

# **Patterns and causes of Mediterranean agricultural water exports in the context of the second globalization**

**Abstract:** During the twentieth century, the Mediterranean basin experienced an intense integration in global markets, becoming one of the largest agricultural and food suppliers in the world. This expansion was particularly intense during the second wave of globalization, and was possible thanks to the increasing consumption of water resources, hand-in-hand with irrigation development and modernization.

This study aims to evaluate the impacts that the Mediterranean agri-food trade specialization exerted on water resources between 1975 and 2015, focusing on the second globalization. Concretely, we would like to approach to the economic, technological, productive and commercial factors behind the growing pressures on Mediterranean water resources. Likewise, we would like to focus on the divergences between northern, eastern and southern Mediterranean countries, establishing regional patterns in terms of the socioeconomic drivers of this process. To that aim, we will use bilateral trade time series with a high product disaggregation detail, which combined with decomposition analysis, make up the methodological setting of the study.

Most of the growth of Mediterranean water consumption associated with agricultural and food exports happened from the beginning of the twentieth century, mostly driven by the great increase in extra Mediterranean exports, in both northern and southern and eastern areas. In northern European Mediterranean countries, the trade expansion, and a considerable structural change towards the production and trade of water-intensive agri-food products, were essential to explain the consumption of water resources. On the contrary, the pattern in southern and eastern regions was more erratic. We observe a clear scale effect, an increase in the water intensity of exports that would point to a decreasing efficiency in these trade flows, and also, to a strong origin effect, indicating that exports come from the most water-intensive countries in the region.

**Keywords:** water, trade, Mediterranean, second globalization, decomposition analysis