16 July 2020

## Survey on the Use of Water in the Agricultural Sector (SUWAS) <br> Year 2016

## The volume of irrigation water used in the agricultural sector increased by $3.7 \%$ in 2018 compared to 2016

The volume of irrigation water used by agricultural holdings amounted to 15,495 cubic hectometers in 2018. This figure is an increase of $3.7 \%$ compared to that recorded in the previous survey, conducted for 2016.

The use of drip irrigation water (localized irrigation) increased by $6.4 \%$, while gravity irrigation increased by $2.8 \%$ and spray irrigation by $0.7 \%$.

Water use volumes by irrigation technique. Year 2018
Unit: thousands of $\mathrm{m}^{3}$

|  | Year 2018 | \% of the total | \% biennial variation |
| :---: | :---: | :---: | :---: |
| Drip | 6,266,631 | 40.4 | 26.1 |
| Gravity | 5,107,395 | 33.0 | 24.9 |
| Sprinkler | 4,120,616 | 26.5 | -30.0 |
| National total | 15,494,642 | 100 | 3.7 |

Water use volumes by irrigation technique. Year 2018
Unit: cubic hectometres


By type of crop, herbaceous crops (cereals, legumes, rice, maize and forage crops), which accounted for $54.6 \%$ of the total volume of irrigation water, used $1.7 \%$ more water than in 2016.

Other types of crops (industrial crops, flowers, ornamental plants, etc.) registered the highest increase in water use (15.4\%). Water volumes increased by $5.7 \%$ in fruit trees, $3.4 \%$ in potatoes and vegetables and 0.3\% in olive groves and vineyards.

Water use volumes by type of crop. Year 2018
Unit: thousands of $\mathrm{m}^{3}$

|  | Year 2018 | \% of the total | \% biennial variation |
| :---: | :---: | :---: | :---: |
| Herbaceous | 8,465,920 | 54.6 | 1.7 |
| Fruit trees | 2,582,525 | 16.7 | 5.7 |
| Potatoes and vegetables | 1,725,225 | 11.1 | 3.4 |
| Olive groves and vineyards | 1,189,450 | 7.7 | 0.3 |
| Others | 1,531,522 | 9.9 | 15.4 |
| National total | 4,642 |  | . 7 |

Water use volumes by type of crop. Year 2018
Unit: cubic hectometres


## Water availability

$74.3 \%$ of the volume of water available for irrigation in 2018 was of surface source. On the other hand, $23.9 \%$ came from underground sources and $1.8 \%$ from other water resources, such as desalinated water (marine or brackish) or reclaimed water (from wastewater treatment plants).

Volumes of water available by water source. Year 2018
Unit: thousands of $\mathrm{m}^{3}$

|  | Year 2018 | \% of the total |
| :---: | :---: | :---: |
| Surface w ater | 12,870,064 | 74.3 |
| Groundw ater | 4,142,241 | 23.9 |
| Other w ater resources | 314,269 | 1.8 |
| National total | 17,326,575 | 100 |

## Results by Autonomous Communities

Among the communities that exceeded $1.0 \%$ of the total irrigated areas, those that used the most irrigation water in 2018 were Andalucía (26.9\% of the total), Castilla y León (14.4\%) and Aragón (13.4\%). And those with the least were La Rioja (1.0\%), Comunidad Foral de Navarra (2.8\%) and Región de Murcia (3.2\%).

The three communities where the use of irrigation water increased the most were Extremadura (12.7\%), Castilla y León (10.9\%) and Comunidad Foral de Navarra (10.7\%).

On the other hand, Castilla La Mancha ( $-7.9 \%$ ), La Rioja ( $-6.3 \%$ ) and Región de Murcia $(-5.8 \%)$ were the Autonomous Communities where irrigation water use decreased the most.

Water use volumes by Autonomous Community. Year 2018
Unit: thousands of $\mathrm{m}^{3}$

|  | Year 2018 | \% of the total | \% biennial variation |
| :---: | :---: | :---: | :---: |
| National total | 15,494,642 | 100 | 3.7 |
| Andalucia | 4,175,562 | 26.9 | 2.2 |
| Aragón | 2,072,461 | 13.4 | 2.0 |
| Castilla y León | 2,226,904 | 14.4 | 10.9 |
| Castilla-La Mancha | 1,523,746 | 9.8 | -7.9 |
| Cataluña | 1,005,576 | 6.5 | 1.2 |
| Comunitat Valenciana | 1,337,413 | 8.6 | 8.3 |
| Extremadura | 1,777,957 | 11.5 | 12.7 |
| Murcia, Región de | 500,569 | 3.2 | -5.8 |
| Navarra, Comunidad Foral de | 435,073 | 2.8 | 10.7 |
| Rioja, La | 156,855 | 1.0 | -6.3 |
| Remaining Autonomous Communities ${ }^{1}$ | 282,526 | 1.8 | 5.3 |

[^0]By irrigation techniques, the Autonomous Community that used the most drip irrigation water was Andalucía. Aragón used the largest volume of water for gravity irrigation, and Castilla y León for sprinkler irrigation.

Volumes of water by Autonomous Community and irrigation technique. Year 2018
Unit: thousands of $\mathrm{m}^{3}$

|  | Sprinkler | Drip | Gravity | Total |
| :---: | :---: | :---: | :---: | :---: |
| National total | 4,120,616 | 6,266,631 | 5,107,395 | 15,494,642 |
| Andalucia | 350,075 | 2,923,974 | 901,513 | 4,175,562 |
| Aragón | 875,460 | 230,924 | 966,077 | 2,072,461 |
| Castilla y León | 1,438,115 | 100,946 | 687,843 | 2,226,904 |
| Castilla-La Mancha | 685,480 | 724,888 | 113,378 | 1,523,746 |
| Cataluña | 221,825 | 219,875 | 563,876 | 1,005,576 |
| Comunitat Valenciana | 6,986 | 645,914 | 684,513 | 1,337,413 |
| Extremadura | 302,251 | 757,193 | 718,513 | 1,777,957 |
| Murcia, Región de | 4,004 | 430,990 | 65,575 | 500,569 |
| Navarra, Comunidad Foral de | 148,278 | 64,784 | 222,011 | 435,073 |
| Rioja, La | 28,352 | 64,435 | 64,069 | 156,855 |
| Remaining Autonomous Communities | 59,790 | 102,707 | 120,028 | 282,526 |

Regarding water use for each irrigation technique, by autonomous communities, the community that used drip irrigation the most was Región de Murcia (86\%), for sprinkler use, it was Castilla y León ( $65 \%$ ) and for gravity irrigation, Cataluña (56\%).

Volumes of water used by irrigation technique, by autonomous community. Year 2018.
Percentage


## Data Review and Updates

The data published today is final. All results are available on INEBase.

## Methodological note

The INE conducts the Survey on the Use of Water in the Agricultural Sector every other year in order to estimate the volume of irrigated water used by agricultural holdings. The sample of the 2018 survey was made up of 557 irrigation communities.

The Central Business Register (CBR) was used as a reference framework, as well as other complementary information from the administrative registers of the Ministry for the Ecological Transition and the Demographic Challenge.

The selection of the sample is comprehensive for those irrigation communities that group together agricultural holdings with a total surface area of more than 2,000 hectares. Communities with a surface area less than this magnitude are investigated by sampling, selecting a quota of entities previously stratified by size, using an allocation with a compromise between uniform and proportional.

[^1]All press releases at: www.ine.es/en/prensa/prensa_en.htm

[^2]
[^0]:    ${ }^{1}$ All the Autonomous Communities with an irrigated area of less than $1.0 \%$ of the national total are grouped under the heading "Rest of Autonomous Communities".

[^1]:    For further information see INEbase: www.ine.es/en/ Twitter: @es_ine

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