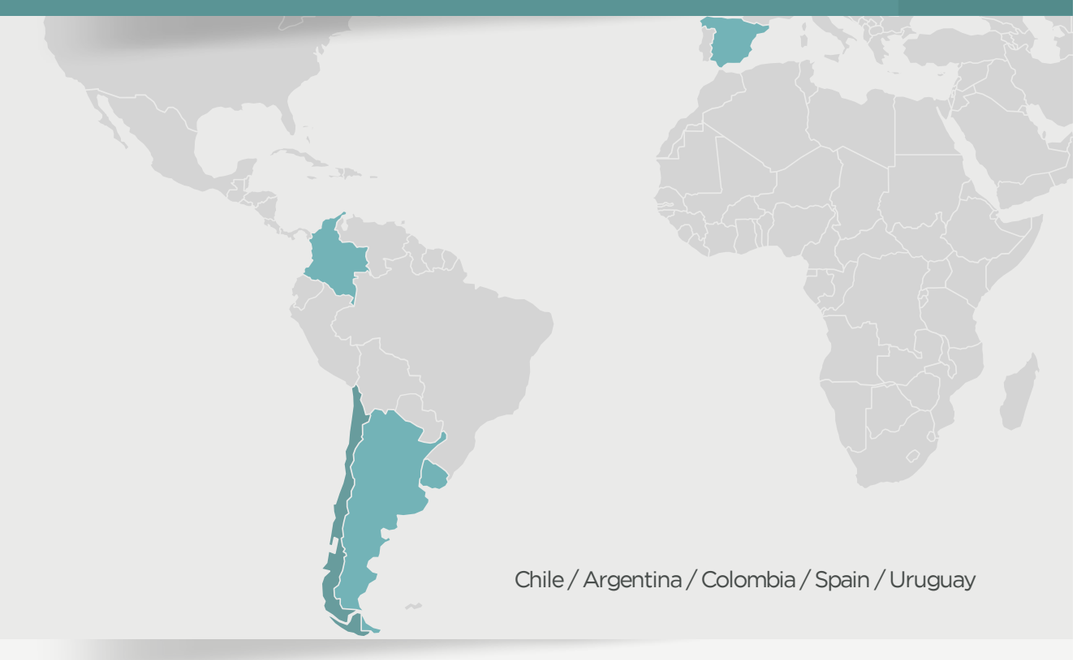
INIA, INSTITUTO DE INVESTIGACIONES AGROPECUARIAS, CHILE

New Technologies to increase efficiency in agriculture LAC 2030

Robust conceptual frameworks to estimate crop water consumption, together with information sources based on modern technologies, allow efficient management of irrigation at the parcel and regional scale.



Chile / Argentina / Colombia / Spain / Uruguay

85%
water efficiency

2
PLAS-LAC 2030

1
Water distribution software

7
Technological pilots - farm level

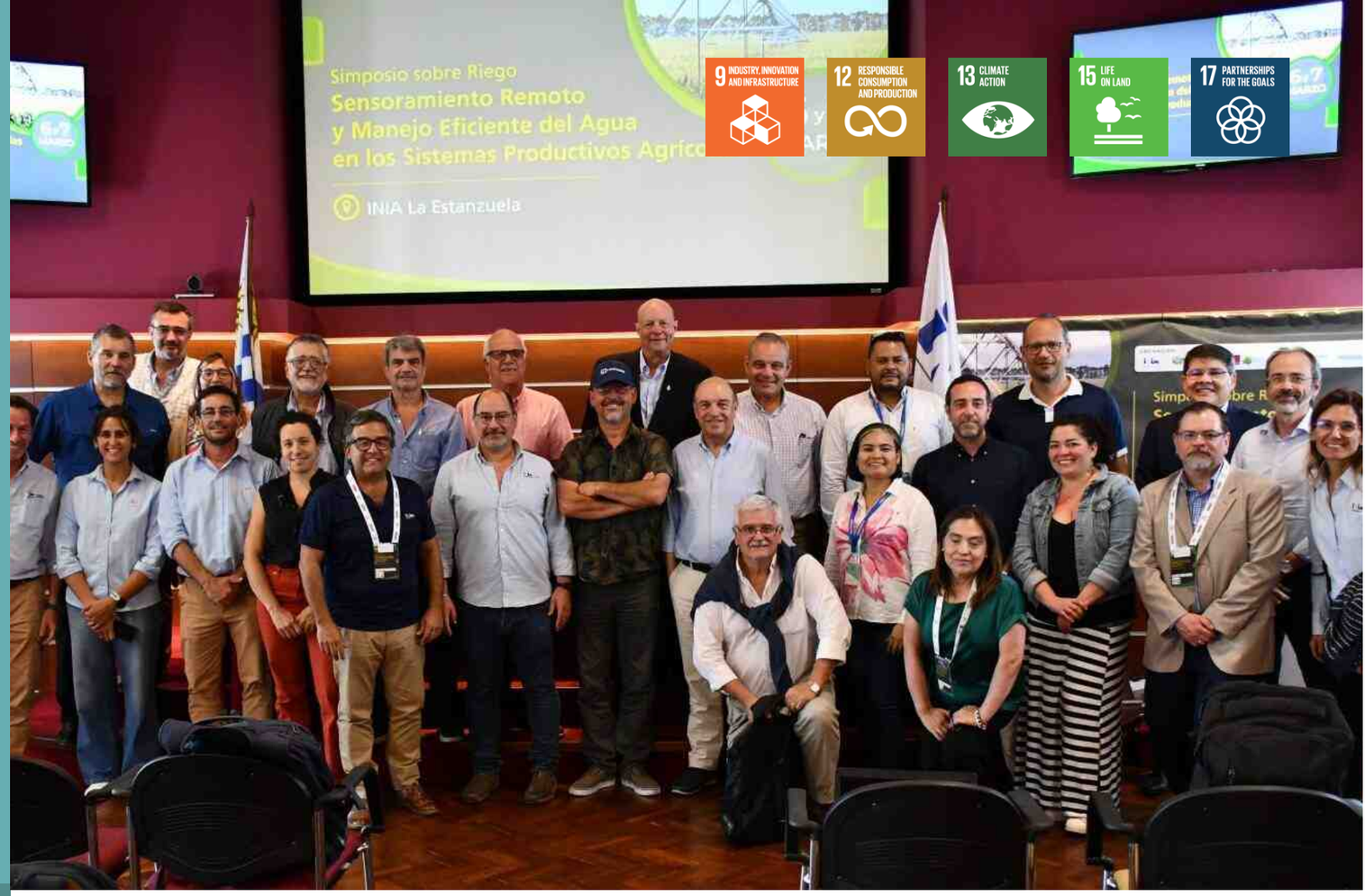
10
Precision irrigation

5600
Trainings

6
Water accounting

4
Thesis

1



PLAS-LAC 2030

The implemented initiative

Within the framework of the initiative "New technologies to increase efficiency in agriculture LAC-2030". Highly technical pilots were established in promising crops with high nutritional value that allow farmers to learn about new technologies and proper water management in agriculture. These pilots were implemented in Chile, Argentina, Colombia and Uruguay.

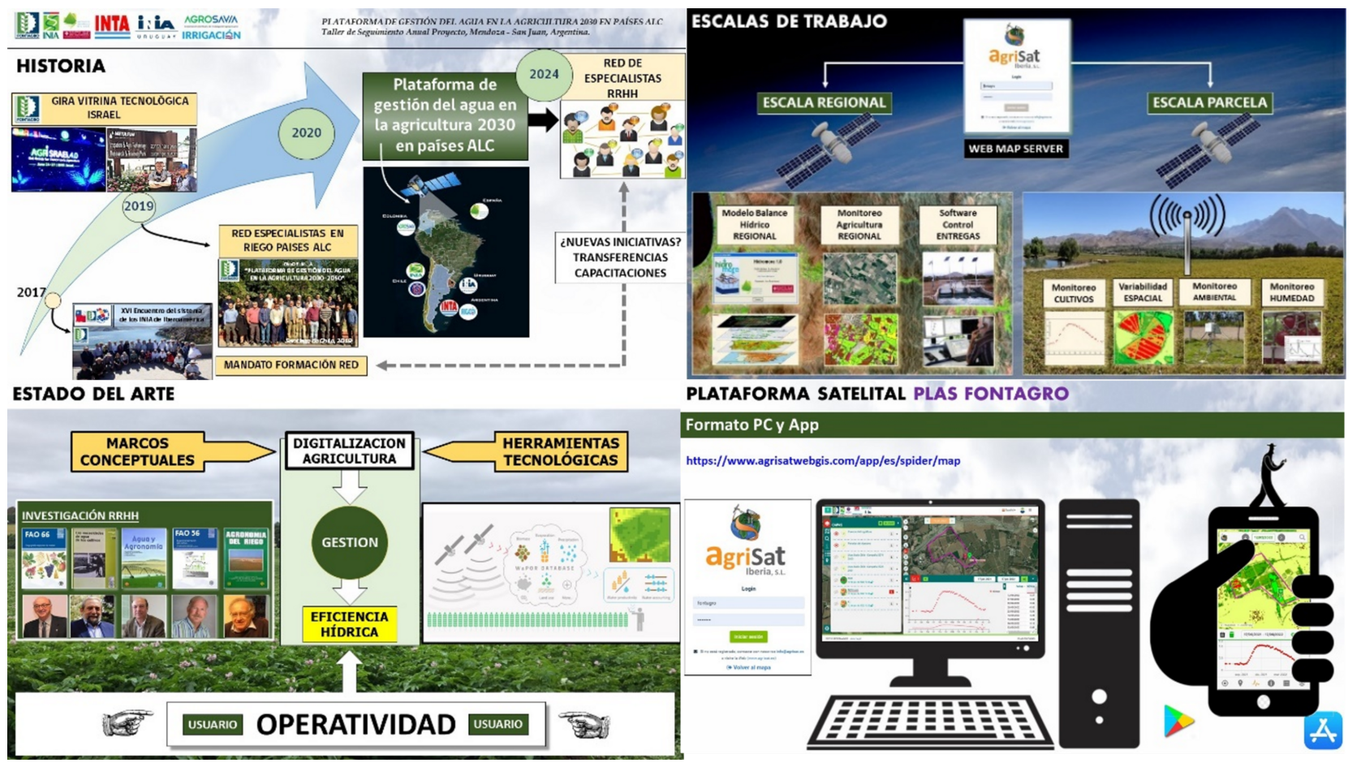
These technologies seek to be applied for the optimized management of irrigation systems and water efficiency at two scales: i) Plot (intra-farm); ii) Cuenca (extra-farm). At both scales, the water needs of the crops were determined, through the use of new technologies, such as the use of remote sensing through the analysis of satellite images.

REMOTE SENSING AND EFFICIENT WATER MANAGEMENT IN AGRICULTURAL PRODUCTION SYSTEMS

The technological solution

This initiative aims to modernize technological tools capable of contributing to the improvement of water use in agriculture through the integration of satellite information, along with local meteorological information. With the aim of specifying the water demand of crops, therefore seeking to contribute to the accounting of irrigation water at the irrigable area scale. Provides information on the current state of water use and management in LAC agriculture, identifying efficiency indicators in water use. Those that were evaluated in technological pilots in different crops. In addition, it has a component of dissemination of results and training for producers, providing appropriate conceptual frameworks for the adoption of technologies.

SATELLITE AGRICULTURAL PLATFORM TO ESTIMATE THE IRRIGATION NEEDS OF CROPS



Results

The implementation of precision technologies in agriculture, such as satellite images and soil moisture sensors, has revolutionized irrigation management. Using platforms like PLAS, farmers can analyze climatic and phenological data to optimize water use and mitigate the effects of climatic variations.
The development of technological pilots at the property and basin level has allowed us to validate this initiative. The delivery of conceptual frameworks related to the water demand of crops, associated with training programs, have been fundamental to disseminate this knowledge and promote the adoption of these technologies, improving the efficiency and productivity of crops.
Finally, an international symposium on Irrigation was held at INIA LA Estanzuela, Uruguay, between March 6 and 7, 2024, which had 120 attendees and was a high-reach training activity for LAC.

MÁS INFO

Main donors

FONTAGRO

Participating Organizations

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