

# Evaluating the effectiveness of risk reduction strategies

Understanding natural hazard risk management in Italy

## Agricultural Irrigation Demand Analyzer - AIDA



**QUESTION** How can hydrological modeling support decision-making for irrigation management, including in response to climate change?



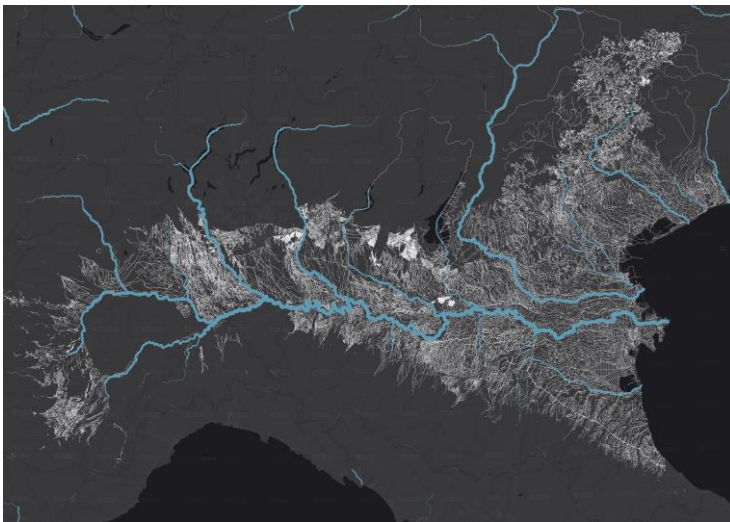
**OBJECTIVE** To provide continuous and accurate information on water flows and volumes associated with agricultural production.



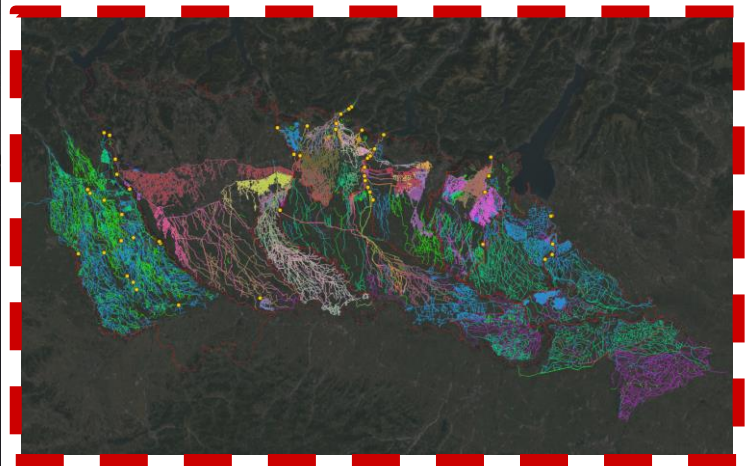
**DESCRIPTION** AIDA combines the latest methodologies for producing weather data for the Italian territory with the best available data on soil properties and crop-specific agro-hydrological modelling. This will allow the generation of information on irrigation needs for individual crops in specific cultivation areas. These insights will be available for the entire national territory at a 1 km resolution, distinguishing between crops and also offering higher resolution zoom-ins for specific areas.



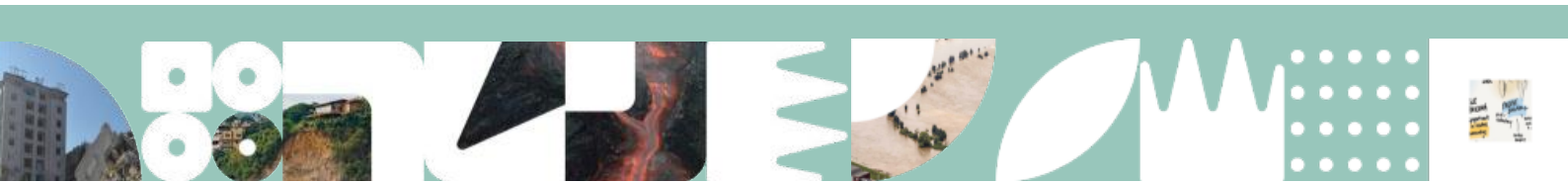
**HOW IT WORKS** By analyzing soil data (available water content and maximum infiltration rate), weather/climate data (precipitation and evapotranspiration), as well as crop and irrigation data, a digital twin will be created to support water management policies for agricultural use.

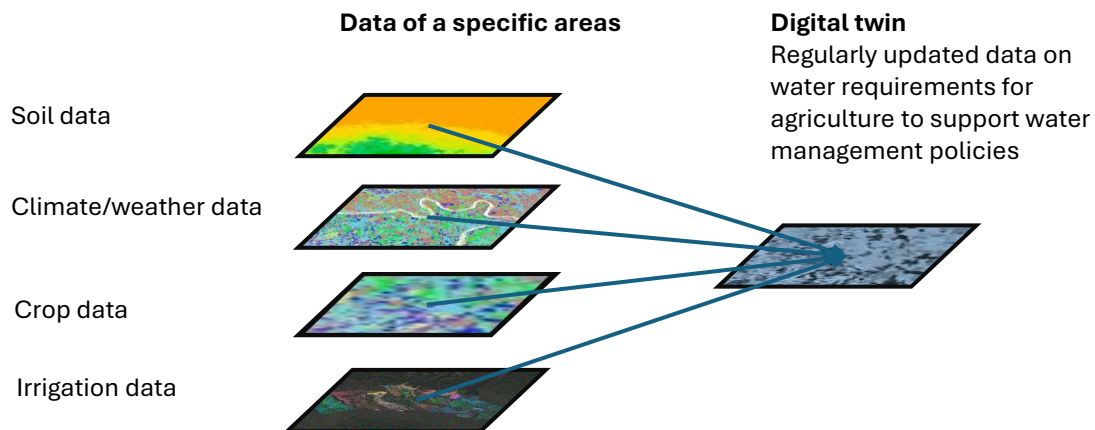
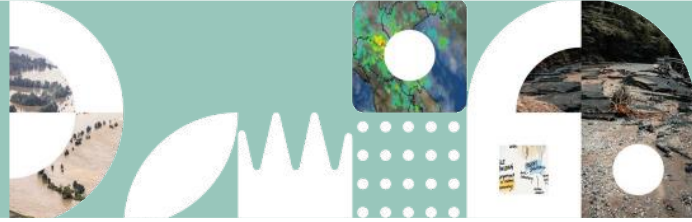


Local sources. Areas equipped for irrigation



Analysis of command areas





## Contacts



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## Institutions



**POLITECNICO**  
MILANO 1863



“ Impact-based decision making allows the prioritization of strategies for targeted future investments.”

