

This bachelor thesis examines changes in the extent of vegetation zones throughout the 1950–2020 time period in Europe. We utilise a climate classification based on two quantities: aridity index (AI) and growing degree-days (GDD). These quantities are commonly used for agricultural and gardening purposes as they represent two paramount characteristics for plant growth and survival: temperature and precipitation. The temperature and precipitation data was obtained from the E-OBS gridded dataset. On the basis of this data, we present maps of Europe that compare the extent of the classification zones in two periods: 1951–1980 and 1991–2020. It was found that GDD increased in almost all of the area under examination. AI decreased in the southern territories, but it increased in the northern ones. Furthermore, we apply the calculated GDD to study the shift of areas with satisfactory conditions for wheat in Scandinavia and observe their enlargement.