In general, it can be said that over 75% of all large sites continued at least until the eight-ninth centuries CE (see Chapters 5 to 7). The largest site in the study area, the city of Be'er Sheva, was probably abandoned in the ninth/tenth century CE. Similar results have been observed in the western Negev Highlands where settlements continued up to the ninth and tenth centuries. In the eastern Negev Highlands, the large settlements declined in the eight century CE (Avni, 2014: 287). In the Arava Valley sites were abandoned only at a later point, and settlements show a continuity up to the second half of the eleventh century CE (Avni, 2014: 287).



**Figure 9.2** Abandonment of cities and towns in the study area.

Seventh century: 15.4%, seventh/eight centuries: 7.7%, eight/ninth century: 46.2%; ninth/tenth and tenth/eleventh centuries: each 15.4%. See Appendix 4—Summary of large sites, selected features and date of abandonment.

## 9.2 Emergence and abandonment of cult sites in the northern Negev

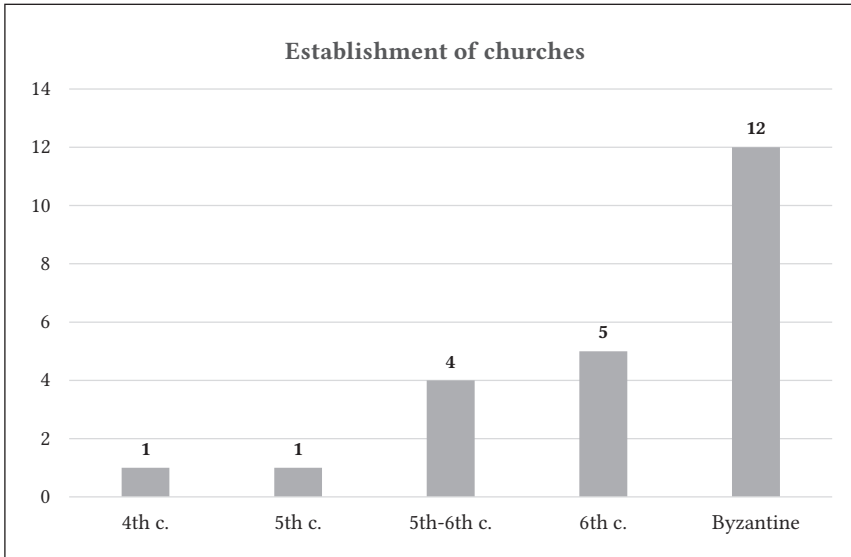
Cult sites are an important indication of change in settlement patterns. During the Hellenistic period, the only known cult site in the study area was a temple located at Tel Sheva, in use from the third to the first centuries BCE. No Roman temple has been found in the northern Negev, and this is probably connected to the fact that during the Early Roman period, only a few, mostly Jewish settlements existed, and those were abandoned by either the First or Second Jewish Revolt. After the Second Jewish Revolt (135 CE), the northern Negev was barely settled—only a few sites are known. By the late third century the area saw an increase in settlements, which was probably based on reforms by Diocletian (see above).

During the Byzantine period, Christianity became the main religion in the northern Negev, churches were built from the fifth century CE onwards. The number of churches and their building dates provide indications of the Christianization of the northern Negev. In other parts of Palestine, churches were built in earlier phases. However, the number of churches built before the fifth century CE is below 10% (cf. Patrich et al., 2020). Within the study areas, 30 churches were found within 20 settlements. Be'er Sheva had the largest number with six churches. Other sites with more than one church were found at Magen ( $n = 3$ ) Horvat Hur ( $n = 2$ ) and Khirbat Qasif ( $n = 3$ ). The churches are quite evenly distributed between villages and towns/cities with over 53% of all churches located in villages, and 47% in towns/cities.

The western study area has the highest number of churches with almost 47% ( $n = 14$ ), followed by the central study area with 30% ( $n = 9$ ) and the eastern study area with 23% ( $n = 7$ ). In a recent study, the regional distribution of churches was analyzed, and, in total, 672 churches were registered in all of Israel. For the northern Negev,<sup>33</sup> a total of 81 churches have been identified, 12% of all churches found in Palestine (see Patrich et al., 2020). The research shows that further south into the Negev desert, the number of churches declined slowly. The Central Negev accounts for 3.3% of all churches and the Eilat region for 0.3% (Patrich et al., 2020). Further north of the northern Negev, the number of churches increases considerably, and Jerusalem, Judea, and the Shephela account for almost 30% of all churches. All churches in the study areas which could be dated were built in the fifth or sixth centuries, with the lowest number in the fifth century and the highest in the sixth century CE (Figure 9.3). For 50% of the churches, the exact date of establishment is unknown.

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33 The area includes the Southern Coastal Plain, Gaza strip, North-Western Negev and the Be'er Sheva-Arad Valley.



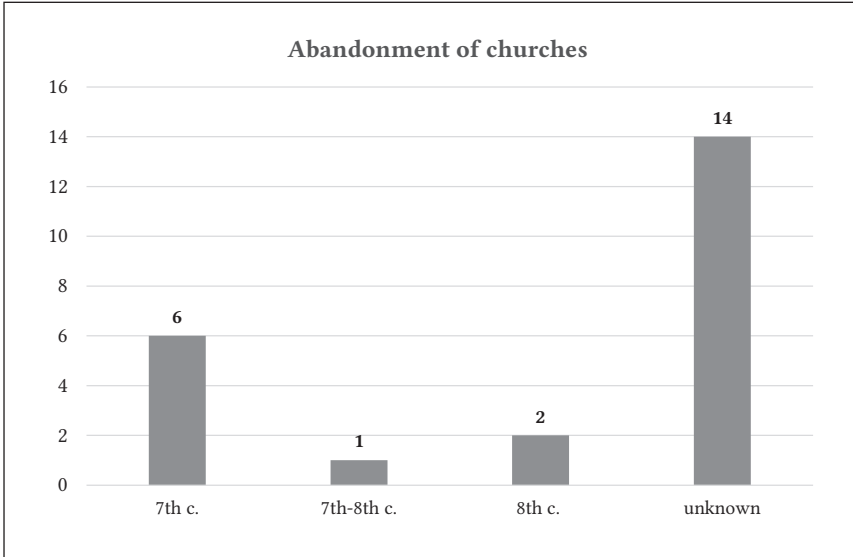
**Figure 9.3 Establishment of churches in the study areas.**

The date of establishment of churches are in most cases based on excavation data, for 50% of all churches the exact date is unknown. By 10% of the churches the date of establishment was in the fifth century, for 16.7% in the fifth/sixth century and for 23.3% in the sixth century CE.

In the above-mentioned study, from all churches found in Palestine,<sup>34</sup> 45% date to the fifth-sixth centuries CE. Only a few date to the fourth century or earlier, and for 40% the date of establishment is unknown (Patrich et al., 2020).

Dates of abandonment are available for only 40% of all churches found within the study areas. All datable churches were abandoned between the late seventh and eight centuries CE, whereas 66.7% (n=8) of the datable churches were abandoned in the seventh century, 16.7% (n=2) in the seventh/eight centuries, and 16.7% (n=2) in the eighth century CE. For 60% of all churches the date of abandonment is unknown. Also, these numbers are comparable to the data collected by Patrich et al. (2020), which concluded that most churches were abandoned in the seventh to eight centuries CE (40.1%). This means that a considerable number of churches were abandoned during the few decades after the Arab conquest and almost all by the eighth century. This fact shows that the transition from Byzan-

34 Including the West Bank and Gaza strip.



**Figure 9.4** Abandonment of churches in the study areas.

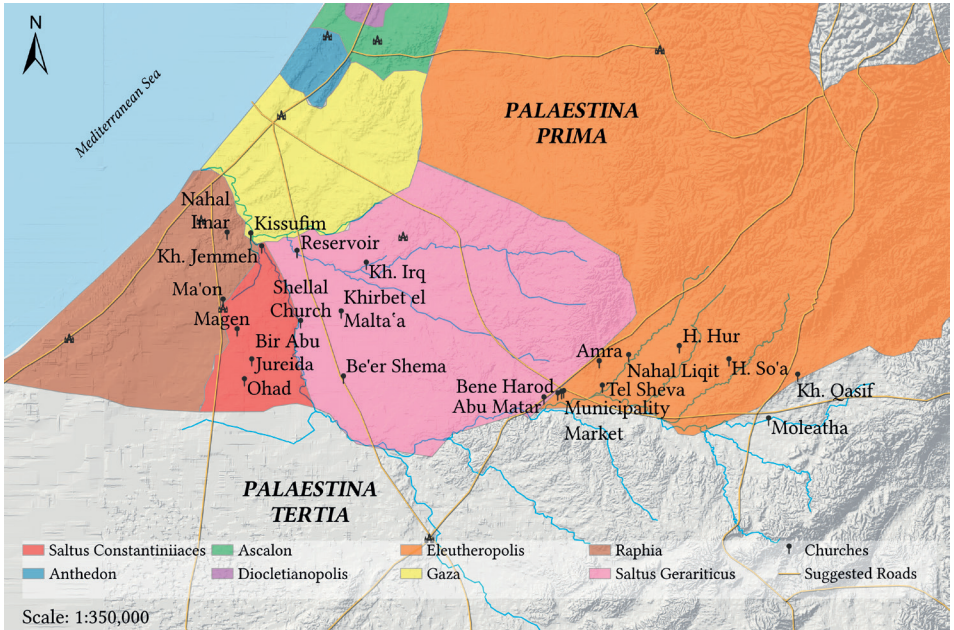
The dates of abandonment of churches are in most cases based on excavation data, and for 60% of all churches the exact date is unknown. 26.7% of the churches were abandoned in the seventh century, 6.7% in in the fifth/sixth century and 6.7% in the eight century CE.

tine Christian rule to Arab Muslim rule had a strong influence, especially on the religious life of the Christian communities of the northern Negev. It does not mean that by the eight century the majority of population was already of Muslim origin, but that the church as a religious institution disappeared widely from the northern Negev. It seems that all the churches in the study areas were abandoned peacefully. According to Schick (1995: 128–29) this also seems to be true for most of churches found in Palestine, as earthquake damage and violent destruction were less common factors.

As mentioned above, most churches were discovered in the western study area and the fewest in the eastern study area. A map with all known churches, as well as urban territory/Bishoprics of the late sixth century shows that churches were evenly distributed in the western study area but, in the central and eastern study area, they were only in the northern parts. The northern parts were located within *Palaestina Prima*, and the southern parts of the study areas were located in *Palestina Tertia*, where no churches were found.

In total, 12 monasteries were found in the study areas. From these, 58.3% (n = 7) were found in the eastern study area, 25% in the central study area, and 16.7%



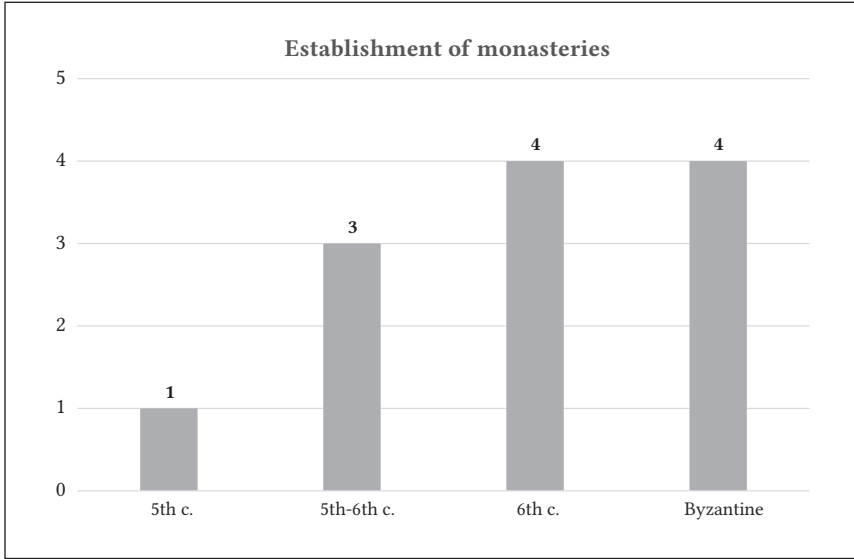


**Figure 9.5 Churches in the northern Negev, map of the sixth century**

The map includes all known churches as well as urban territory/Bishoprics during the Byzantine period. The central and eastern study area are divided between *Palaestina Prima* and *Palaestina Tertia*. Background: Hillshade created from the 12.5 m-resolution ALOS-PALSAR DEM.

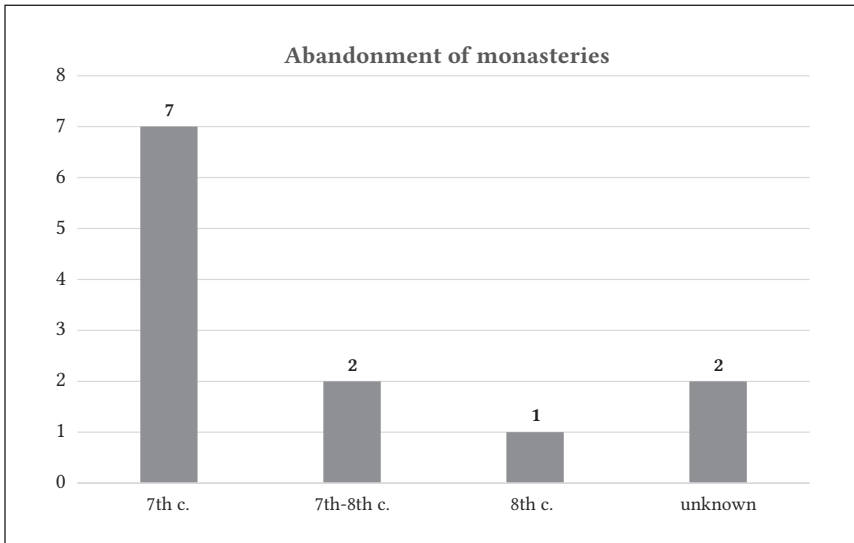
in the western study area. In the western study area, most churches have been found but fewer monasteries. The eastern study area is exactly the opposite with the most monasteries but the fewest churches. One explanation might be that the eastern study area was much more isolated than the western study area, with larger mountain ranges and desert areas. Most monasteries (66.7%) were located in large urban centers (or in the close vicinity), but 33.3% of all monasteries were discovered in rural locations, either within villages or isolated locations. The date of establishment of the monasteries in the northern Negev shows a picture similar to the establishment of the churches. All monasteries were established between the fifth and the sixth centuries CE. With the fewest monasteries in the fifth and the most in the sixth century CE. There is no difference in the date of establishment between monasteries and churches (see above, Figure 9.3).

The same is true for the abandonment of monasteries in that 58.3% ( $n=7$ ) of all monasteries in the study areas were abandoned in the (late) seventh century, 16.7% ( $n=2$ ) were abandoned in the seventh-eight century CE, and 8.3% in the



**Figure 9.6** Establishment of monasteries in the study areas.

The establishment of monasteries are in most cases based on excavation data. See Appendix 5—Cult sites in the study areas: Christian Cult sites—Monasteries.

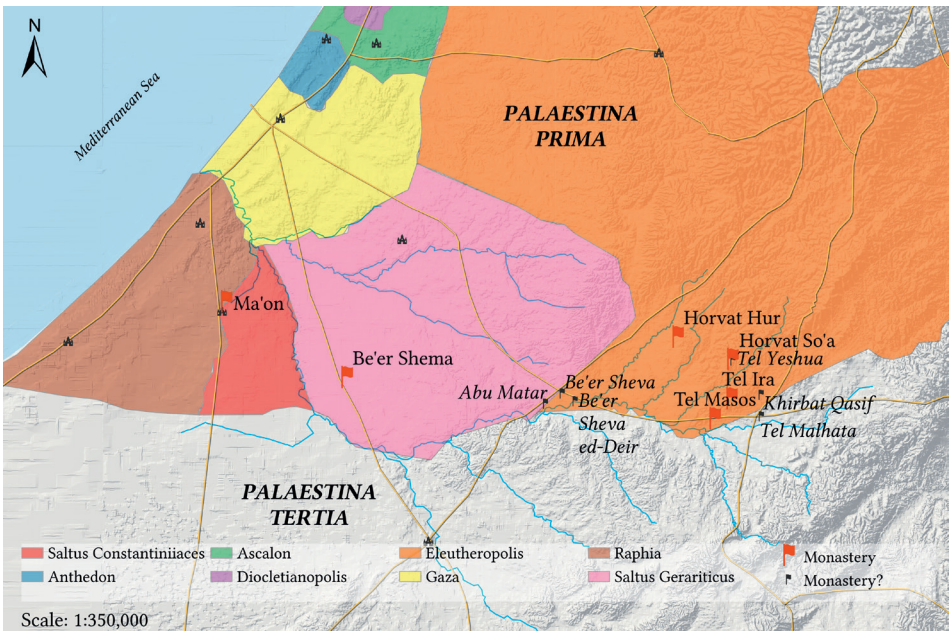


**Figure 9.7** Abandonment of monasteries in the study area.

The date of abandonment of monasteries are in most cases based on excavation data, for 16.7% of all monasteries the exact date is unknown. 58.3% of the churches were abandoned in the seventh century, 16.7% in in the fifth/sixth century and 8.3% in the eight century CE. See Appendix 5—Cult sites in the study areas: Christian Cult sites—Monasteries.

eight century CE. For two monasteries, the date of abandonment is unknown (Figure 9.7). Just like the abandonment of the churches, the abandonment of the monasteries took place within decades after the Arab conquest. The abandonment of churches and monasteries is clearly also connected to change in political policy, in the early eight century CE anti-Christian legislation was introduced by Umar ibn Abd al-Aziz (Umar II) and anti-Christian persecution intensified around the mid-eight century CE under Abbasid rule (cf. Patrich, 2011: 207–08).

The analysis of the establishment and abandonment of churches and monasteries shows that all of the Christian cult sites in the study area were built between the fifth and sixth century. Meaning that, by this point, Christianity was the main religion in the northern Negev. By the eight century CE all Christian cult sites, which have been found in the study areas, were abandoned. A map with all known monasteries, as well as urban territory/Bishoprics of the late sixth century, shows that in the southern area of the study areas no monasteries have been found. It seems that the Nahal Beersheba-Nahal Malhata line formed a “border” further south, only churches and monasteries in towns and cities have been found but not in villages.



**Figure 9.8** Monasteries in the northern Negev.

The map includes all known monasteries and possible monasteries as well as urban territory/Bishoprics. Background: Hillshade created from the 12.5 m-resolution ALOS-PALSAR DEM.

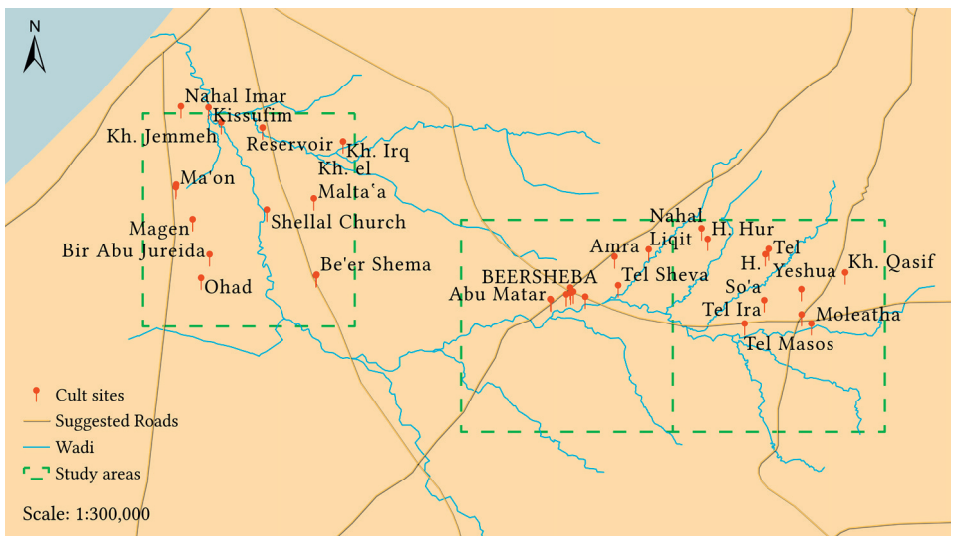
In the two largest urban centers located within the study area, Ma'on and Be'er Sheva, indications of a synagogue were found. The Ma'on synagogue, was probably built in the fourth century CE and renovated, with a new mosaic, in the sixth century CE. The synagogue was abandoned in the late seventh century CE. It seems that large urban centers in the northern Negev had minor Jewish population, as synagogues were found only in the large rural settlement of Gaza (Ovadiah, 1969), Ma'on, and Be'er Sheva. This is also true for other large settlements in Palestine, such as *Eleutheropolis* (Beit Guvrin) and Ashkelon (Avni, 2014: 332). On the other hand, villages were mainly populated by people of one religion, since as the settlement analysis showed, no villages with a church and a synagogue were found. According to Avni (2014: 334), members of the same religion tended to live nearby, as can be seen in the southern Hebron hills, where a cluster of several Jewish villages was found, such as Horbat Rimmon (Kobrin, 2019), Horbat 'Anim (Amit, 2003), Khirbet Susiya (Yeivin, 1974), and Eshtamoa (Yeivin, 2004), whereas the villages in the study area seemed to be mainly Christian.

Not many mosques were found in the northern Negev—within the study areas only two had been found, and one was just outside the central study area. The mosques within the study area were both located in the eastern study area. One was an indoor mosque and a second an open-air mosque. The indoor mosque at Nahal Anim probably dates to the eighth century CE (Govrin, 1991; Magness, 2003); the date of the open-air mosque at Abu Quirnat is unknown (Kobrin, 2020). The open-air mosque found south of the modern Bedouin town of Rahat, dates probably to the eighth century CE. First mosques were introduced in the northern Negev, at the earliest point, in the eighth century CE. According to Avni (2014: 336–37) the establishment of mosques points to the arrival of newcomers and not to the conversion of Christians and Jews. No Early Islamic mosques have been found in any of the large urban settlements in the northern Negev. This is in major contrast to the areas farther south where many open-air mosques have been found mainly in rural settlements in the area of Shivta, Sde Boqer and the Central Negev highlands (cf. Avni, 1994; 2007). Most open-air mosques were found in agricultural and nomadic sites, which show no archaeological evidence for the introduction of Christianity (Avni, 1996: 78–82; 2007). Many standing stone steles were discovered, and it is believed that those represent the nomadic tradition of desert nomads who used standing stones to represent their gods and deities (Avni, 1994; 2007). There is evidence of the transition from the use of standing stones to open-air mosques in agricultural villages and nomadic campsites (Avni, 1994; 2007). In the Negev Highlands, in contrast to the northern Negev, only the towns were Christianized, whereas the agricultural and nomadic settlements developed from cultic installation (standing stones) to open-air mosques. In the northern Negev, small agricultural sites also show signs of Christianization, such as en-

graved crosses, churches, or monasteries. Furthermore, the number of churches is in the northern Negev about four times higher than in the Negev Highlands (cf. Patrigh et al., 2020).

The process of religious change, compared to other factors, is more clearly traceable through the appearance and disappearance of cult sites, but also based on other findings. For example, the presence of a Jewish population in the northern Negev during the Early Roman period can be demonstrated through finds, such as a *mikve*, underground hiding complexes (Bar-Khoba revolt), and also specific small finds. The rise and fall of Christianity and the appearance of Islam in the northern Negev is traceable through the high number of cult sites. Figures 9.9 to 9.11 show the decline of Christian and Jewish cult sites and the establishment of Muslim cult sites by century.

Based on analyzing the changes in urban and rural settlements, it is evident that the processes of change from the Byzantine–Early Islamic interface were gradual. Analyzing the Christian and Jewish cult sites show that the Arab conquest must have had a strong impact on the cult sites. Some 150 years after the Arab conquest, the last few Christian cult sites were abandoned in the western study area, probably earlier than in the central and eastern study area (Appendix 5—Cult sites in the study areas). However, Muslim cult sites only appear sparsely, from the eighth/ninth century CE, in the study area. The abandonment of Christian cult sites during the seventh and eighth century is in the northern



**Figure 9.9** Seventh century CE cult sites in the study area.





Figure 9.10 Seventh-eight centuries CE cult sites in the study area.

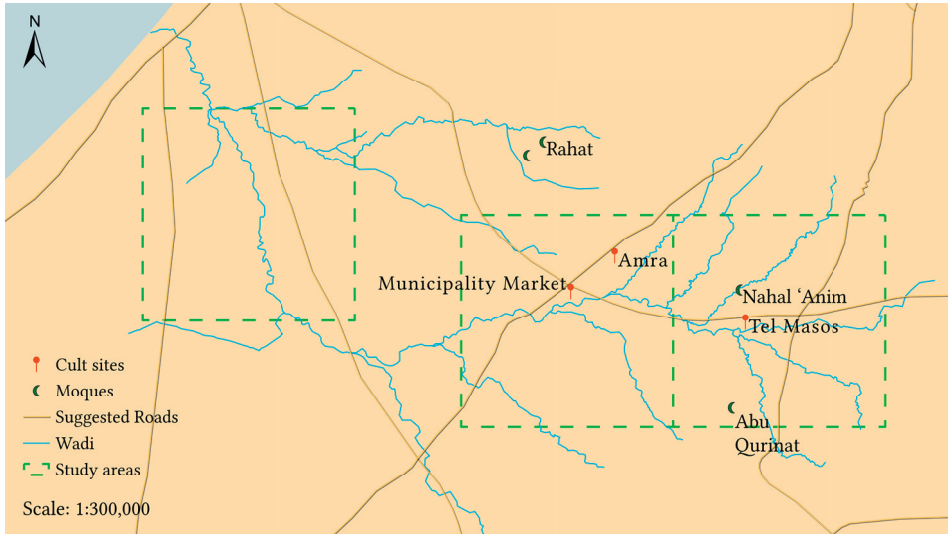


Figure 9.11 Eight century CE cult sites in the study area.

Negev is not different from the other parts of Palestine, where in total 83.5% of all datable churches were abandoned during the same time period (see Patrich et al., 2020). There were no Christian and Jewish cult sites in the northern Negev by the end of the eighth century CE, but only a few Islamic cult sites had been built. The religion of the majority of the population remains unclear, but it can be assumed that part of the population had already converted to Islam by the late eighth- beginning of the ninth centuries CE. However, as almost no mosques have been discovered, and with the assumption that new mosques were built mainly by newcomers rather than by converted population, it is also a possibility that a part of the Christian and Jewish population slowly left the area and an additional part converted to Islam, which would also explain the gradual decline in settlements in the northern Negev.

### 9.3 The *longue durée* process of change

As discussed above, several general changes in settlement patterns during the Classical period were observed and analyzed. In this section, the possible forces of change are discussed along with how these factors influenced the *longue durée* process of change from the Hellenistic to the Early Islamic period.

#### 9.3.1 Political change

##### ***Hellenistic to Late Roman period border area***

The northern Negev was, during the Classical period, a border region which was located most of the time between the Dead Sea, south of Masada, and the Mediterranean coast, crossing through the Be'er Sheva-Arad valley. In terms of the study areas for this research, this meant that the border passed through the central and eastern study area, dividing each into two, almost equally sized (northern and southern) parts. The western area was less affected as only the most southern part of the western study area was at certain times divided by the border. Although an ancient border cannot be understood as borders are today, it is one of the historical factors that had a clear influence on the settlement patterns of the northern Negev. As discussed above (see Chapter 9.1 Analysis of the survey samples), the border was one of the strong factors in the change of settlement patterns from the Hellenistic to the Late Roman period, and the area south of the Nahal Beersheba-Nahal Malhata line was practically unsettled. In the northern part, several fortified structures and fortresses were found dating to Hellenistic/

Early Roman period. Only during the Byzantine and Early Islamic period were the southern parts of the study area settled.

### ***First and Second Jewish Revolt***

During the early first century CE, several Jewish settlements existed, mainly in the Be'er Sheva–Arad valley. The destruction of Jerusalem, as well as reforms and changes in imperial and local administration had a strong influence on the settlements in the northern Negev. Most settlements were abandoned or destroyed after the First Jewish Revolt, such as the settlement at Tel Ira and Tel Arorer. Others continued to be settled until the Second Jewish Revolt, such as Rakafot 54 and Nahal Yattir, or had been resettled, as Tel Arorer. The Tenth Legion was stationed in Jerusalem and the province of Judea was made independent (Magness, 2012: 257). After the First Jewish Revolt, Jews had to pay an annual temple tax to the *Capitolium* in Rome (Magness, 2012: 257). By 106 CE, the Nabatean Kingdom was incorporated into the Roman Empire, and with this, the trade of incense and spices was under Roman control. Within the study area, it seems the incorporation of the Nabatean kingdom into the province of Arabia, and the shifting of the trade routes to the north out of Nabatean territory, had no significant influence on the settlement patterns of the northern Negev, which was sparsely populated with only a few settlements. It seems that the settlements that existed during the Bar-Kokhba Revolt (132–135 CE) engaged in fighting the Romans, as underground tunnel system and fortified structures have been found (cf. Zissu and Kloner, 2010). Based on the settlement analysis the Bar-Kokhba Revolt had a strong influence on the settlement patterns in the northern Negev. By the end of the revolt, all Jewish settlements in the study areas were abandoned. The northern Negev was mainly unsettled, with only a few settlements, such as fortresses at Tel Sheva and Tel Malhata still existing. Based on the settlement analysis the northern Negev remained largely unsettled until ca. 250 CE.

### ***Reforms at the end of the third beginning of the fourth century CE***

The increase of settlements at the end of the third and beginning of the fourth century CE in the northern Negev, is a major phase of change in the settlement history of the region. As coin finds show, most these changes fall into the period of Diocletian (284–305 CE). The Roman emperor Diocletian introduced far-ranging reforms, including the administrative transfer of the Negev, Sinai, and southern Transjordan from *Provincia Arabia* to *Provincia Palastina* (Tsafrir, 1986: 82–83; Erickson-Gini, 2002: 118; Di Segni, 2018: 248). Around the year 300 Diocletian transferred the tenth legion from *Aelia Capitolina* (Jerusalem) to *Aila* (Aqaba) (cf. Isaac, 1992; Magness, 2012: 271; Erickson-Gini, 2010). During the same time, fortresses on Tel Sheva and Tel Malhata were renewed. It seems that Be'er Sheva's



military camp also falls chronologically into this time period, although the excavation revealed only remains dating from the mid-fourth century onwards. Some of the public buildings excavated at compound C, are dating to the late third, fourth century CE (Fabian and Gilead, 2010a; 2010b). This is further proven by a large number of coins dating to Diocletian. It seems that with the reforms of Diocletian, the area of the northern Negev saw a stronger military presence, new roads were built, and the whole area saw a rise in settlement. In particular, the settlements of Be'er Sheva and Tel Malhata developed into large settlements. However, these changes in settlement density at the end of the third century is only visible in the large settlements, not in the countryside. There are only a few farmhouses that date to the late third to fourth centuries CE throughout the study areas (see Chapters 5 to 7).

### ***The fifth century CE: Decline in demographic and economic vitality of the northern Negev?***

Only a few coins were found in the study areas which date to the fifth century CE. This phenomenon was also observed in other areas of the region. For the period at the end of the third/beginning of the fourth centuries, the coin numbers were very high in the study areas, but for the mid-fifth century CE, they almost drop to zero. According to Safrai (1998) the drop in coins from the fifth century CE (408–491 CE) is due to a decline in demographic and economic vitality in the region. Gitler and Weisburd (2005: 552) analyzed the coin finds from villages and towns of Palestine and argued that the decline in the fifth century appears to be because an unusually high level of coinage production took place during the fourth century, but during the fifth to seventh century, coinage production returned to standard levels. However, during the sixth and seventh century CE, coin numbers are higher than during the fifth century CE. Furthermore, settlement analysis showed that most sites date either from the late fifth or from the sixth century CE. Therefore a decline in demographic and economic vitality might be a possibility, especially in the early to mid-fifth century CE.

### ***Crisis in the seventh century CE***

The seventh century saw many changes to the populations in the northern Negev. At the beginning of the seventh century CE, the Persians ruled the area, and twenty years later the Arab conquest took place. At the end of the seventh century, 'Abd al-Malik established far reaching reforms that profoundly changed settlement patterns and population in the northern Negev. However, neither the Persian nor the Arab conquests left destruction in the settlements of the northern Negev. The settlements seemed to continue uninterrupted throughout the whole seventh century CE, and new settlements were even formed.

During the years 614 to 628, CE Palestine was under Persian rule. The Negev was not involved in the war with the Persians, and its impact remains unclear (Mayerson, 1964: 191–192; Haldon, 1995: 406; Schick, 1995: 20–48; Walmsley, 2007: 45–47; Holmquist, 2019: 10). Only one site, Magen, in the western study area, reports violent destruction dating to the first half of the seventh century CE. Tsaferis (1985: 14) attributes these destructions to the Persian raids in 614 CE, although no other destruction layers have been recorded in the study area in connection to the Persian war. Therefore, the recorded destruction might be the result of another (local) violent event.

The Arab conquest took place in the years 634 to 640 CE. In some areas of Palestine, the conquest was conducted peacefully, in others violently through siege and battle, such as the fall of Gaza in 637 CE, or Caesarea Maritima (see further Kaegi, 1992: 88–111). According to Avni (2014: 311) the Arab conquest marked the end of nearly a thousand years of Western influence during Hellenistic, Roman and Byzantine rule. It was also the trigger for profound changes in settlement and society (Avni, 2014: 311).

The analysis of the settlement patterns (see Chapter 5–7) showed that no settlements, within the study areas were affected by the Arab conquest through battle. No destruction layers were noted during surveys or excavations at any of the sites. Avni (2014: 314) notes that in the whole Negev, no site was involved in a violent battle during the Arab conquest. On the contrary, during the seventh century new settlements were constructed, mainly large farming estates outside the urban centers (see Chapter 8). In fact, in some locations public buildings were built. In conclusion, it seems that the Arab conquest was for the northern Negev a rather peaceful event, with a change from Byzantine to Arab rule, but no major destruction of settlements and no direct influences on settlement patterns. Also, most churches and monasteries continued to be in use, at least for several decades until after the Arab conquest.

### 9.3.2 Environmental change

The impact of climate change on the settlement patterns in Palestine during the Classical period has been extensively discussed. In the early twentieth century, Huntington proposed that the rise and fall of civilizations in the Near East was based on climatic change. According to Huntington (1911), the rise of settlements in arid areas during the Roman-Byzantine period was a result of more favorable climatic conditions, and the decline during the Late Byzantine and Early Islamic period was due to worsening climatic conditions which led to the desertification of the area. The discussion on the impact of climate change was again revived in

the early 1990s and 2000s with several researchers in favor of the theory that climate change was responsible for the rise and abandonment of the settlements during the Roman-Byzantine to Early Islamic period (see Issar and Govrin, 1991; Issar, 1995; 1998; Hirschfeld, 2004a; 2006; 2007) others argue that political and social factors were responsible for these fluctuations in settlements (see Rubin, 1989; 1991; Rosen, 2000; Avni, 2014).

Several geomorphological studies have been conducted since the 1990s, some showing favorable conditions between 200 BCE and 200 CE, and at the beginning of the fourth century CE (for a summary see A. Rosen, 2007: 165–166). However, most studies are based on research not conducted in the northern Negev, such as in the Soreq cave in central Israel or the Dead Sea area. Two main questions have to be answered: (1) Can that data from central Israel or Dead Sea be extended, even partially, to the northern Negev? (2) If there were fluctuations, were they enough to impact settlement, especially in an environmentally marginal or transitional area? Only one study was conducted in the northern Negev, showing that the climate was consistent in the northern Negev during the last 13,000 years (Vaks et al., 2006). Furthermore Bar-Matthews et al. (1998) argue that the period from ca. 1050 BCE to 950 CE was the most stable period in terms of rainfall amount, and according to A. Rosen (2007: 168) the stability of rainfall is far more important than the rainfall quantities in marginal farming areas such as the Negev (see Chapter 3.2 Paleoclimate).

The analysis of settlement patterns shows that, during the time period between 200 BCE and 200 CE, some settlements were founded in the northern Negev, but no strong increase in settlement is visible. Furthermore, during this time period, where the climate was supposed to be favorable, the northern Negev was almost completely abandoned, with only a few settlements (70 to 250 CE). During the early fourth century CE in the northern Negev, mainly the (Byzantine) urban centers, such as Be'er Sheva, Ma'on, Be'er Shema and Tel Malhata/Moleatha were settled, whereas not many farmhouses and small farming villages date to the early fourth century CE. Most farmhouses and small villages in the northern Negev date to the fifth to seventh century CE, when according to some geomorphological studies, the climate was supposed to be less favorable. Especially in the late sixth- beginning of seventh centuries. This period saw a phase of ruralization of urban centers and the establishment of large farmhouse estates outside the cities/towns in the northern Negev (see Chapter 8). The results of the settlement pattern evaluation also show that if there were favorable climatic fluctuations in the northern Negev during the Classical period, these were not the main factors responsible for the foundation and abandonment of settlements and therefore played no significant role in the shifting demographics of the region.

It seems that earthquakes did not play a major influence on the settlement patterns of the northern Negev during the Classical period, as no wide range destruction layers have been found which are associated with any specific earthquake within the study areas. Although several researchers argue for earthquake impacts in several Negev towns, outside the study areas, such as in Elusa, Shivta, Rehovot-in-the-Negev, and Oboda. These destruction layers are either dated to the early seventh century CE or to the mid-eight century CE (cf. Negev, 1974; 1976; 1993; Amiran et al., 1994; Fabian, 1998; Korjenkov and Mazor, 1999a; 1999b; 2003; 2005; 2013; 2014; Erickson-Gini, 2006; 2010).

### 9.3.3 Social and economic change

Several social and economic factors influenced the settlement patterns and the population of the northern Negev. However, many of these social and economic factors are a direct result of political events. The influences of these factors are the most difficult to trace within the changes in settlement patterns and population. The exception is the most traceable social factor: the change in religion and culture of the population of the northern Negev. This factor is associated with cult sites, symbols and in some parts a specific material culture, however, change in religion can also be direct result of political change.

#### *Collapse of the Incense Road*

After the Romans annexed the Nabatean kingdom and incorporated it into the province of Arabia in 106 CE, the international trade along the Incense Road continued, although it declined. Further south, along the trade road in central Negev, the Romans built forts with courtyards. In terms of the northern Negev and the study areas, only the last part of the Incense Road (part of the road from Elusa to Gaza) is relevant, as it passed through the western study area. During the third century CE, the trade road collapsed completely. After attempts to revive the international trade road failed at the end of the third century CE, the road continued to be used as a link between Petra and the Negev until the Early Byzantine period (cf. Erickson-Gini, 2010).

In the western study area, through which the Incense Road passed during the Hellenistic through Early Roman period, no settlements were located along the Incense Road. All settlements were located along Nahal Besor, or other roads in the area. Only in the Late Roman period, when the road had already collapsed, several settlements were located along the road. The road continued to be used as link between the settlements in the central Negev, such as Elusa, Oboda, and Mampsis, and the coastal cities, Gaza, and Ashkelon.

### ***Justinian Plague***

The Justinian plague hit the area in 541–543 CE, spreading from Alexandria to Constantinople (cf. Newfield, 2016; Harper, 2017; Mordechai and Eisenberg, 2019). Spreading first in the coastal cities such as Gaza and Ashkelon, the precise effect of this event is unknown, as no mass burials have been discovered in the northern Negev. Furthermore, it seems that, in general, the time period of the sixth century CE was the high point of Byzantine settlement construction in the study areas. Many religious buildings such as churches, synagogues and monasteries are date to the mid-sixth century or have at least been renovated extensively. Therefore, it is unclear whether the Justinian plague had any strong effect at the settlements, population, and economy of the northern Negev.

### ***Changes in population/culture/religion***

The northern Negev saw constant change from the Hellenistic to the Early Islamic period, not only in the dynamics of settlements, but also in the religion and culture of the population. Based on the settlement patterns, cult sites, and material culture of the study areas, the population of the northern Negev followed numerous religions (see Table 9.1). Change in religion does not mean that the population of the northern Negev changed as well. However, after the Second Jewish Revolt, most of the northern Negev was unsettled and only resettled towards the

**Table 9.1** Change in religion of the population of northern Negev over time.

Table of the main religion of the northern Negev (based on the settlement patterns in the three study areas) from the Hellenistic to the Early Islamic period. Main religion(s) in bold.

Period	Time span	Religion(s)
<i>Early Hellenistic</i>	332–167 BCE	<b>Classical paganism</b>
<i>Late Hellenistic</i>	167–37 BCE	<b>Classical paganism</b> /Jewish (?)
<i>Early Roman</i>	37 BCE–132 CE	Jewish/ <b>Classical paganism</b>
<i>Late Roman</i>	132–324 CE	<b>Classical paganism</b>
<i>Early Byzantine</i>	324–491 CE	<b>Classical paganism</b> /Christian/Jewish
<i>Late Byzantine</i>	491–640 CE	<b>Christian</b> /Jewish/ <b>Classical paganism</b> (?)
<i>Early Islamic (Umayyad)</i>	640–750 CE	<b>Christian</b> /Muslim/Jewish (?)
<i>Early Islamic (Abbasid)</i>	750–969 CE	Christian/Muslim
<i>Early Islamic (Fatimid)</i>	969 CE–1099 CE	<b>Muslim</b> /Christian (?)

Late third century CE. The population that resettled the northern Negev was most likely of Judean or Arab/Nabataean (Negbite) origin. During the Early Byzantine, no Christian cult sites were built in the northern Negev, and only in the late fifth/early sixth century do the first churches appear. Therefore, it is likely that a large part of the population was polytheist. Only in the late fifth, beginning of sixth century CE, did the Christianization of the area take place, and it is assumed that a large part of the population converted to Christianity. In contrast, it seems that the southern coastal plain with the cities of Gaza and Ashkelon, were Christianized in the early fifth century CE and first monasteries and churches appear in the region of Gaza in the fourth century CE (Ashkenazi, 2004: 207; Hirschfeld, 2004b). Several churches with a *baptisterium* were found within the study areas. Most baptismal fonts found in the study areas were designed for adults, such as the one discovered in Be'er Sheva (Figueras, 2013: 131), Magen (Tsaferis, 1985), or Be'er Shema (Patrich et al., 2020). An interesting baptistery was discovered at Horvat Karkur Illit, located just outside the central study area, where a baptismal font which was originally built for adults has been replaced at a certain point with a stone basin, clearly designed for the baptism of infants and small children (Figueras, 2004: 37–38). The early baptismal font for adults was built during the first phase of the church, dating to the early fifth century CE, the baptistery for infants and small children dates to the mid-sixth century CE (Figueras, 2004: 7–9). This might serve as an indication that by the mid-sixth century CE, adult baptism was no longer necessary (Figueras, 2004: 38). However, new populations also arrived in the northern Negev, from all parts of the eastern Mediterranean. It is assumed that most of the population practiced Christianity until at least the eighth century CE, when the Muslim population slowly settled down in the northern Negev, and most Christian cult sites were abandoned.

It has to be kept in mind that changes in religion are based on political change, and these always had at least partial impacts on any new populations arriving in the region.

### ***Wine trade collapse end of seventh century***

The wine trade was an important economic factor in the northern Negev. Different research shows that wine production and trade were the highest during the fifth to sixth centuries CE, with the most in the mid-sixth century CE (Fuks et al., 2020; Lantos et al., 2020). Several industrial-scale wine presses were discovered in the study areas. It seems that the majority of those wine presses went out of use in the seventh century CE. In the northern Negev, it is obvious that the wine production declined from the Late Byzantine to the Early Islamic period (cf. Tepper et al., 2018; Bar-Oz et al., 2019: 4–5, 9; Lantos et al., 2020). However, evidence suggests that wine production continued also during the Early Islamic period and

wine consumption was not prohibited (Lantos et al., 2020). The decline of most of the wine presses in the study areas is probably a result of the collapse of the international wine trade, as the main focus of Palestine trade shifted eastwards to Arab territories and transportation from sea to land (cf. Schick, 1995: 78–79; Avni, 2014: 267–71; Decker, 2013: 112–13; Lantos et al., 2020). The decline of viticulture in the seventh century CE corresponds with evidence of the termination of dovecotes in the northern Negev. Dovecotes were built to produce dung as fertilizer, which was used to enrich the poor-quality loess soil. This dung fertilizer was needed for cultivating plants, mainly fruit trees and vines. Several large dovecote towers have been found in the northern Negev in connection with large industrial wine-presses, e.g., Be'er Sheva, southern entrance (Haimi, 2008; Michael and Tepper, 2021) or Nahal Zon (Lifshits, 2017). It seems that the decline of both occurred during the same time and were most likely connected.

### ***Ruralization, urban decline, and architectural change in the seventh to eighth century CE***

During the seventh century CE a phase of ruralization and urban decline is evident in the study areas, especially in Be'er Sheva, but also in other large settlements. The main indicator is the establishment of large farmhouse estates outside urban centers. Interestingly, several of these large farming estates were built close to the city, much closer than the village hinterland during the Byzantine period. The establishment of large farmhouses near urban centers might be a sign that the supply to the cities was reduced or partly collapsed during the seventh century CE. Therefore, farming estates were needed close to the cities. Another explanation is that with the abandonment of the winepresses in the seventh century, land near the city could be used for grain, or other agriculture products that were earlier produced farther away from the urban center.

However, the majority of excavated farmhouses and villages in the hinterland or urban centers show no discernable changes during the early Umayyad period in the seventh and early eighth centuries. This means that the large farming estates were in addition to the already existing farmhouses and villages in the hinterland.

A new phase is visible in the mid-eight century CE, at the beginning of the Abbasid period. In large buildings, such as farmhouses, the rooms were divided into smaller rooms. In the majority of the buildings, new walls were built from dressed building stones and architectural remains in secondary use from collapsed Byzantine buildings such as public buildings or churches. This might serve as an indication that a part of the population left the area, and churches and other public buildings were no longer rebuilt. Most buildings continued to be used until the ninth/tenth century CE. This phase of architectural change is visible in almost

all Early Islamic buildings in the northern Negev. The phase of ruralization and urban decline result from economic reasons or change in culture. It seems that the architectural changes were based on changes in culture, away from the Roman building style to a more functional architecture.