

Project title: Determination the Levels of Vulnerability and Adaptation Capacity of Wheat Farming against Climate Variability

<b>Research Area</b>	Soil Water Resources and Environment
<b>Research Program</b>	Climate Change and Agricultural Ecology
<b>Executive Institute</b>	International Agricultural Research and Training Center
<b>Supporting Institute/s</b>	GDAR (General Directorate of Agricultural Research and Policy), Ankara HBV University
<b>Project Leader</b>	İdris USLU
<b>Other Researchers</b>	Dr. Zerrin ÇELİK, Dr. Gözen YÜCEERİM, Vural KARAGÜL, Prof. Dr. Aslı ÖZDARICI OK
<b>Research Period</b>	01.01.2023- 31.12.2024

**Project Summary:**

Due to the fact that climate has a determining role on plant growing, extreme weather conditions affect crop growing significantly. As climate affects large areas simultaneously, monitoring and determination of the adverse effects of climatic events on the crops are important. In this research, it is aimed to provide a method in order to evaluate all the factors which affect wheat farming to monitor and make decisions about large areas. In the research, the factors which effective on adaptation capacity of wheat farming against climate variability will be examined by data obtained from survey data. The data regarding wheat cultivation in the area will be collected by a survey will be linked with the yield data in the GIS environment. Wheat development, at the same time, will be monitored by Sentinel 2A multispectral satellite data by NDVI, NDWI, MSI, PDI and VCI indices. Moreover, crop yield obtained from farmers' plots will be combined with the vegetation indices in order to evaluate large production areas on the plane. At the end of the research, the vulnerability and adaptation capacity of wheat farming will be determined against climate variability in the research area.

**Key words:** Climate variability, vulnerability, adaptation capacity, wheat, crop monitoring, Sentinel 2A