The aim of the project was to explain the patterns of stability and change associated with the spread and establishment of farming in Neolithic Europe in the light of new perspectives on human cultures and societies derived from evolutionary theory. As the basis for doing this the project created a spatial database of radiocarbon dates from archaeological sites and data on animal bones, plant remains and pottery, as well as evidence for the occurrence of mining, of the building of monumental sites such as earthwork enclosures, and the incidence of violence, for the period from 8000-4000 BCE in western and central Europe, from Ireland to Poland. This broad coverage made it possible to draw large-scale comparisons over space and time. On this foundation we developed novel quantitative methods to use the radiocarbon dates as a robust measure of changing population size and to test the hypothesis that farming led to regional population growth when and where it was adopted. We then investigated whether the population patterns were affected by climate and also whether subsistence patterns, cultural patterns, the construction of monuments, the incidence of violence and the digging of flint mines were related to the population patterns. We also addressed long-standing questions concerning the way cultural features are transmitted across space and time, and the factors that affect this, for example, whether similarities and differences between cultures can be explained by how distant they are from one another in space and time.

The project's most important conclusion is that the introduction of farming to Europe did not lead to a steady improvement in living conditions and ongoing population increase, but was characterised by a pattern of ‘boom’ and ‘bust’ in many regions; even in regions without dramatic ‘busts’ there were often longer term population declines. We did not find evidence that these could be accounted for by climate change, suggesting that it was internal factors in these early societies that led to them exceeding the sustainable limits of their socio-economic systems. In keeping with this, we found correlations between the population patterns and changing patterns in the subsistence economy, and also between periods of high local population and investment in conspicuous monument construction, as well as in evidence for the incidence of violence, which appears to be associated with societies exceeding their demographic and economic limits. We also showed that the cultural transmission processes that produce distinctive patterns of similarity and difference in the archaeological record have recognisable signatures that can be identified from the archaeological material. This makes it possible to link them to similar processes in the present, such as those which produce fashion trends. The great majority of the
substantive results have been achieved through novel methodological developments that take the application of quantitative methods in archaeology to new levels of sophistication and represent another main achievement of the project. As we hoped, the methods are now being applied by others, while our substantive results are beginning to be cited by geneticists and environmental scientists interested in human population history.

The project has been extremely active in disseminating its results. Four conference sessions/workshops have taken place and 65 further talks given. Eighteen journal articles or book chapters have been published, together with two edited books. Most of these are already open access and the others will be. At the time of writing two more papers are in press and others in preparation. Dissemination has also taken place through the project website (https://www.ucl.ac.uk/euroevol). The database is being placed in a public repository and published in the Journal of Open Archaeological Data. A book synthesising the results of the project is currently being written.