

Name:

Irrigation water application

Definition:

Irrigation water application is the controlled application of water (m³/ha) for agricultural purposes through manmade systems to supply water requirements not satisfied by rainfall.

Method of calculation:

The water consumption on each irrigation plot is taken into account.

The value of this indicator is calculated as:

$$\text{Indicator} = \frac{\sum_i WC_i \times A_i}{A_t}$$

Where:

WC_i: Water consumption (m³/ha) on each plot

A_i: Area assigned to the crop/plot

A_t: Total area considered (ha).

Interpretation:

Irrigation water application depends on water consumption by crops depends on several factors: species, irrigation system, irrigation strategy (deficit irrigation management strategies, etc.).

Information source:

Data obtained in a farmers survey.

WC_i: Irrigation water applied (m³/ha) on each plot.

A_i: Area assigned to the crop/plot.

A_T: Total area considered (ha).

Bibliography and references:

Gómez-Limón, J. A., & Sanchez-Fernandez, G. (2010). Empirical evaluation of agricultural sustainability using composite indicators. *Ecological economics*, 69(5), 1062-1075.