

## IRRICLIME - CLIMATE SMART IRRIGATION TOOL

<https://gecosistema.com/irriclime>

### Climate-Proof Irrigation

IRRICLIME is an Innovative Climate Service integrating:

- Open data from earth observation
- Climate projections and seasonal forecast from Copernicus CDS
- Crop-soil water budget and Data driven modeling tools

The End Users can be supported in:

- Promoting an efficient use of water resources for irrigation and towards a more sustainable agriculture
- Reduce harvesting losses and Economic damages due to climatic stress

### IRRICLIME Description

**IRRICLIME - Climate Smart Irrigation Tool** consists in a cloud-web mapping application able to provide ensemble climate predictions on decadal or daily basis with focus on main crop-soil water budget variables (P,T,ET0,SWC) requested to estimate agri-climatic risk indicators for irrigation management.

#### IRRICLIME IRRIGATION DEMAND Predictions:

- **Seasonal Forecast** - Medium-Term Planning: quantifying in advance the seasonal/future water irrigation demands
- **Climate Change Prediction** - Long-Term Planning: assessment of adaptation/mitigation options or new investments in irrigation network or higher efficiency systems

### IRRICLIME's Bullets Point

#### Purposes:

Supporting Climate SMART Agriculture and Irrigation

#### Potential Users:

- Farmers, agri-food companies
- Irrigation Managers/ Water Irrigation Authorities
- Insurances

#### The Case Study:

Romagna Land Reclamation and Irrigation Authority

#### Climate Data Providers:

- Copernicus CDS (CMCC/SMHI/SWICCA) Seasonal/Climate
- Local Meteorological and Soil Data
- Real-time IoT SWC acquisition and integration

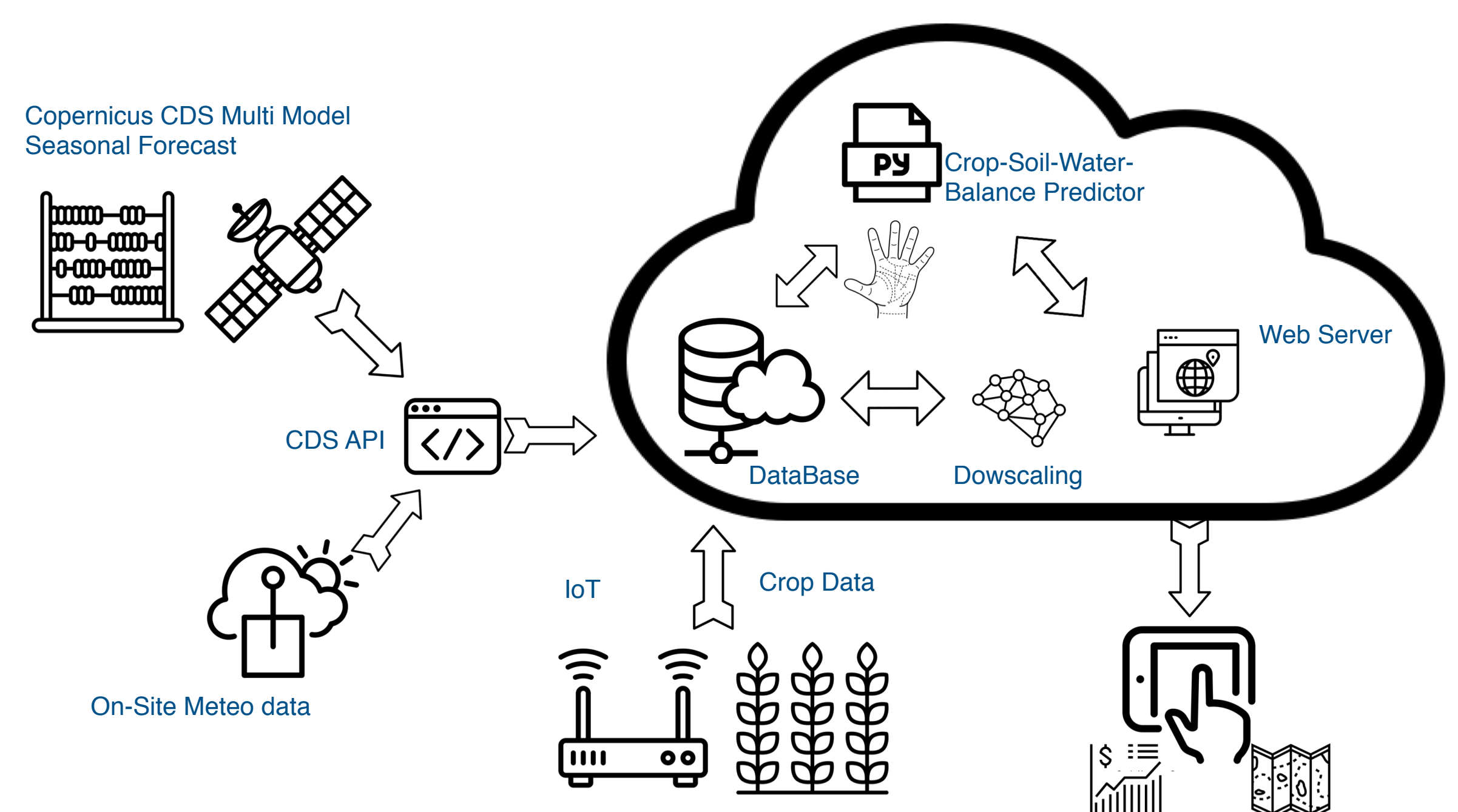
#### The Climate-proof Irrigation Indicators:

- Simplified Soil Water balance :
  - $Precipitation - kc \cdot PET + Irrigation$
- CRITERIA 1 D ARPAE MODEL
  - <https://github.com/ARPA-SIMC>

#### Outputs of the service:

- seasonal ensemble prediction of cumulated value of crop-specific irrigation demand
- Automatic generation of a climate web-bulletin

### The Cloud-Web Framework



### The Web GUI

