

## 10 CONCLUSIONS

### 10.1 Summary of the study

The focus of this study has been on gathering and synthesizing a considerable amount of survey and excavation data from the northern Negev in order to explicate long term settlement trends in the region during the Classical Era (Hellenistic through Early Islamic). The intent was to explore the relationships between changing settlement systems, environmental fluctuations, and various social and political factors, including shifting borders and political systems, demographic trends, and social factors such as religious transformations. In particular, the northern Negev, on the edge of dry-farming practicability, is especially sensitive to environmental and climatic fluctuations with significant impacts on farming potentials. The area also bridges different regions—the desert and the Mediterranean zone, and interior regions with the coastal plain—and thus it is a major locus of trans-shipment and trade. Social and political trends over the long millennium of the Classical Era also played a role in settlement systems, and these were central to the study.

Considering the archaeological evidence, the northern Negev was settled throughout the Classical Era. However, it shows that at certain points of the history only a handful of sites were settled, and at other times the settlement density was extremely high with hundreds of settlements. Furthermore, analysis of the three study areas show that the settlement density was almost identical in all three areas. Although the three areas can be differentiated in several aspects, such as altitude, access to water, rainfall per year, and flora and fauna, they all show the same settlement dynamics: a low settlement density during the Hellenistic and Early Roman period. After the early second century CE, only a handful of settlements existed in the northern Negev, with a strong rise towards the end of the third century CE, which is most likely connected to the reforms by Diocletian.

Interestingly, the rapid increase in settlement in the third century is mainly visible in the larger settlements, such as Be'er Sheva, Ma'on or Tel Malhata, which became cities and towns during the Byzantine period. Not many small, isolated settlements, such as farmhouses, have been found dating to the third century CE. Over 60% of all sites date to the Byzantine period. Most of these sites date from the fifth century onwards, which correlates also with the Christianization of the northern Negev, as the majority of churches and monasteries in the northern Negev were built during the fifth/sixth centuries CE. The growth of population and settlements during the Byzantine period is impressive. Based on the analyzed data, the population of the northern Negev probably reached over 100,000 people in the mid-sixth century. The majority of settlements continued into the Early Islamic period without interruption. With the decline of Christianity, the settlement and population of the northern Negev also slowly decreased. The northern Negev has not seen such a population increase as during the Byzantine period until recent times.

During the entire Classical Era, there is no evidence of any destruction or violent conquest of a settlement that can be connected to an historical event. The different political, economic, social, and environmental factors have been analyzed and correlate to the settlement history of the Classical Era in the northern Negev. Many political factors had a strong influence on the settlement patterns, such as ancient borders, the First and Second Jewish Revolts, political reforms, Christianization, the Arab conquest, etc. However, the economic and social factors are more difficult to interpret, and many times those changes came into being based on changed political factors.

It is unclear to what extent environmental factors played a role in the changing settlement patterns. First of all, there are different opinions about whether the climate, particularly the amount of rainfall, changed at all during the Classical Era in the northern Negev (see Chapter 3). Secondly, for most significant changes in settlement patterns it could be shown that political factors were the major catalysts of change, not climate. Therefore, it can be concluded that changing environmental factors, such as an increase or decrease of rainfall, might have supported the changes in settlement patterns, but they were not the main catalyst for those changes.

## 10.2 Contribution of the research

This research was conducted with the intent of providing the most comprehensive analysis to date of the dynamics and changes in settlement patterns of the northern Negev during the Classical Era (Hellenistic through Early Islamic periods). A large database for each study area was established, containing all Classical period archaeological sites discovered during surveys, excavations, inspections, and trial trenching. The data were interpreted according to specific attributes and standards. Furthermore, key excavations were used to consider the collected data, and numismatic evidence from the study areas was used to construct a database line which allowed for the analysis of the peaks and troughs of each period. Detailed analyses of the three study areas were presented from the Hellenistic to the Early Islamic periods. Different GIS technologies were used for the construction of the maps, as well as for analyzing the data. The data were examined using three different scales: the whole region as the northern Negev, the three study areas—west (Nahal Besor region), central (Be'er Sheva and surroundings) and east (eastern Be'er Sheva—Arad Basin). Finally, individual survey squares (10 × 10 km) were also examined. GIS technologies were used to calculate the size of specific sites and to analyze the site hierarchy, as well as the spatial relation between specific sites and surrounding sites. By examining the population of urban centers and answering the question of how urban centers adopt specific land use strategies, which in turn impact settlement density on types, the research showed how the hinterland of a large settlement was organized and how urban centers interact and influence it.

This thesis has presented the dynamics of settlement patterns and presented possible catalysts for change for the northern Negev. Furthermore, it has shown ways of using legacy survey data for archaeological research.

## 10.3 Significance of the research

The study of the settlement patterns of the three study areas over a long time period allowed for the analysis of the changes of settlement patterns, as well as different catalysts for change. It also enabled the reconstruction of the settlement history of the northern Negev.

The importance of the research lies in the synthesis of a large dataset, using new tools that have not previously been applied, thus offering both a more detailed perspective on settlement change and a way of testing these methods in an environmentally sensitive zone. This has general implications for understanding

how peripheral zones operate historically. Beyond examining historically specific trends, broad conceptualizations of how arid peripheries work on the edge of empires may be developed in the future.

The thesis reports on the dynamics of settlement patterns and changes as well as the different catalysts for change. Furthermore, it shows changes in population and culture of the inhabitants of the northern Negev over a long-time span. The thesis has also documented ways to incorporate legacy survey data for archaeological research as well as noting limitations of the use of such data for further archaeological research. Legacy survey data have become more and more important, as many archaeological sites are being destroyed, through construction, agriculture, erosion etc. In many cases, only legacy survey data of sites exist, therefore working with such data is essential for future archaeological research.

#### 10.4 Limitations of the study and recommendations for further research

This study had several limitations. First of all, the research area of the study was limited to the three survey samples, as the whole of northern Negev would have been a far too large area. Furthermore, the survey samples could not be chosen freely as the whole of northern Negev has not been systematically surveyed (see Figure 4.1). The research was also limited by certain parameters, for example the survey data provided by the ASI, IAA, and research institutions. In several cases, only a general description and no accompanied finds were published. Therefore, many sites could not be redated. Furthermore, not all descriptions of sites were detailed, and in many cases the site had to be interpreted based on the limited survey descriptions. To minimize the possibility of bias and mistakes in interpretation and classification, a list of attributes was established, and each site was classified according to the attributes, this allowed for standardization of the sites. Another limitation was related to the excavations conducted in the northern Negev. Several important excavations were unpublished, or only preliminary publications were available. Therefore, it was not possible to draw final conclusions from certain studies. To counter this problem, access to unpublished material was facilitated through colleagues from the IAA Southern district. However, this was not in all cases possible. Furthermore, one of the largest excavations conducted in the northern Negev was at Khirbat Amra. The excavation was conducted some 25 years ago, but in order to learn more about the settlement history of the northern Negev, I took over the publication of this important site, together

with I. Taxel. As the site was settled from the Hellenistic through the Early Islamic period, it turned out to be a perfect case study to accompany this research.

This study presented the changing political and demographic patterns of the semi-arid south, at the edge of the empire. It might be interesting to see if these changing political and demographic patterns are paralleled by other areas of Palestine. Therefore, the next step in research, to fully understand the political and demographic patterns of the regions, is to make a detailed comparison using these different perspectives.