



Evaluation of irrigation infrastructure, crop mapping and estimation of agricultural water use in Libya (IagWat)

In Libya there is a need to strengthen national capacities to monitor water consumption and productivity through remote sensing and to adopt effective options for increasing irrigation infrastructure assessment and water productivity in Fezzan region, as a pilot to be scaled up throughout the country. The impact of this project is that food security in Libya in general and in Fezzan region, in particular, is improved through more performant use of agricultural water.



IagWat

THE PROBLEM TO BE ADDRESSED

In Libya, reliable data on accurate crop area and extent are not always available and are affected by serious discontinuities across the different regions. Moreover, available data suffer from inconsistent quality and spatial resolutions, and are often derived from different and incompatible methodologies and classifications. The agricultural cropland estimation, assessment and monitoring is imperative for estimating crop water productivity and ensuring a sustainable use of water in agriculture. To help decision makers for taking quick action and mitigate the negative effects of emergencies, conventional surveys and assessments of agricultural production are far too expensive to be conducted regularly and with sufficient frequency.

HOW TO ADDRESS THIS PROBLEM

Considering the special context in Libya, it is proposed to extend the use of remote sensing as a key technology to increase the accuracy and frequency of key parameters like spatial extent of croplands and to produce reliable and economically affordable results. Several studies have reported the use of multi-spectral and multi-temporal data to map irrigated areas, land use, land cover, and crop type. Satellite imagery is progressively less costly and more available at higher temporal and spatial resolutions, making them specifically suited to agriculture applications.

2 ZERO HUNGER



6 CLEAN WATER AND SANITATION



BETTER PRODUCTION



Government counterparts

Ministry of Water Resources (MoWR)
Ministry of Agriculture and Livestock (MoA)
Ministry of Finance (MoF)

Libyan Center for Remote Sensing and Space Science (LCRSSS)
National Meteorological Center (NMC)
University of Tripoli (UoT)

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