

Analisi e considerazioni sui fabbisogni irrigui

Claudio Gandolfi

claudio.gandolfi@unimi.it



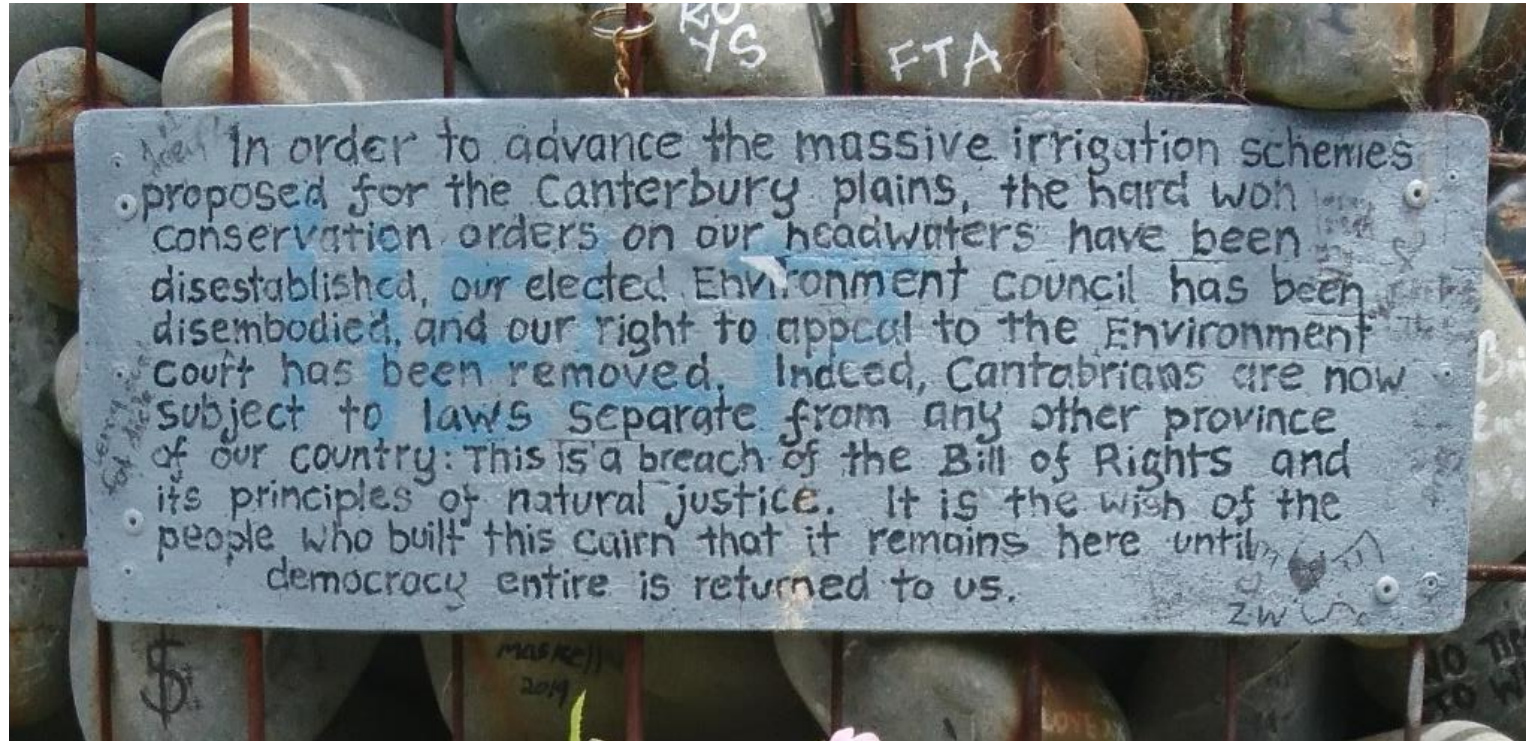
UNIVERSITÀ
DEGLI STUDI
DI MILANO

Descrivere le Stagioni irrigue, Milano, 13 aprile 2022

Utilizzo irriguo dell'acqua e altri usi



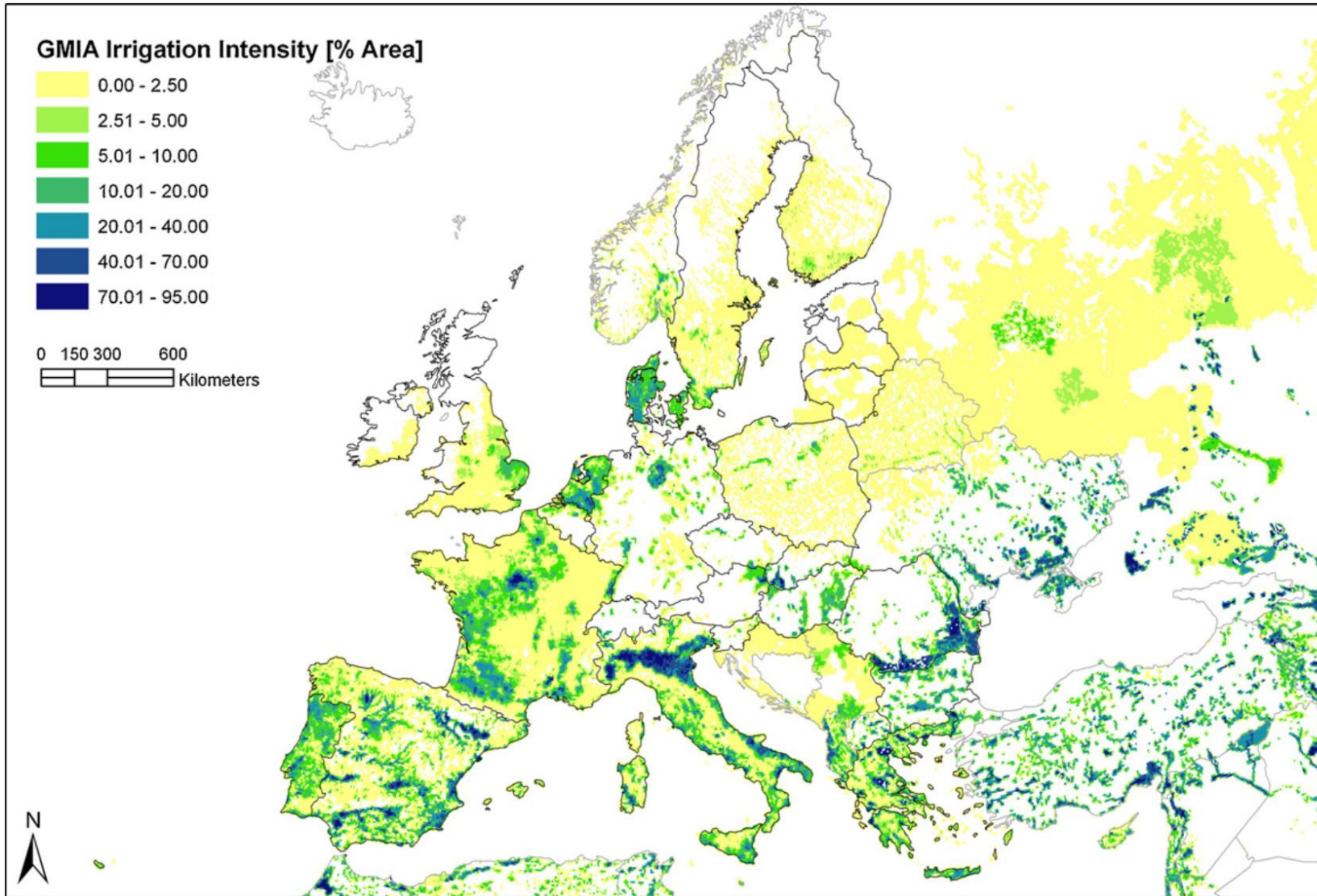
Christchurch (Nuova Zelanda)



In order to advance the massive irrigation schemes proposed for the Canterbury plains, the hard won conservation orders on our headwaters have been disestablished, our elected Environment Council has been disembodied, and our right to appeal to the Environment Court has been removed. Indeed, Cantabrians are now subject to laws separate from any other province of our country: This is a breach of the Bill of Rights and its principles of natural justice. It is the wish of the people who built this cairn that it remains here until democracy entire is returned to us.

ZW

Intensità dell'irrigazione in Europa

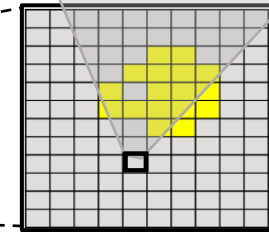
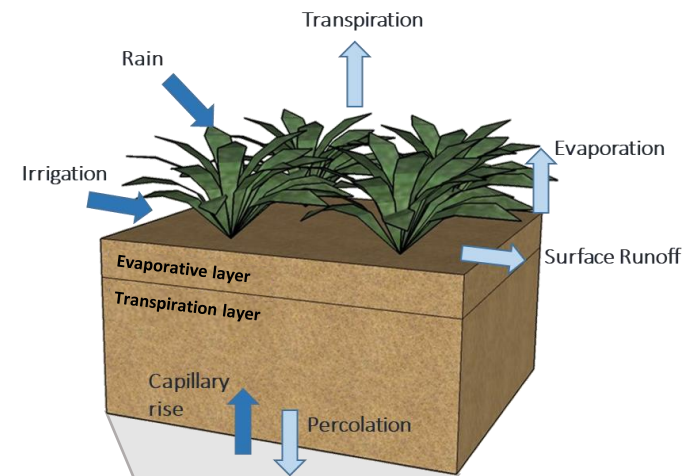
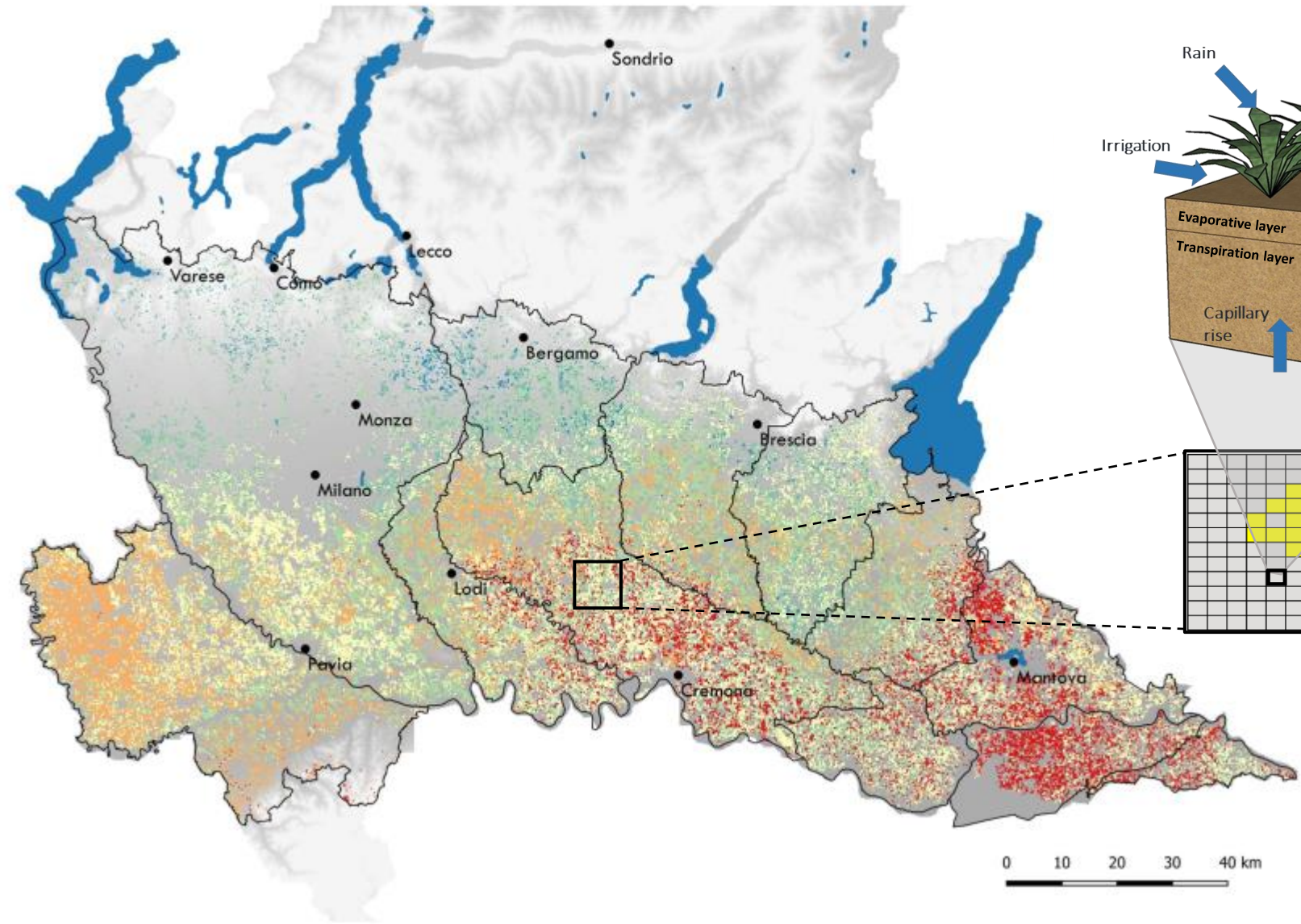


Global map of irrigation areas (GMIA)

Wriedt G. et al (2009). A European irrigation map for spatially distributed agricultural modelling. doi:10.1016/j.agwat.2008.10.012



Fabbisogni irrigui colturali



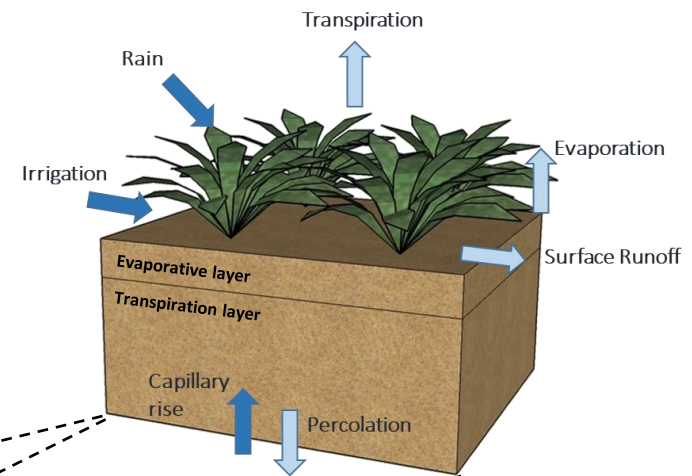
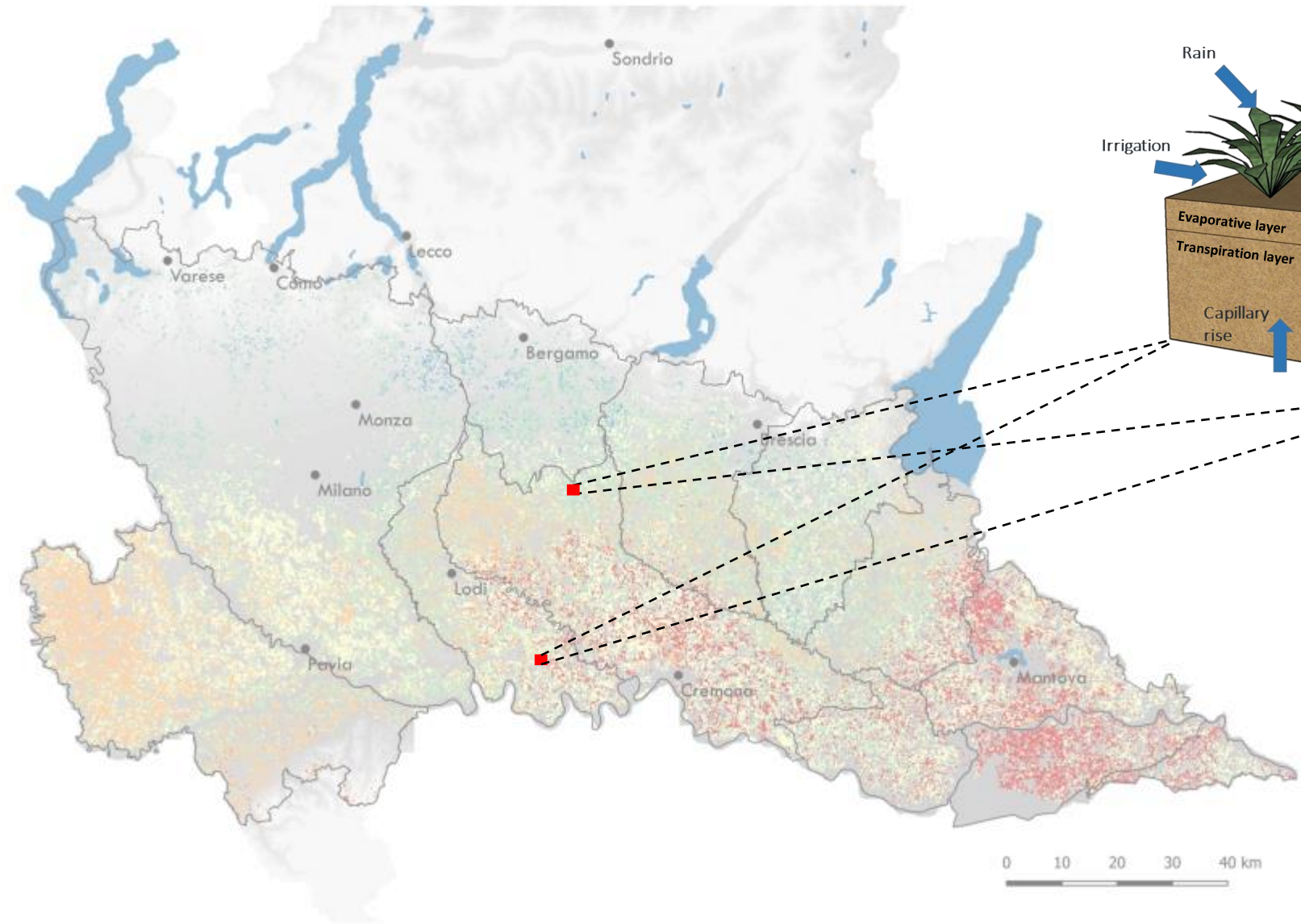
Legenda

Fabbisogno irriguo netto stagione 2020 (mm)

- <= 200
- 200 - 300
- 300 - 400
- 400 - 500
- 500 - 600
- > 600
- Comprensorio di bonifica

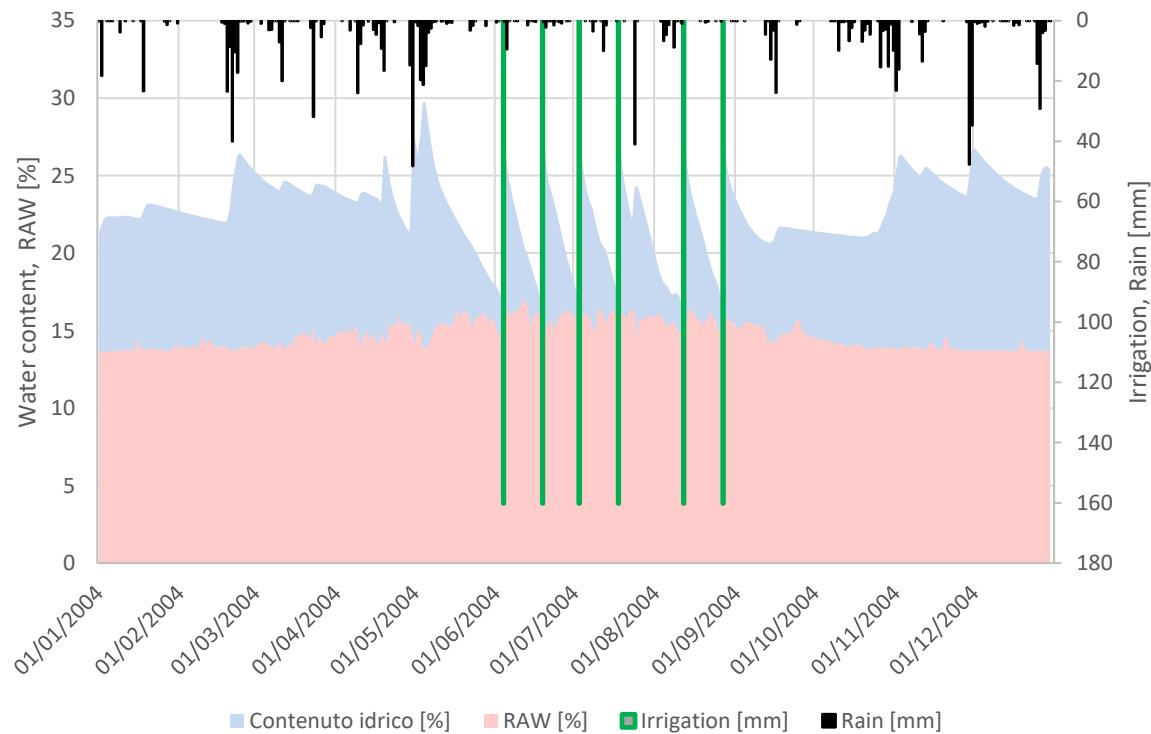


Fabbisogni irrigui colturali

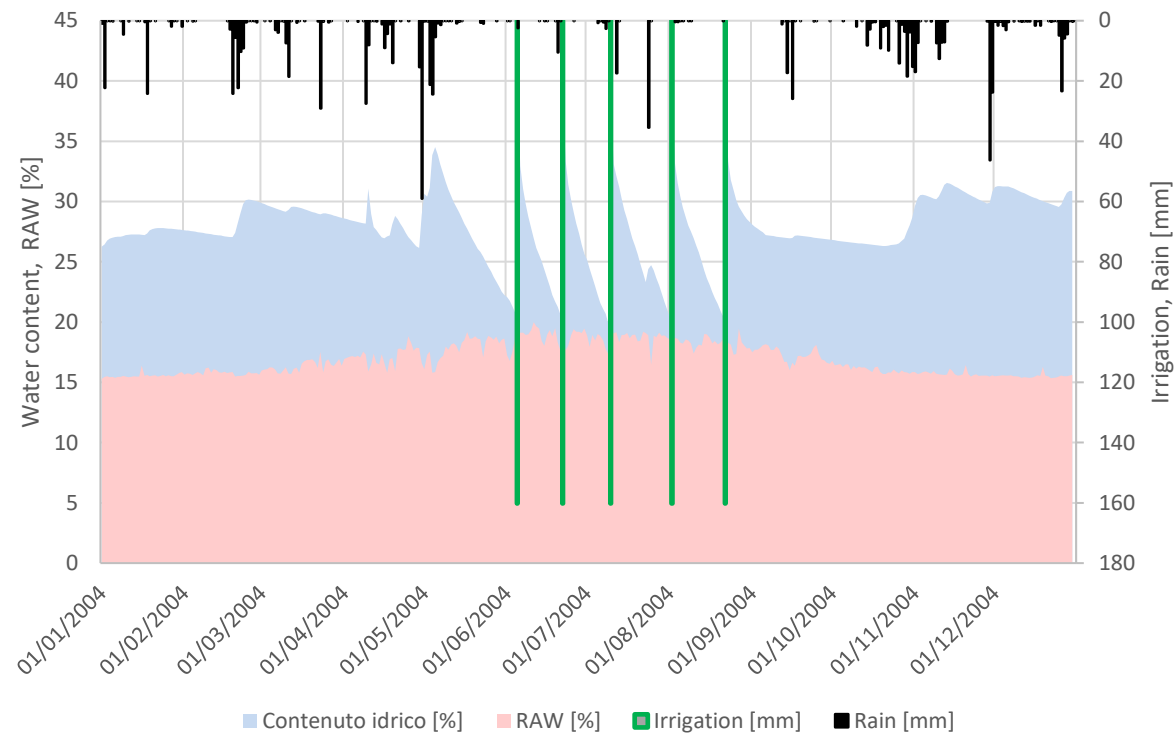


Fabbisogni irrigui colturali

Cella 1. mais, suolo meno ritentivo

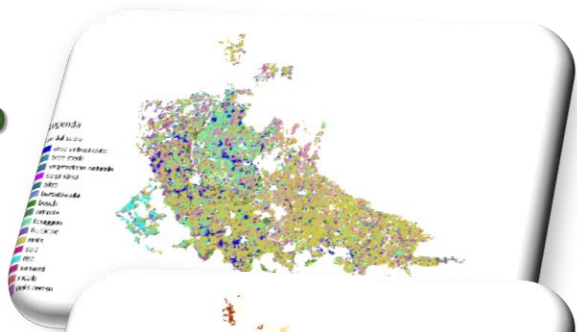


Cella 2. mais, suolo più ritentivo



Fabbisogni irrigui colturali

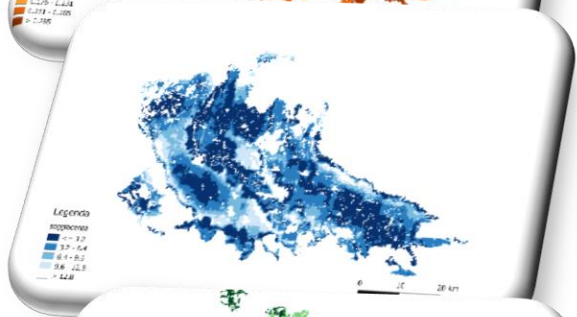
Uso del suolo



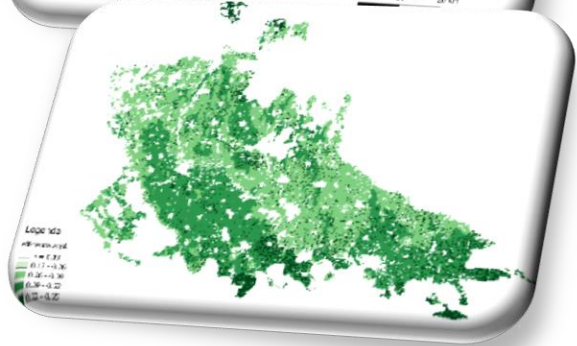
Proprietà
idrauliche
del suolo



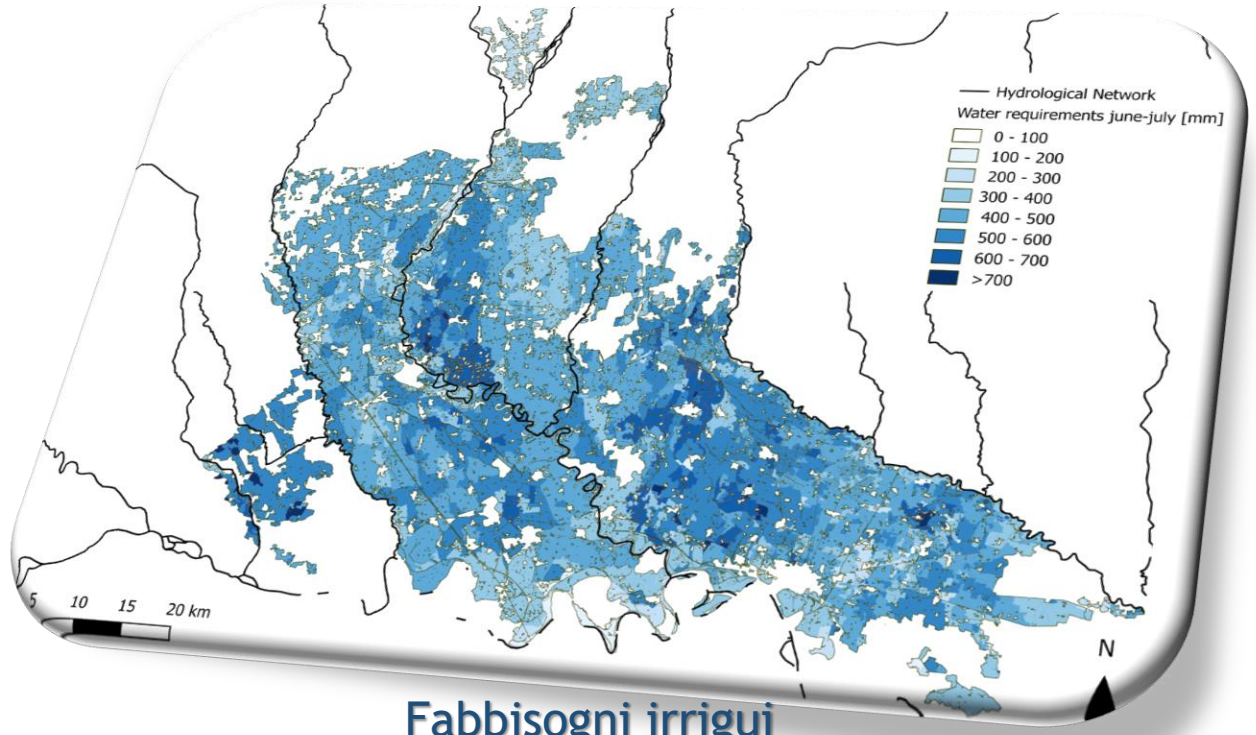
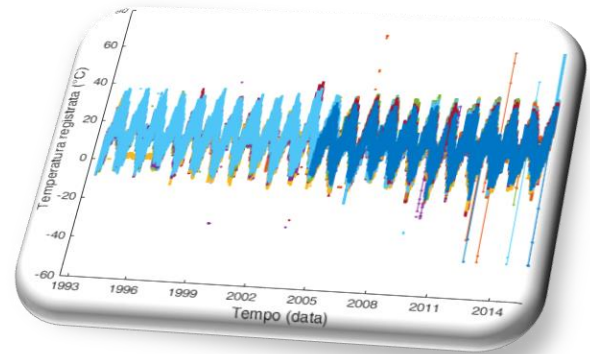
Soggiacenza
zona satura



Metodi
irrigui

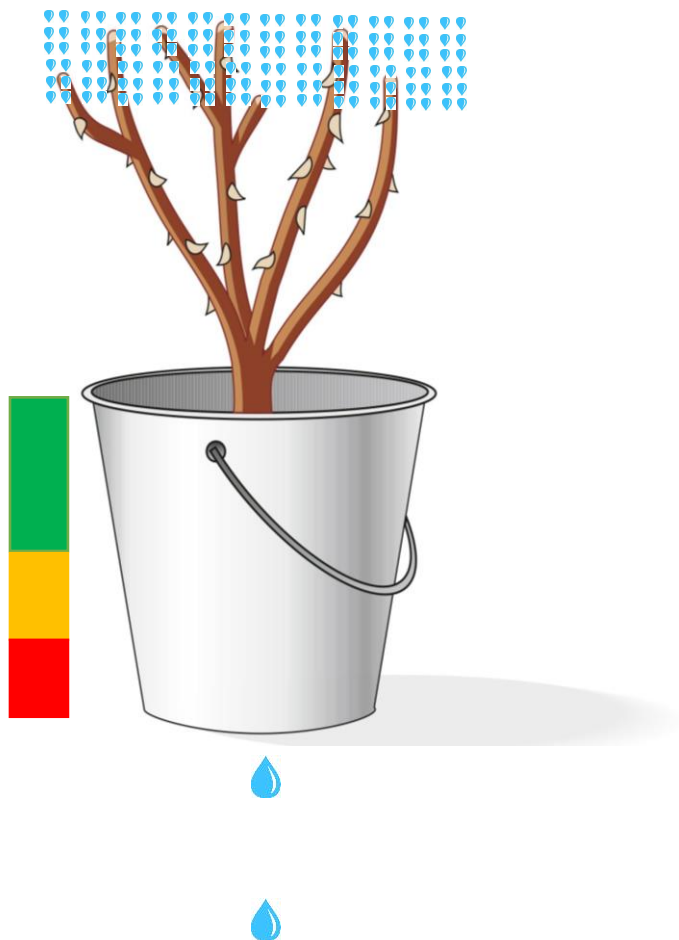


Variabili
agrometeo

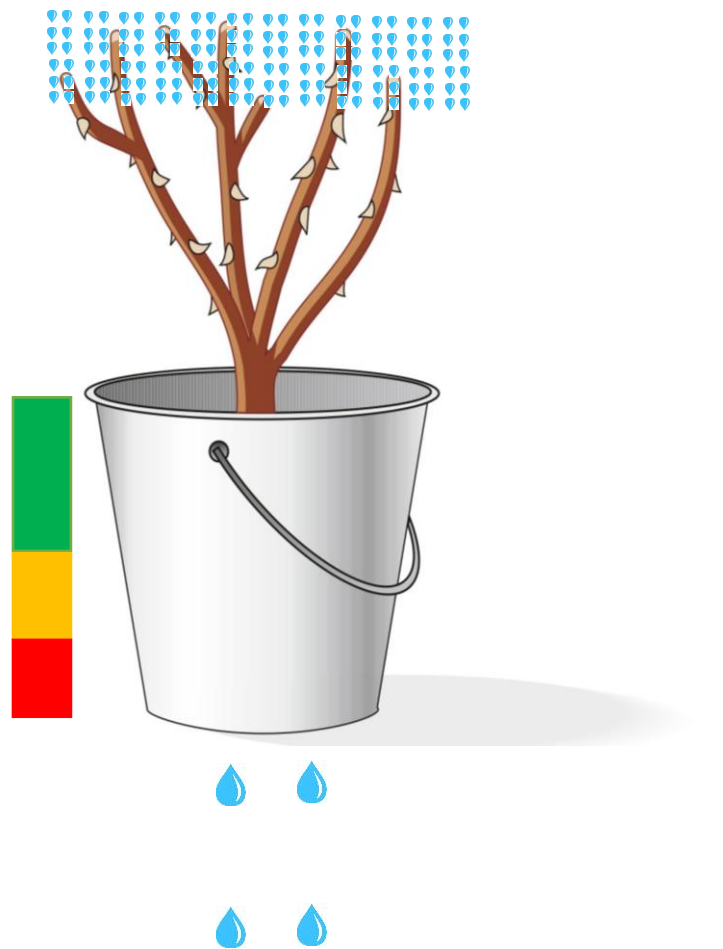


Fabbisogni irrigui

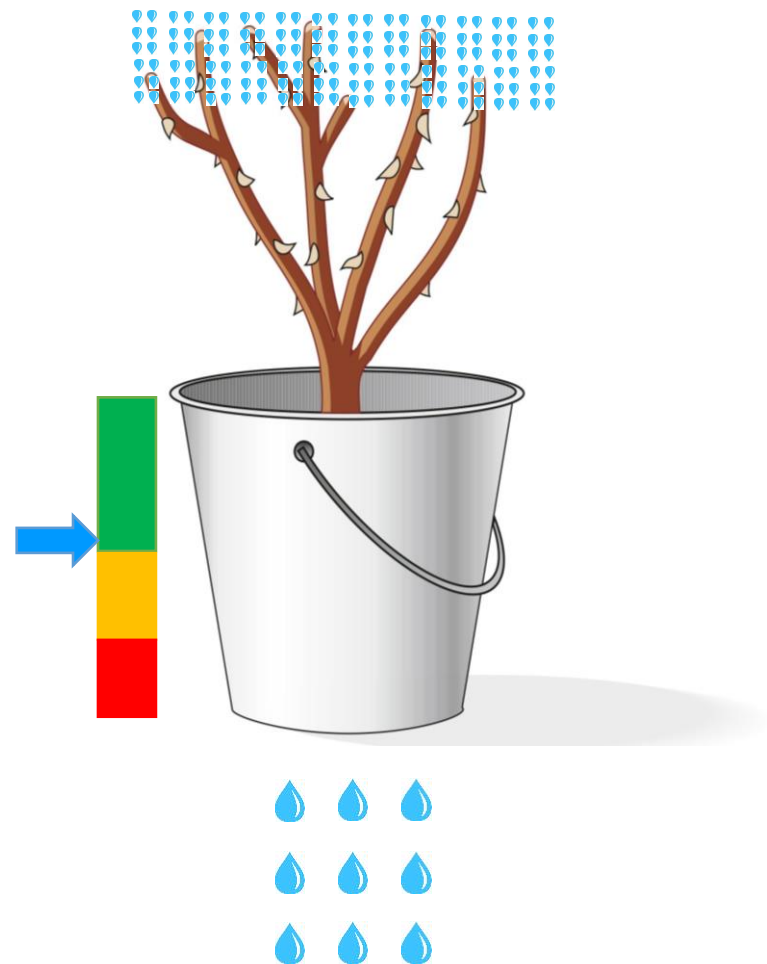
Fabbisogni irrigui colturali: importanza della gestione



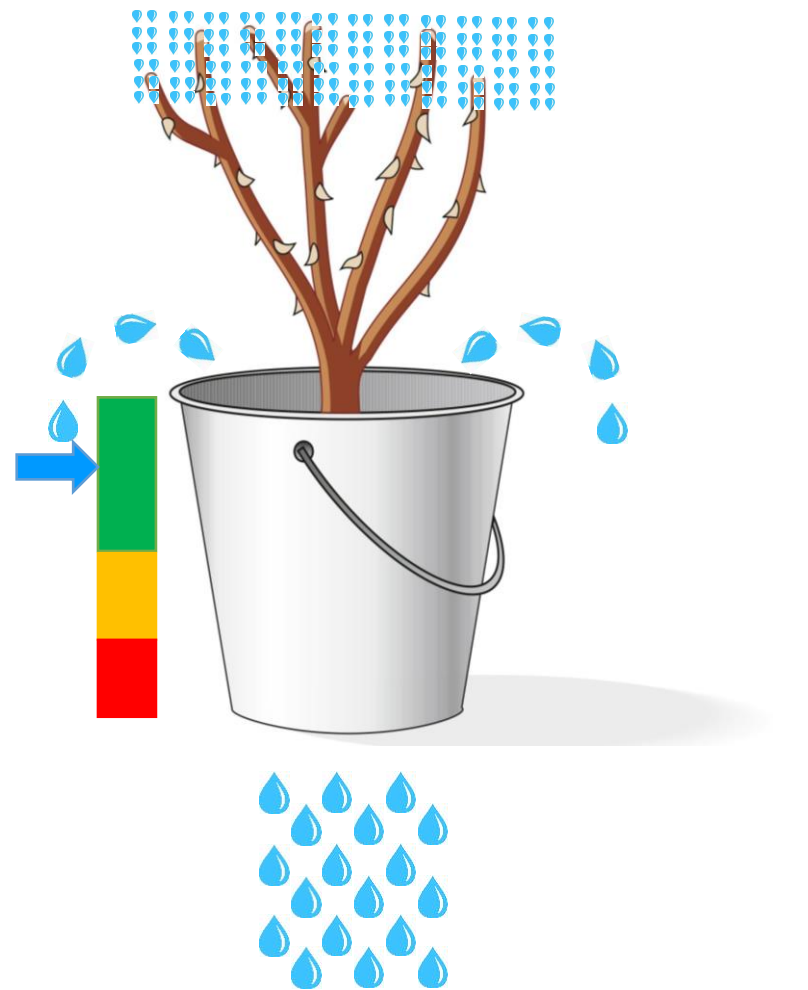
Fabbisogni irrigui colturali: importanza della gestione



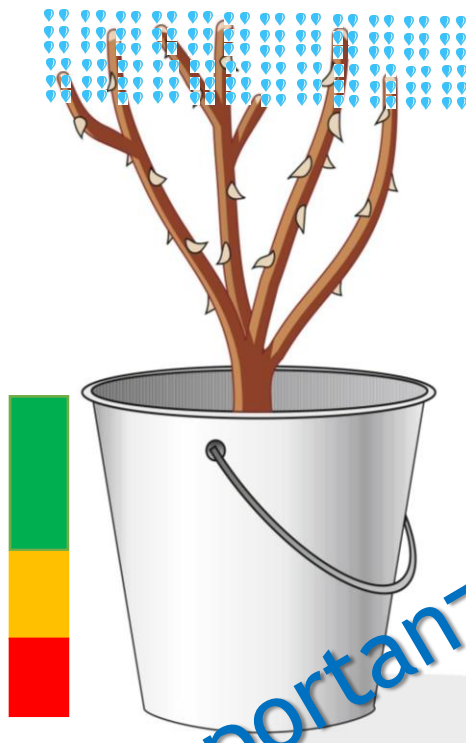
Fabbisogni irrigui colturali: importanza della gestione



Fabbisogni irrigui colturali: importanza della gestione



Fabbisogni irrigui colturali: importanza della gestione



scorrimento



aspersione

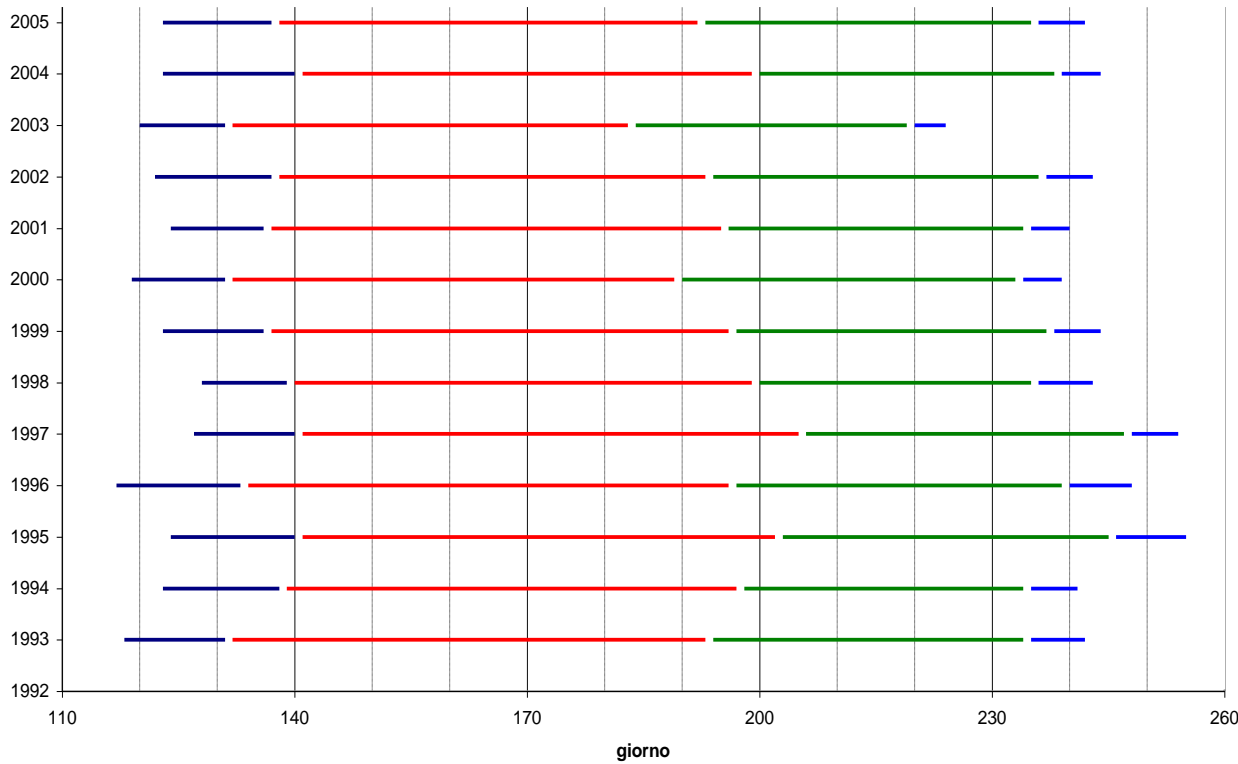


goccia



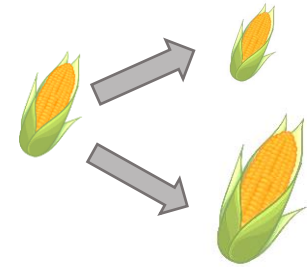
Caratteristiche del modello IdrAgra

Variabilità interannuale delle fasi fenologiche



Effetti del cambio climatico

- Influenza della concentrazione di CO₂ sulla resistenza stomatica e effetto “fertilizzante”
- Effetti degli stress termici
- Effetti degli stress idrici

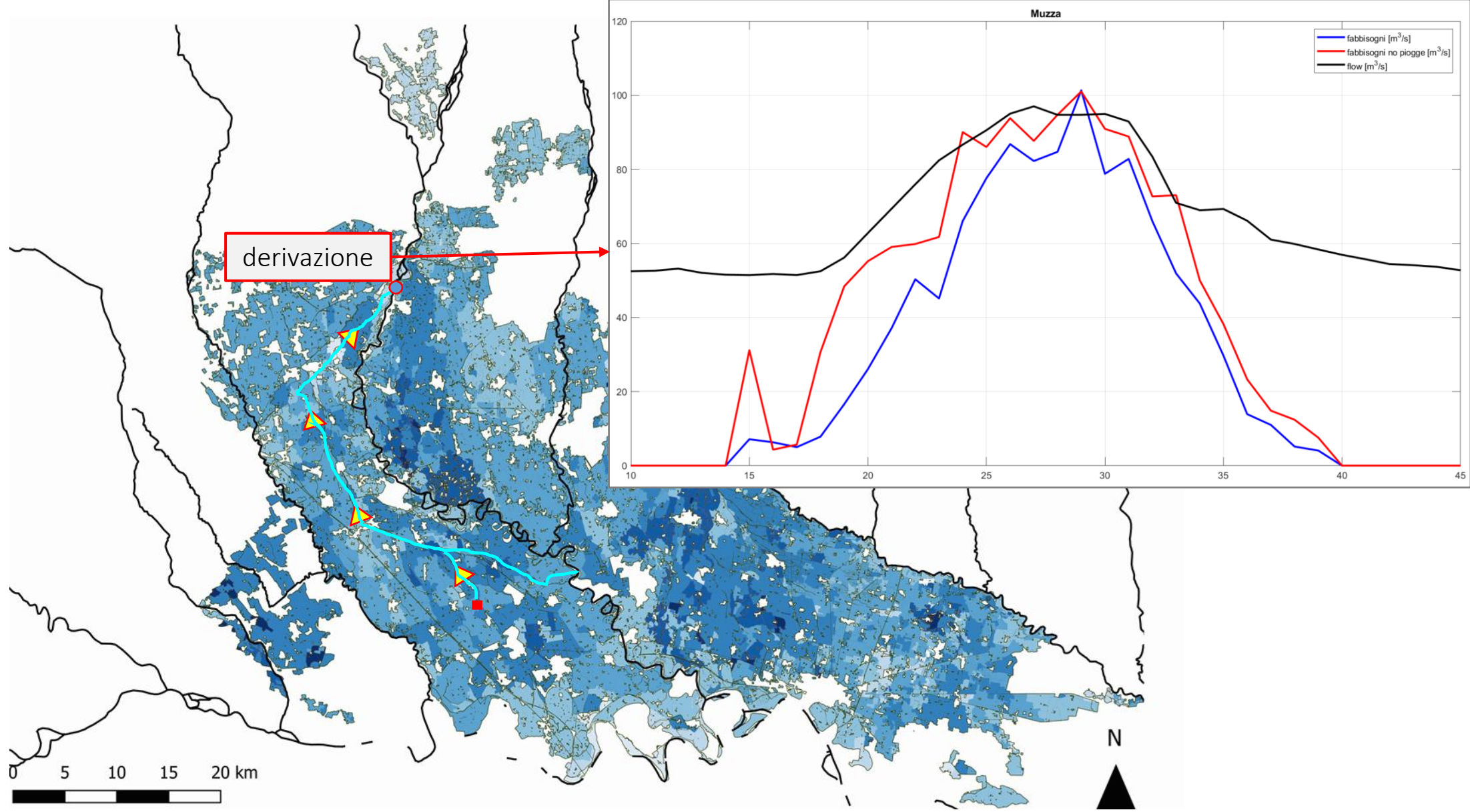


link sito IdrAgra: <https://idragra.unimi.it/>

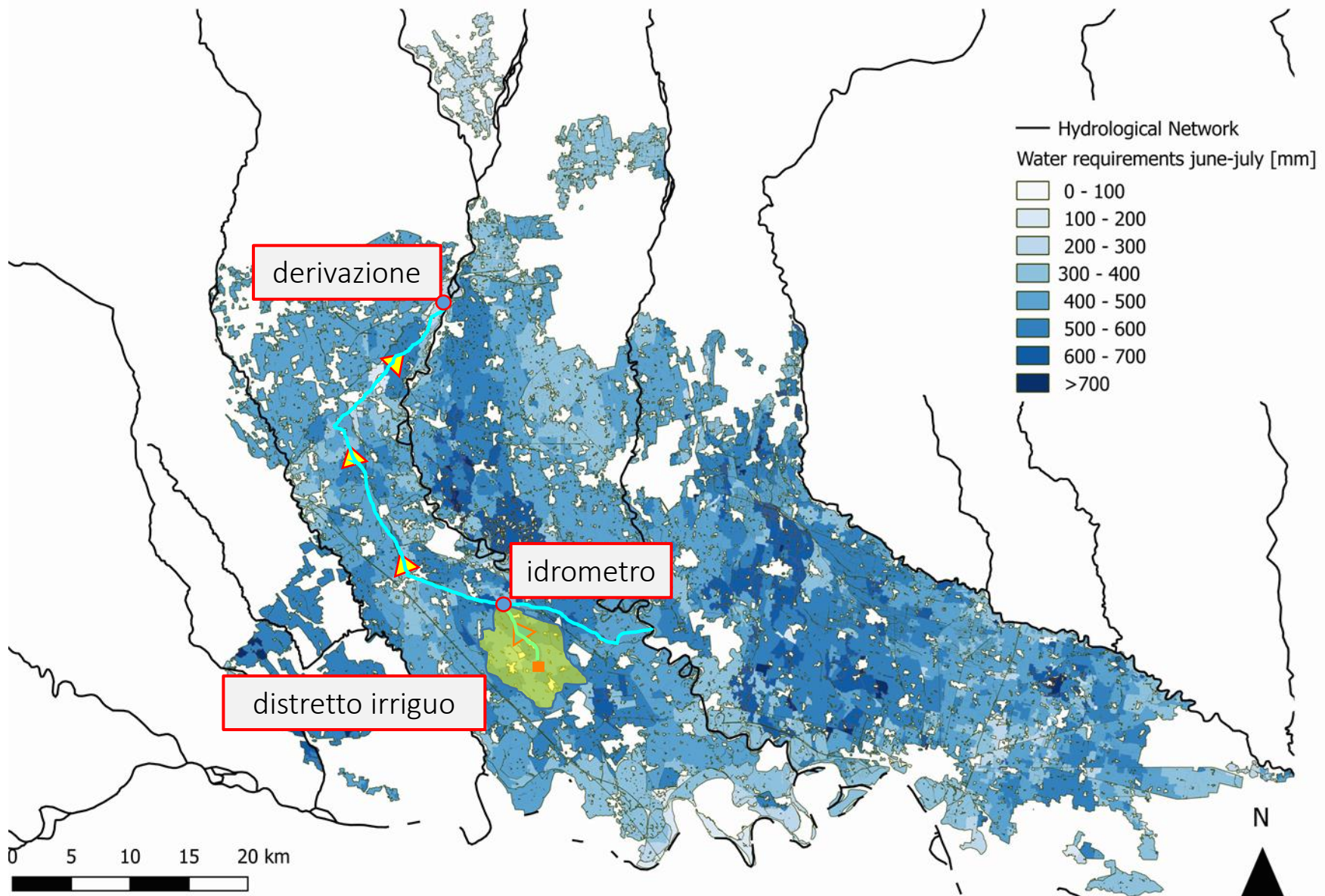




Fabbisogni alla derivazione

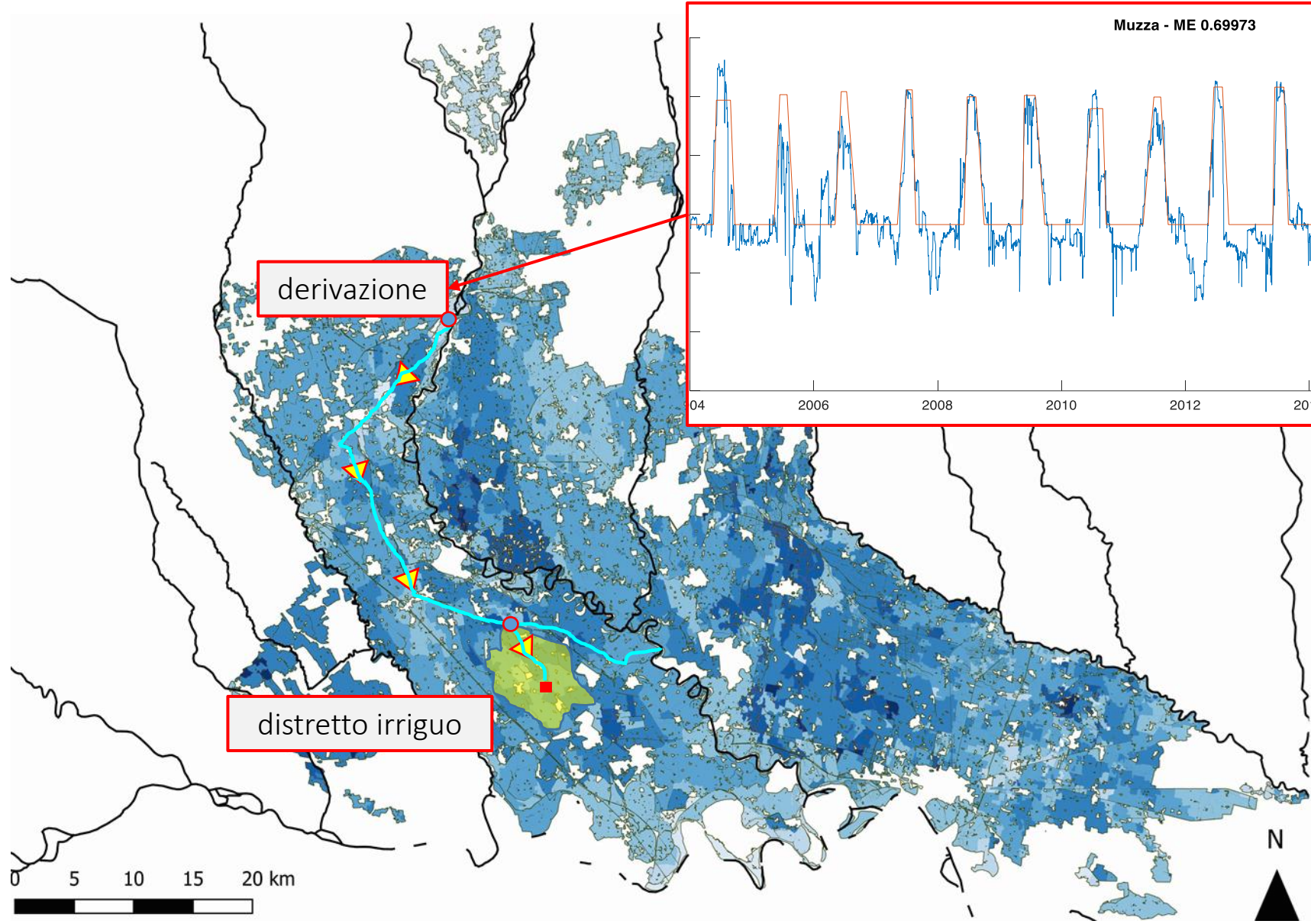


Fabbisogni alla derivazione





Utilizzi irrigui





Supporto alla pianificazione

Interventi per efficientamento e adattamento





grazie per l'attenzione