



Cambiamenti climatici e idrologia del bacino dell'Arno. Gli impatti sulla disponibilità idrica

Firenze, 17.05.2013

Bernardo Mazzanti
Autorità di Bacino del Fiume Arno



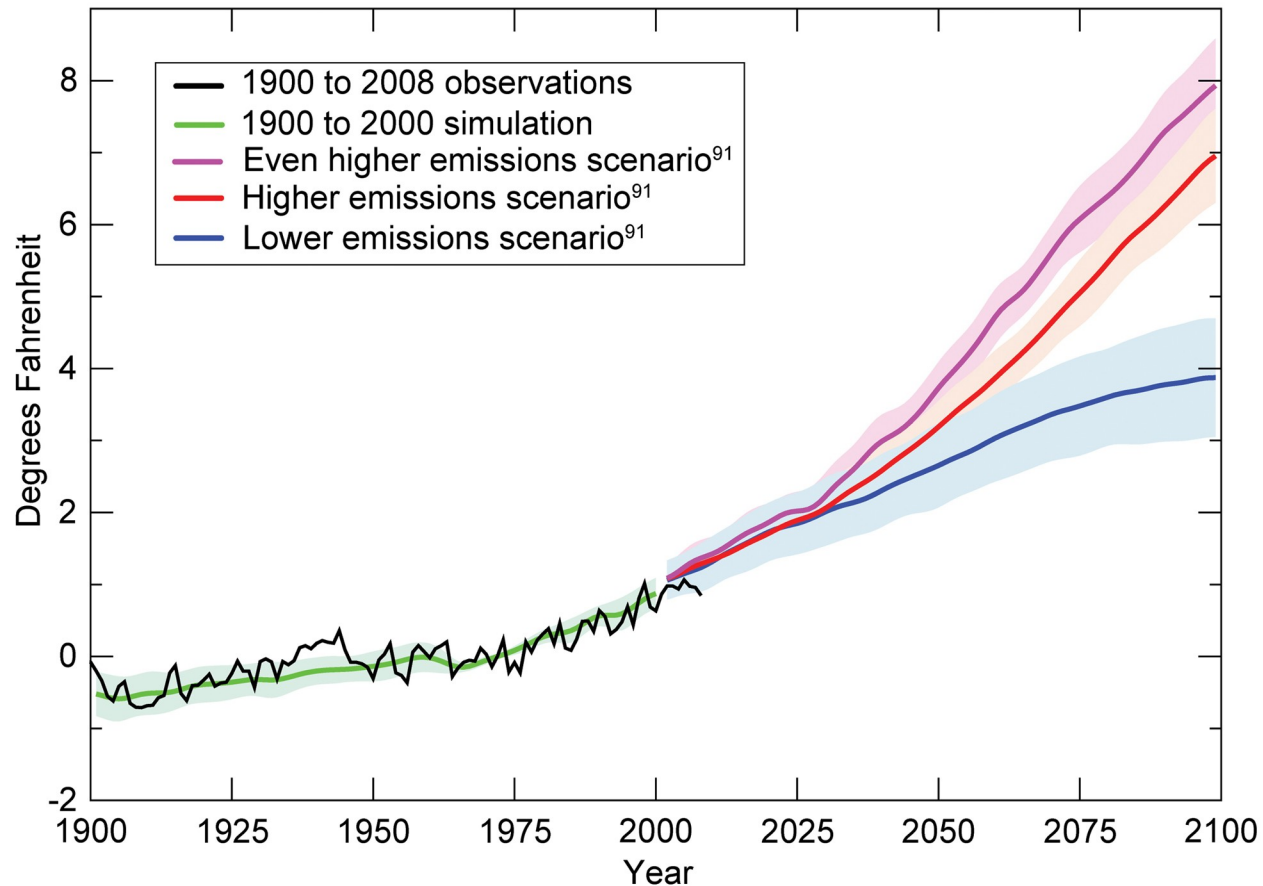


Il cambiamento climatico

- Impatto sul ciclo idrologico
 - ✓ Precipitazioni
 - ✓ Portate
- Scenari di previsione per WIZ
 - ✓ Disponibilità idrica



Il cambiamento climatico



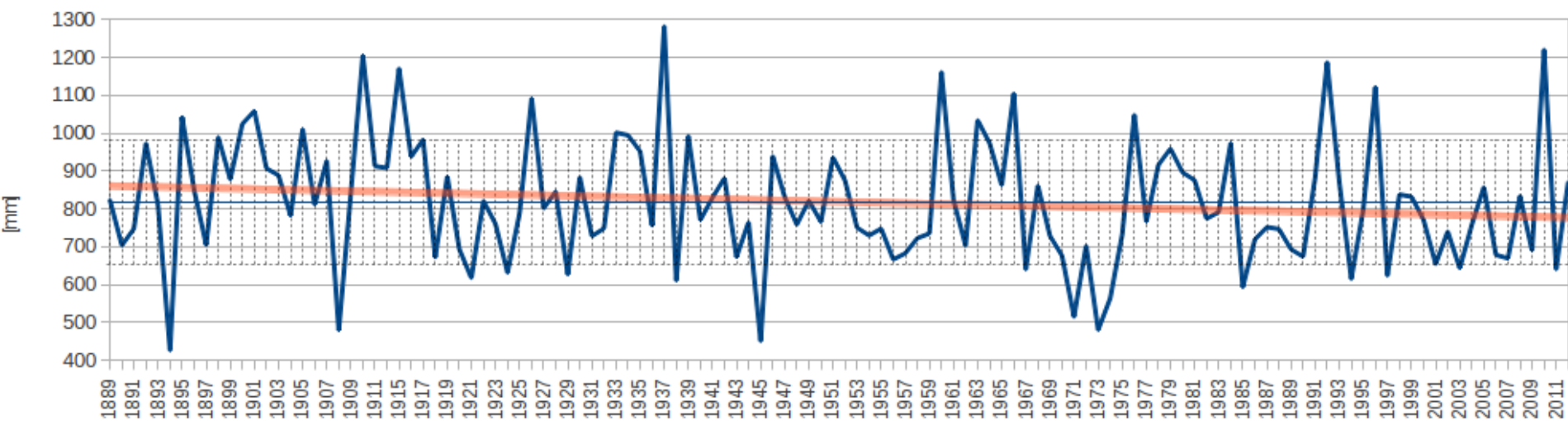


Tendenza sul lungo periodo delle precipitazioni annue





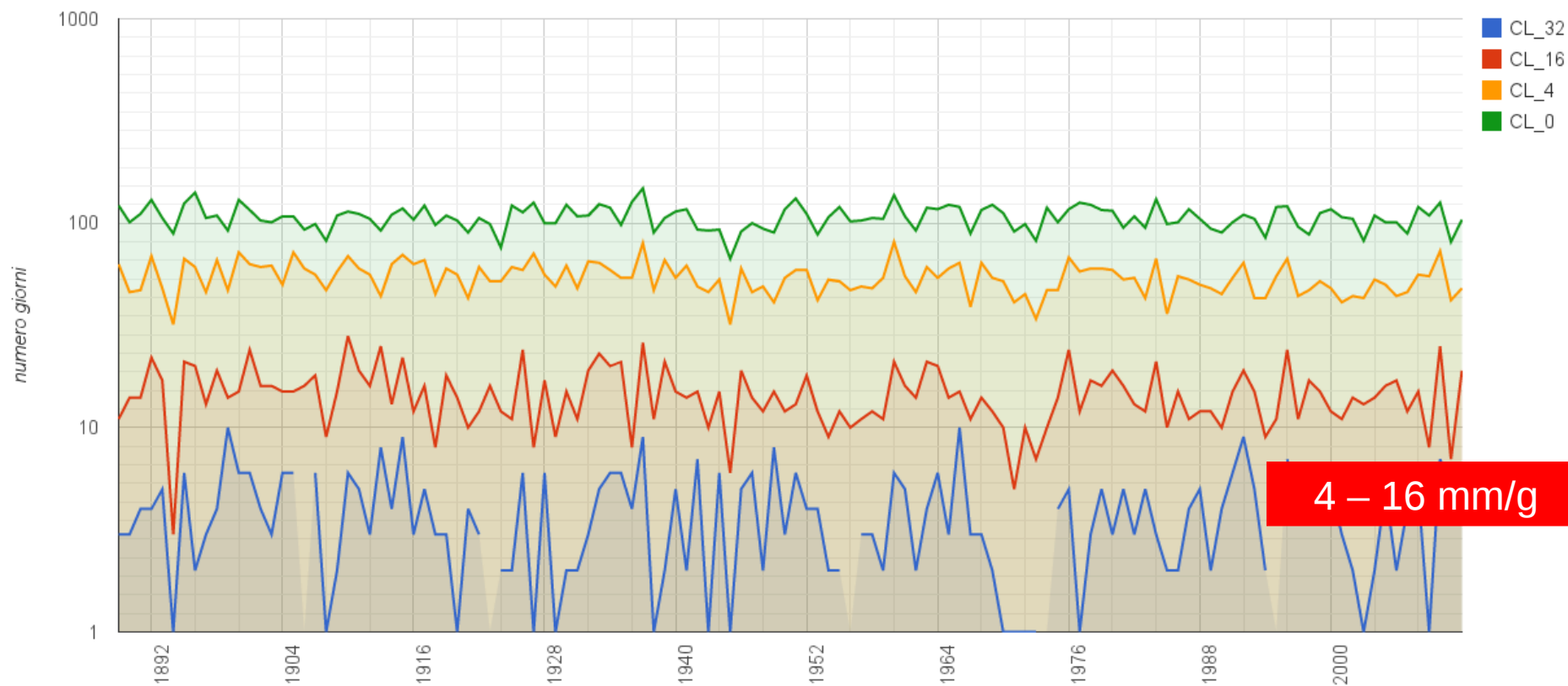
Precipitazione annua a Firenze

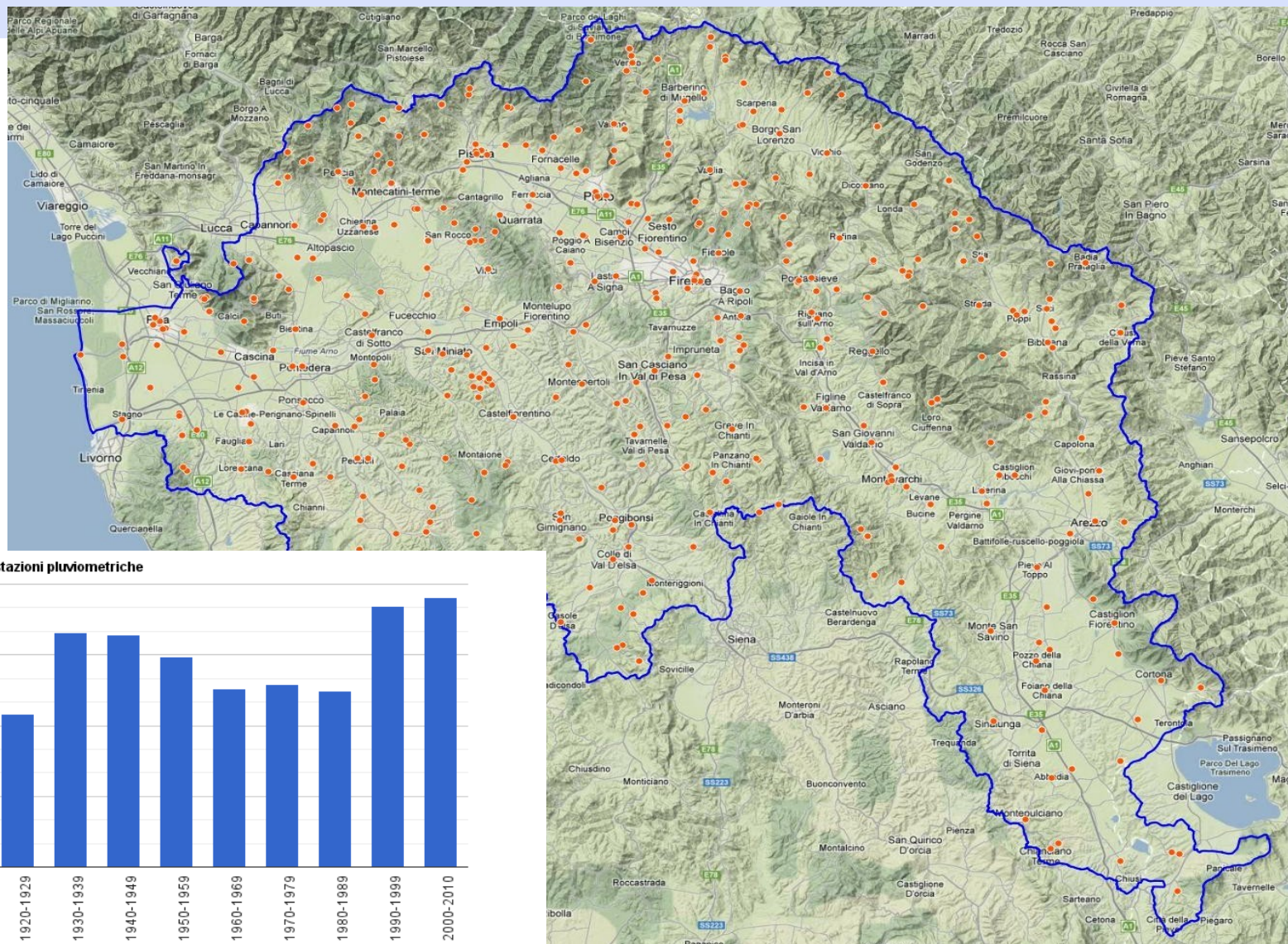


-10%



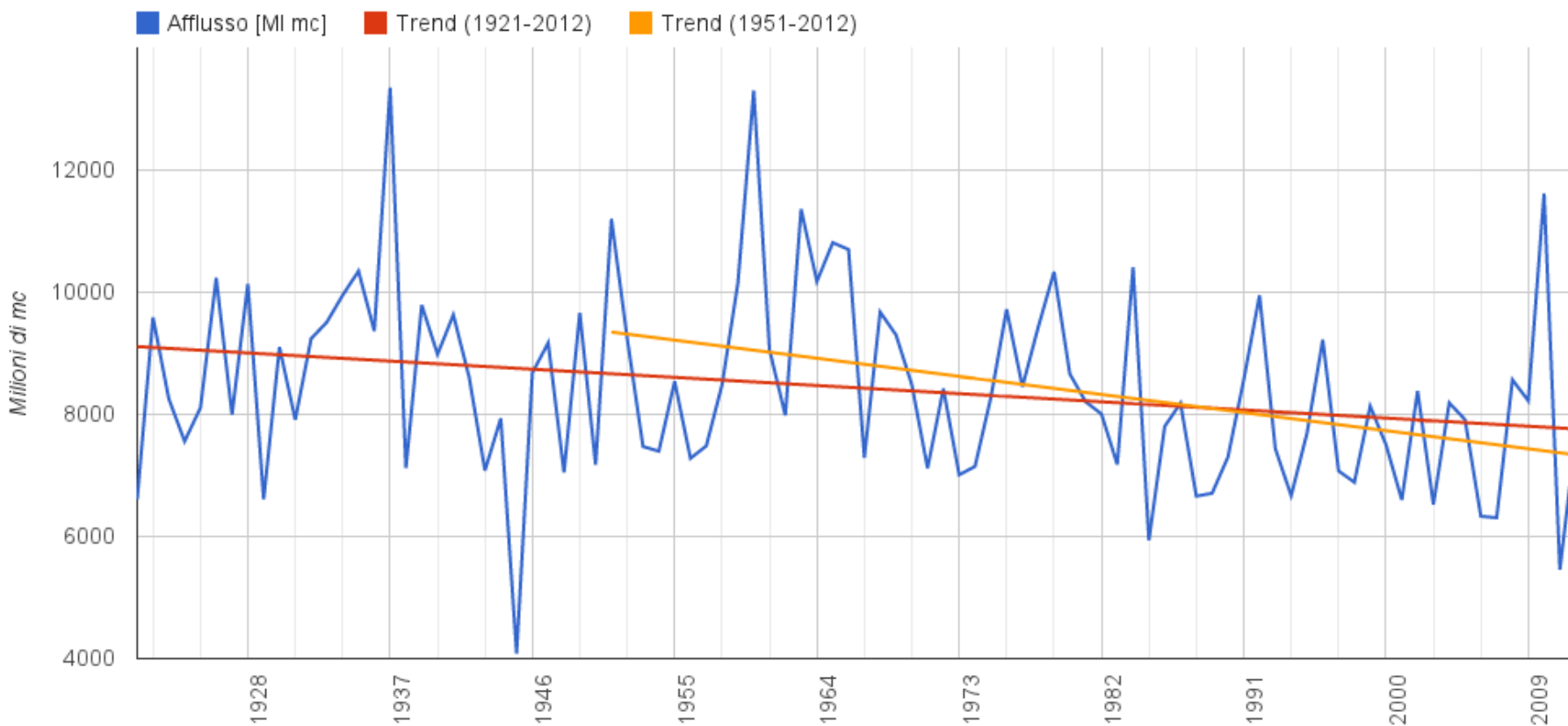
Firenze - Distribuzione delle precipitazioni giornaliere







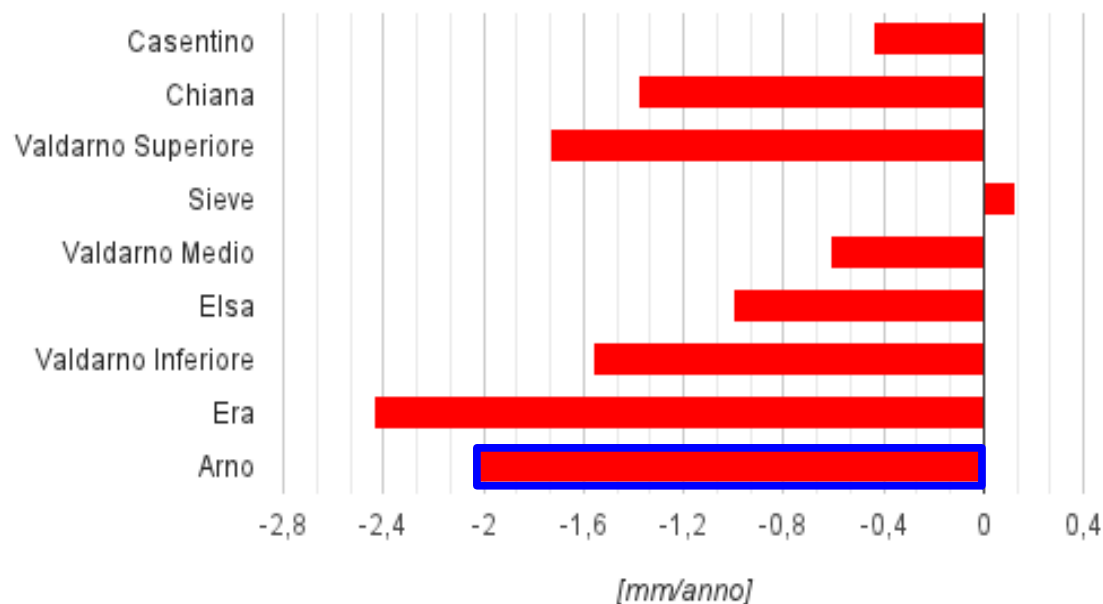
Afflussi nel bacino dell'Arno





Tendenza degli afflussi nei sottobacini

Variazione annua afflussi (1921-2012)



-66 MI mc
ogni 2
anni

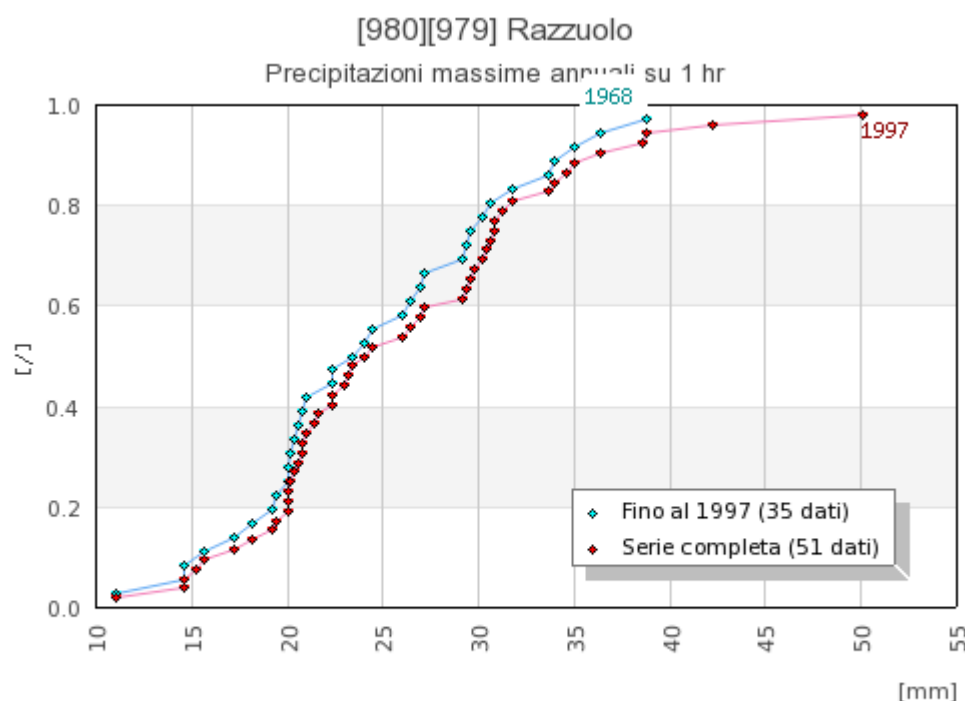


Precipitazioni estreme



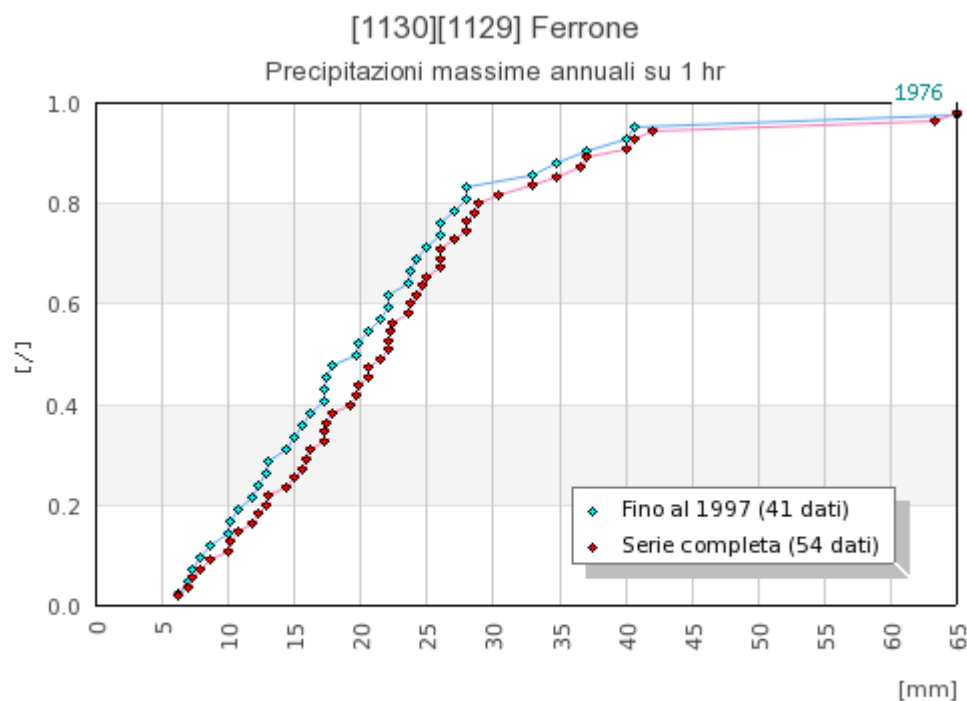


Confronto serie piogge max su 1 ora



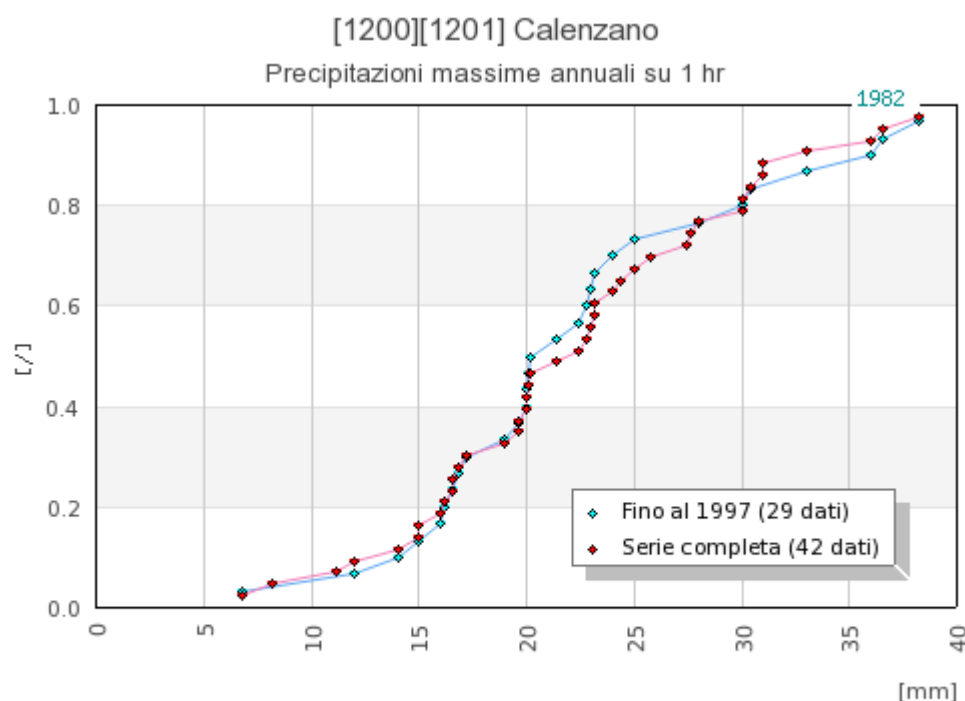


Confronto serie piogge max su 1 ora



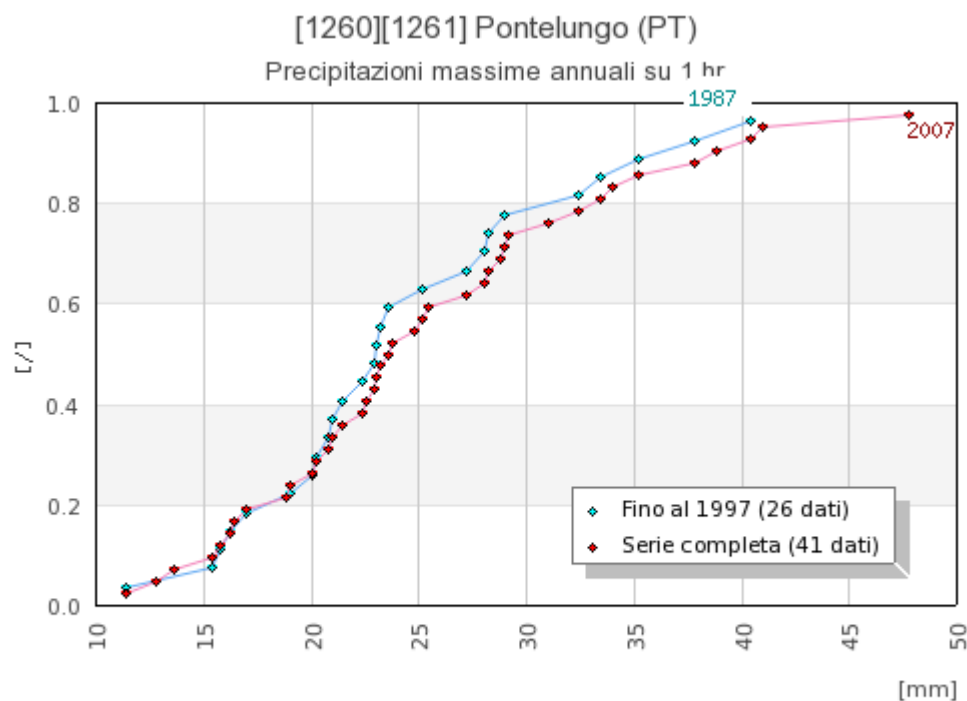


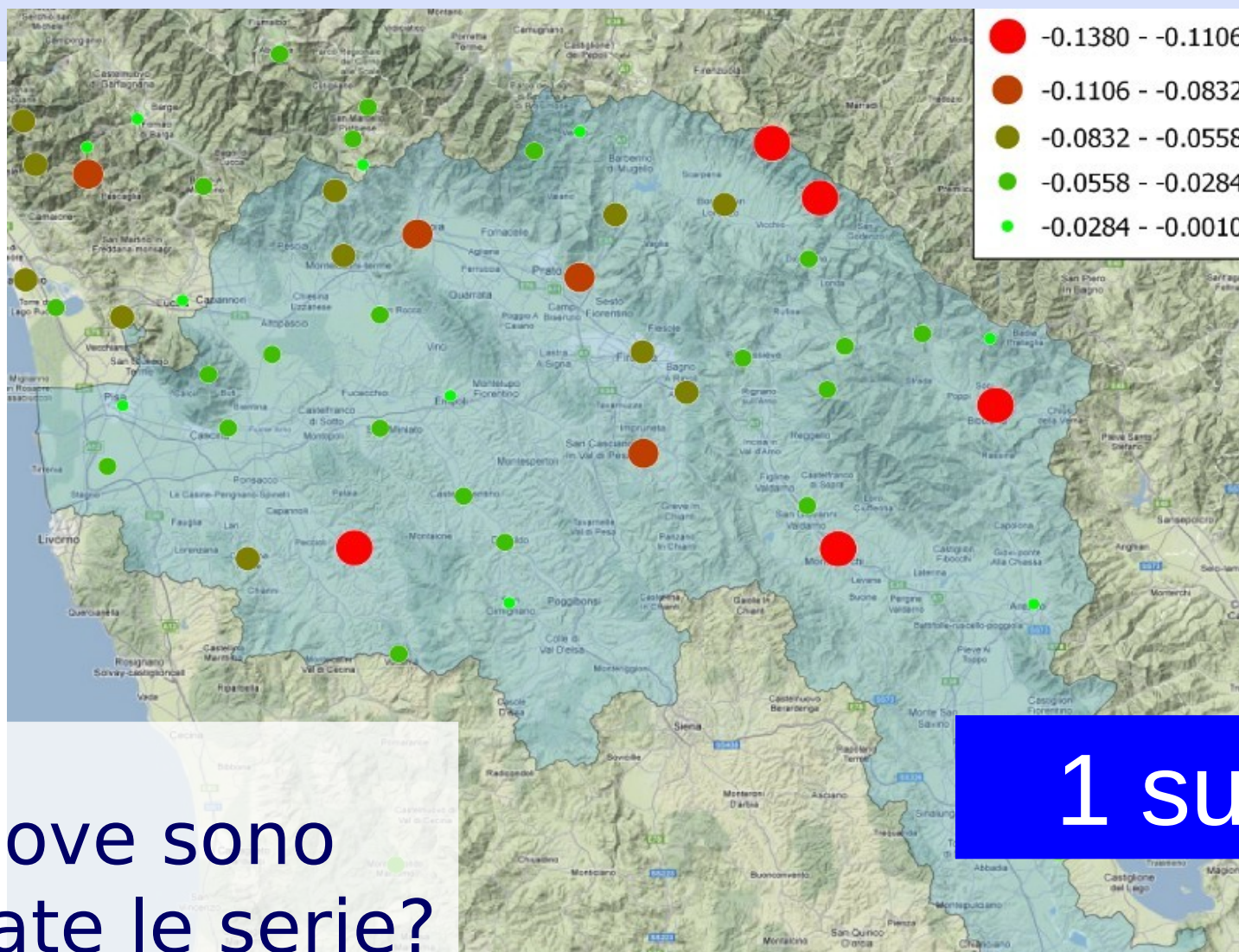
Confronto serie piogge max su 1 ora





Confronto serie piogge max su 1 ora





Dove sono
variate le serie?

2013

LIFE + WIZ Project

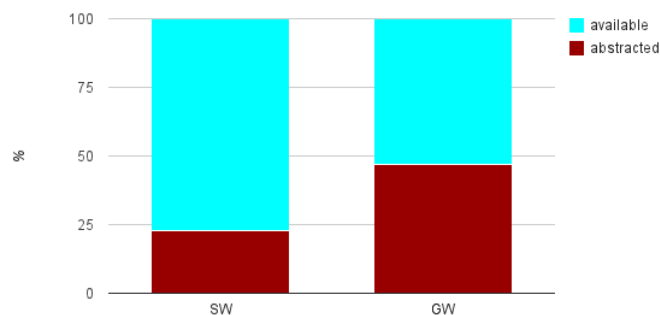
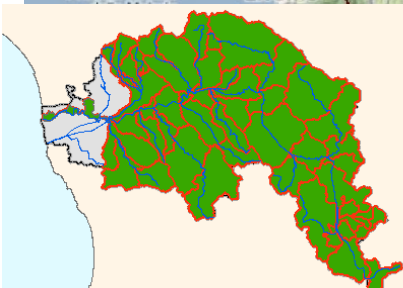
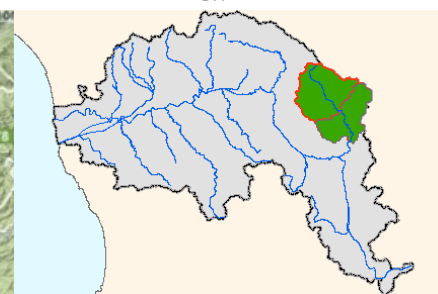
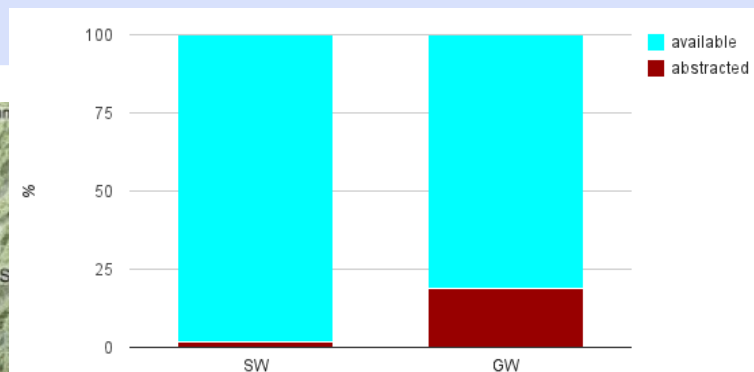
1 su 3

15

Deflussi

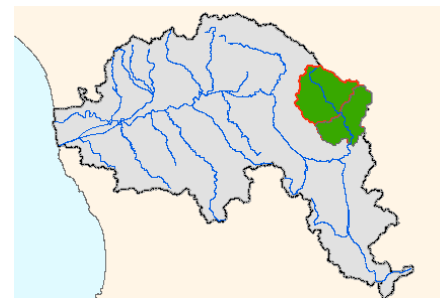


Arno a Firenze, in grave stato di magra, nel settembre 2012

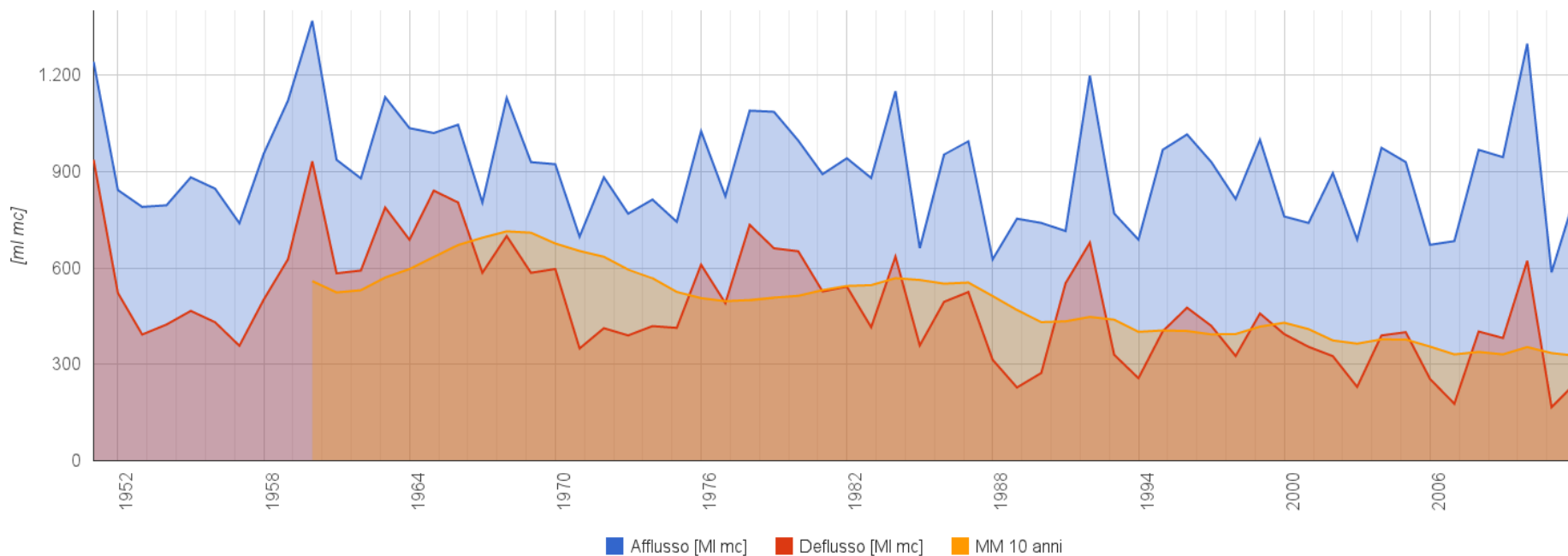




Afflussi / deflussi a Subbiano

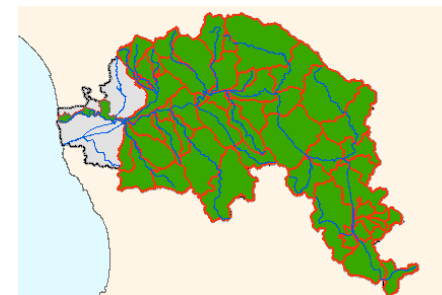


Afflussi/deflussi annui. Arno a Subbiano (738 kmq)

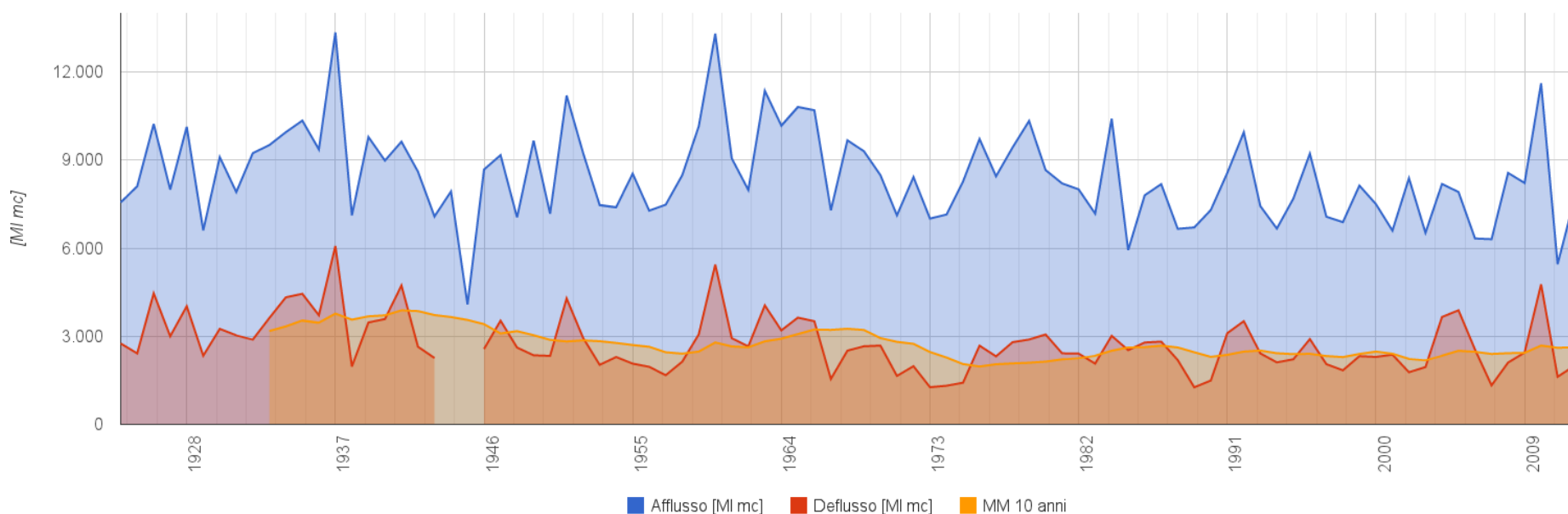




Afflussi / deflussi a San Giovanni alla Vena

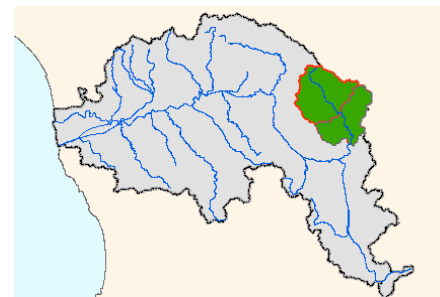


Afflussi/deflussi annui. Arno a San Giovanni alla Vena (8186 kmq)

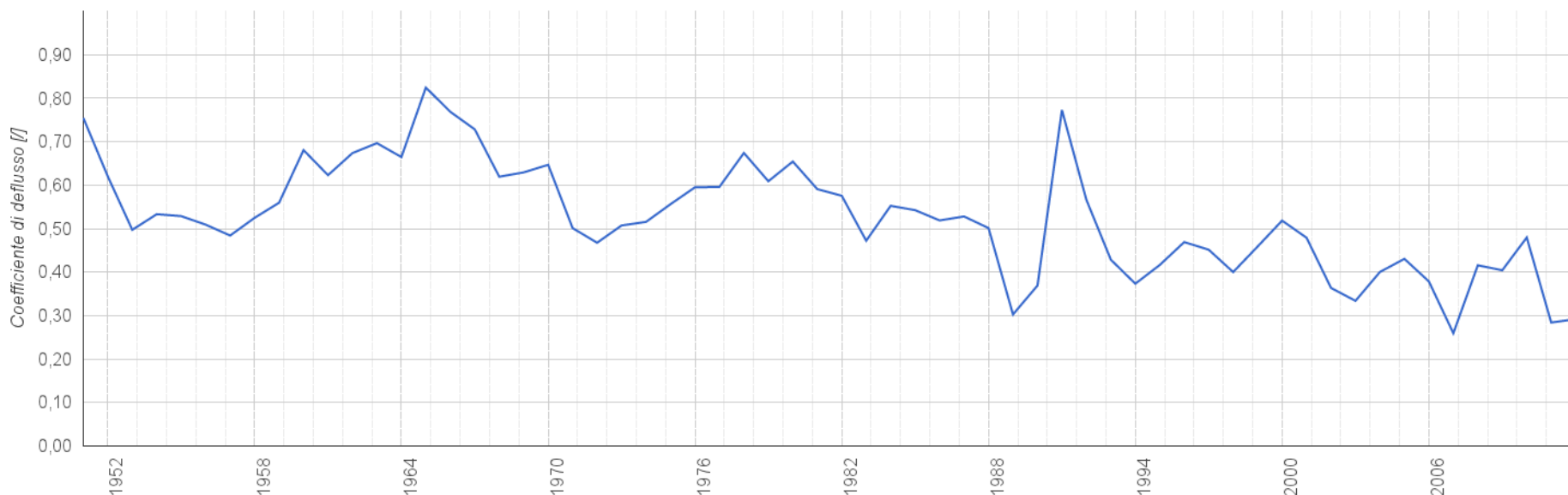




Coefficiente di deflusso Arno a Subbiano

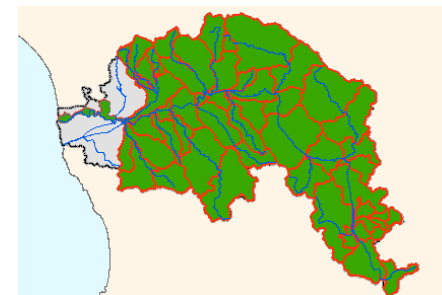


Coefficiente di deflusso annuo. Arno a Subbiano (738 kmq)

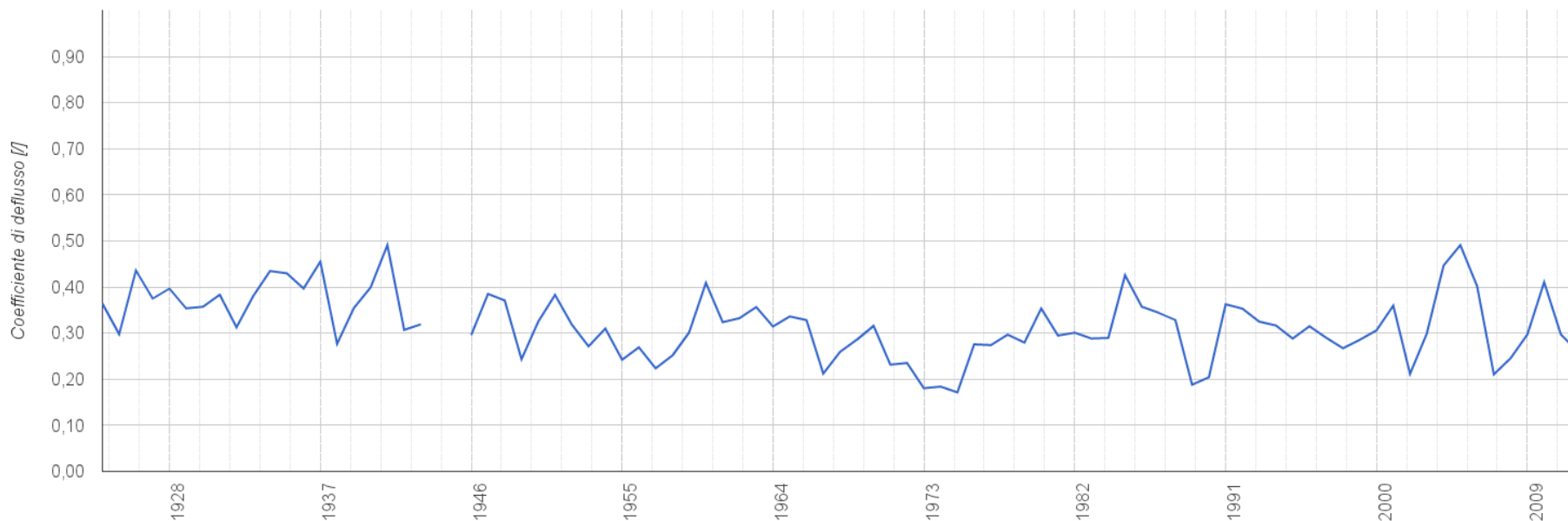




Coefficiente di deflusso Arno a San Giovanni alla Vena

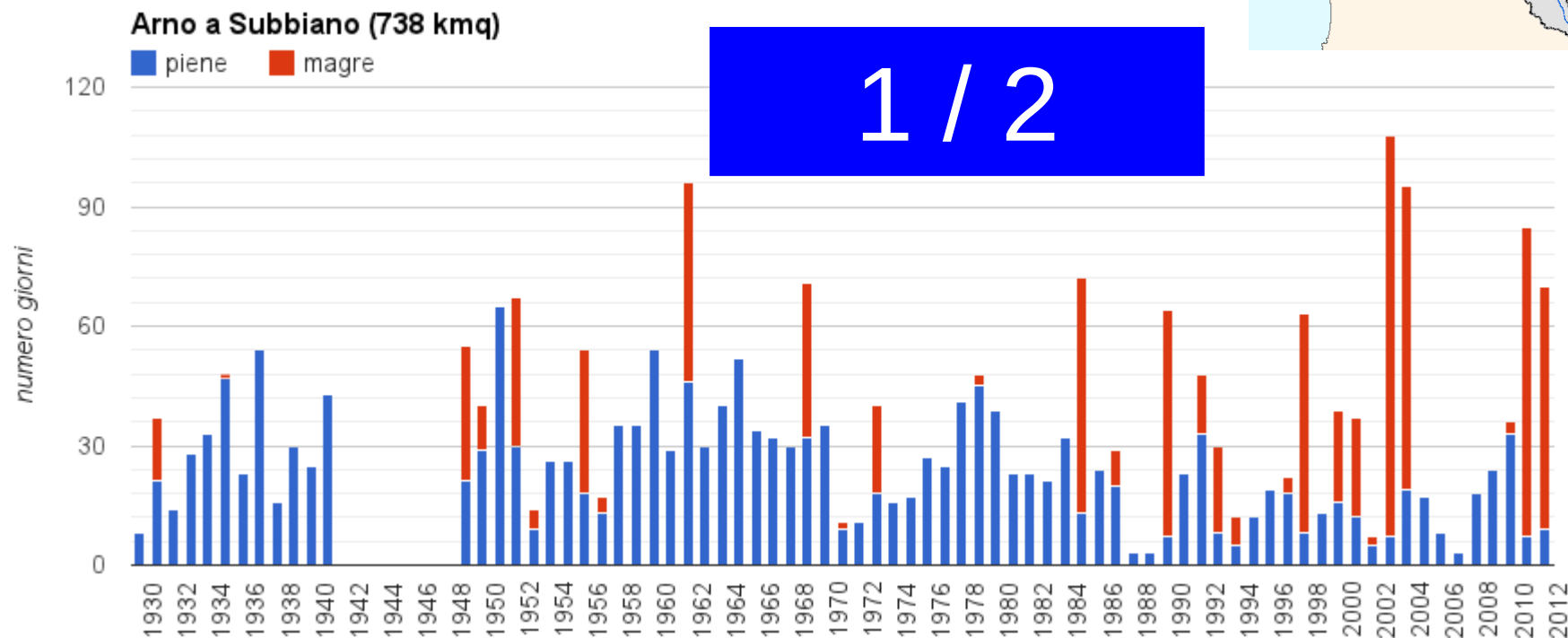
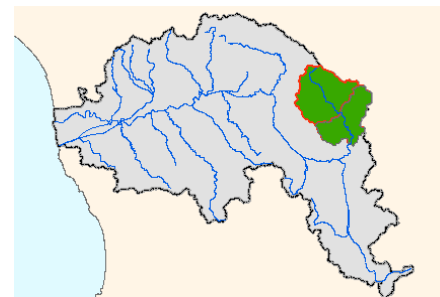


Coefficiente di deflusso annuo. Arno a San Giovanni alla Vena (8186 kmq)



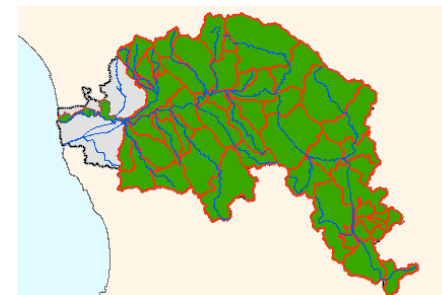


Numero annuo di piene e magre



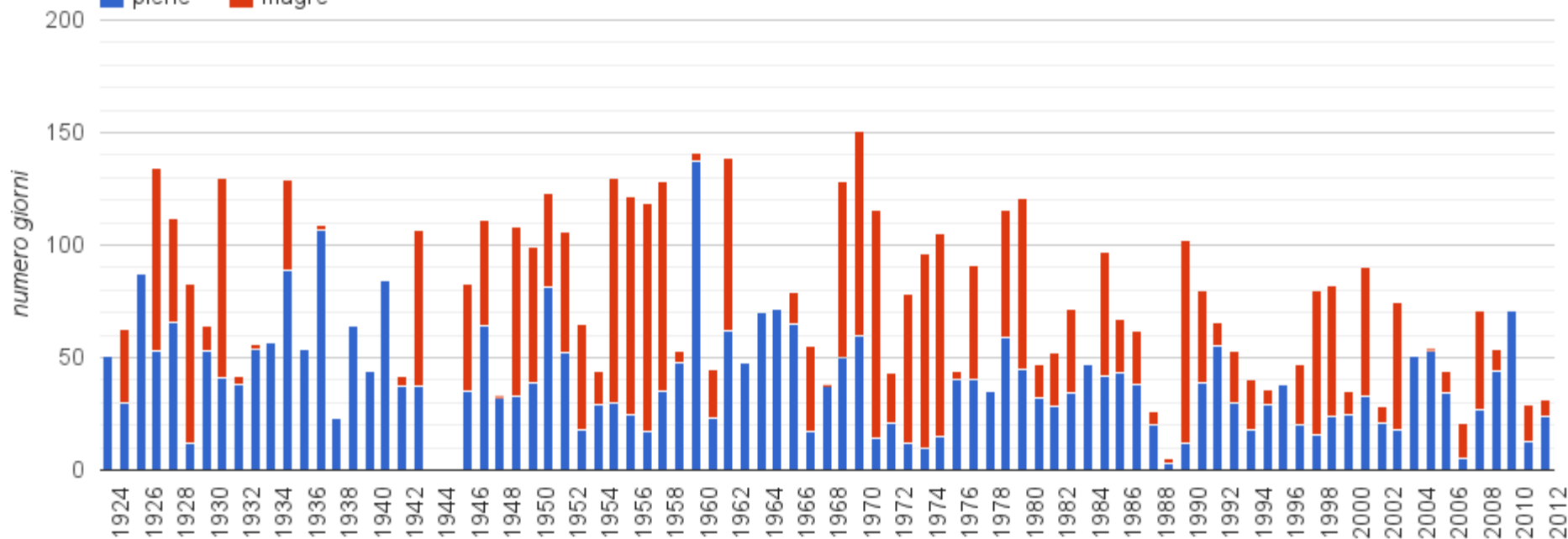


Numero annuo di piene e magre

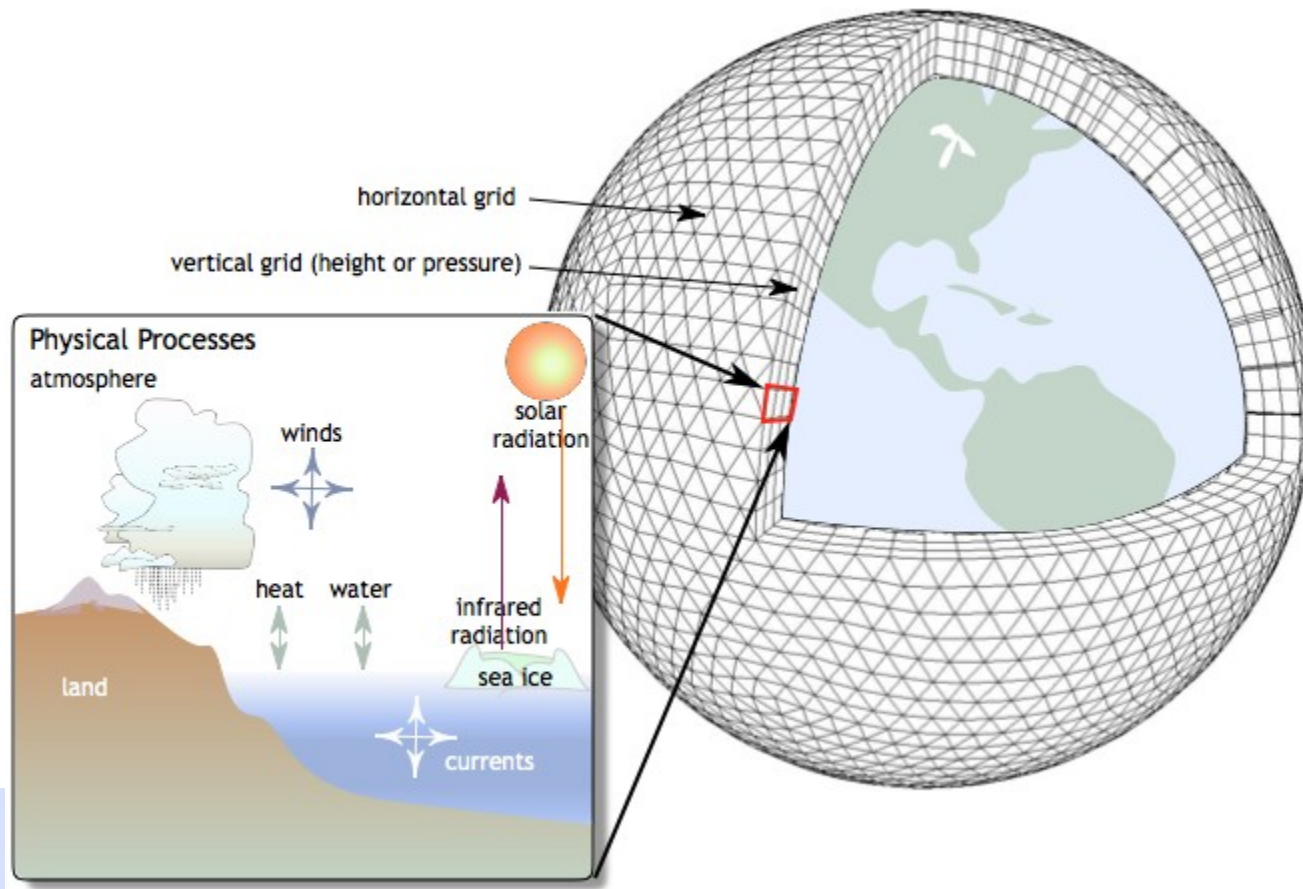


Arno a San Giovanni alla Vena (8186 kmq)

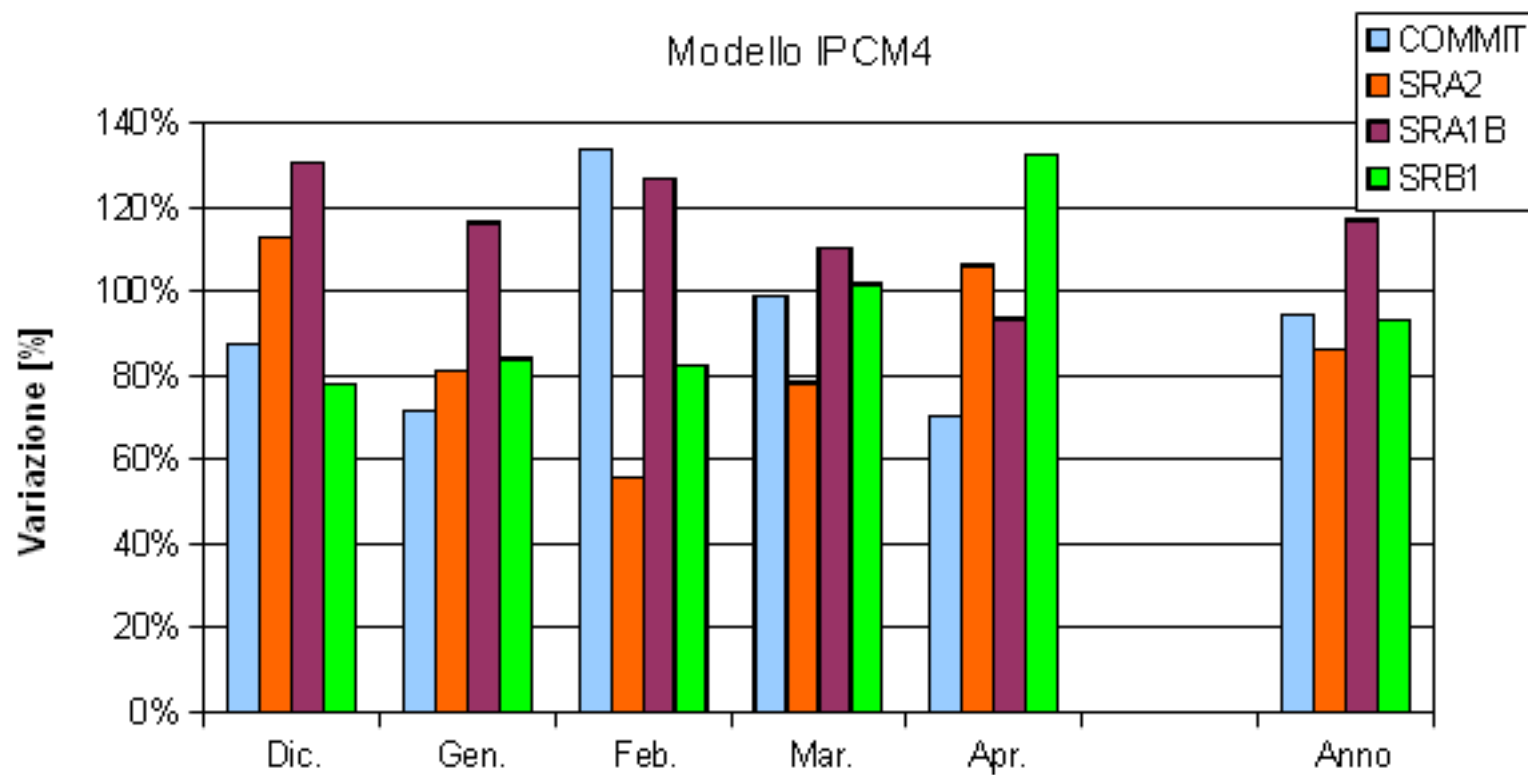
■ piene ■ magre



Scenari per la previsione della disponibilità idrica

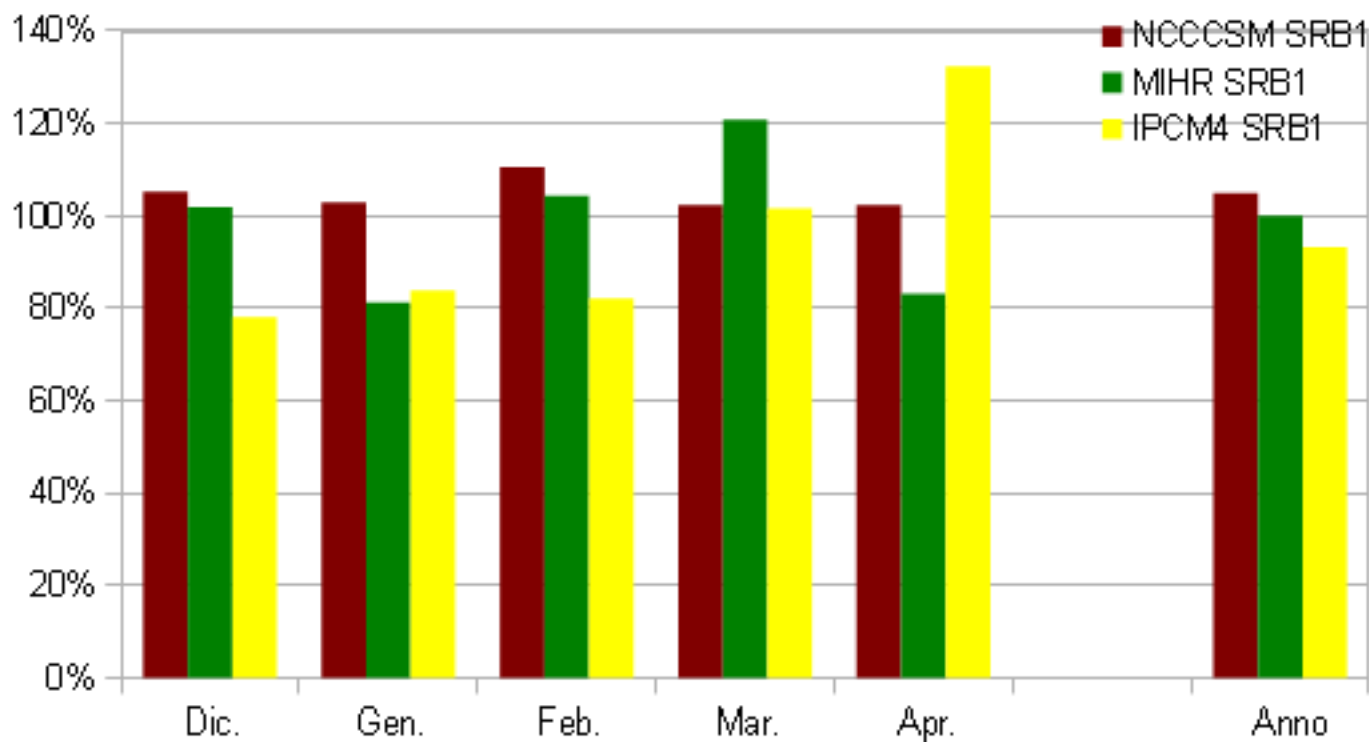


Confronto tra scenari





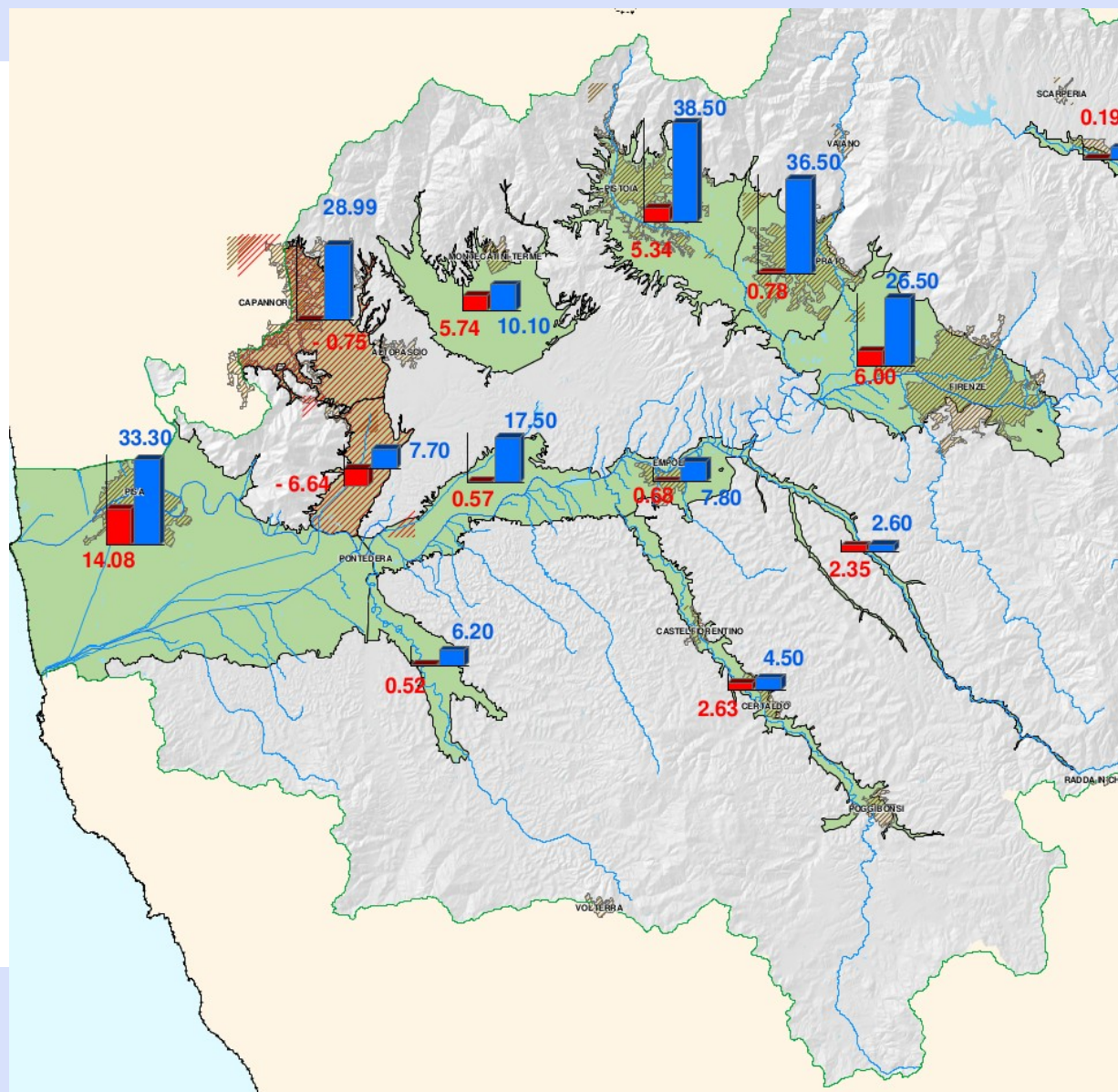
Confronto tra modelli





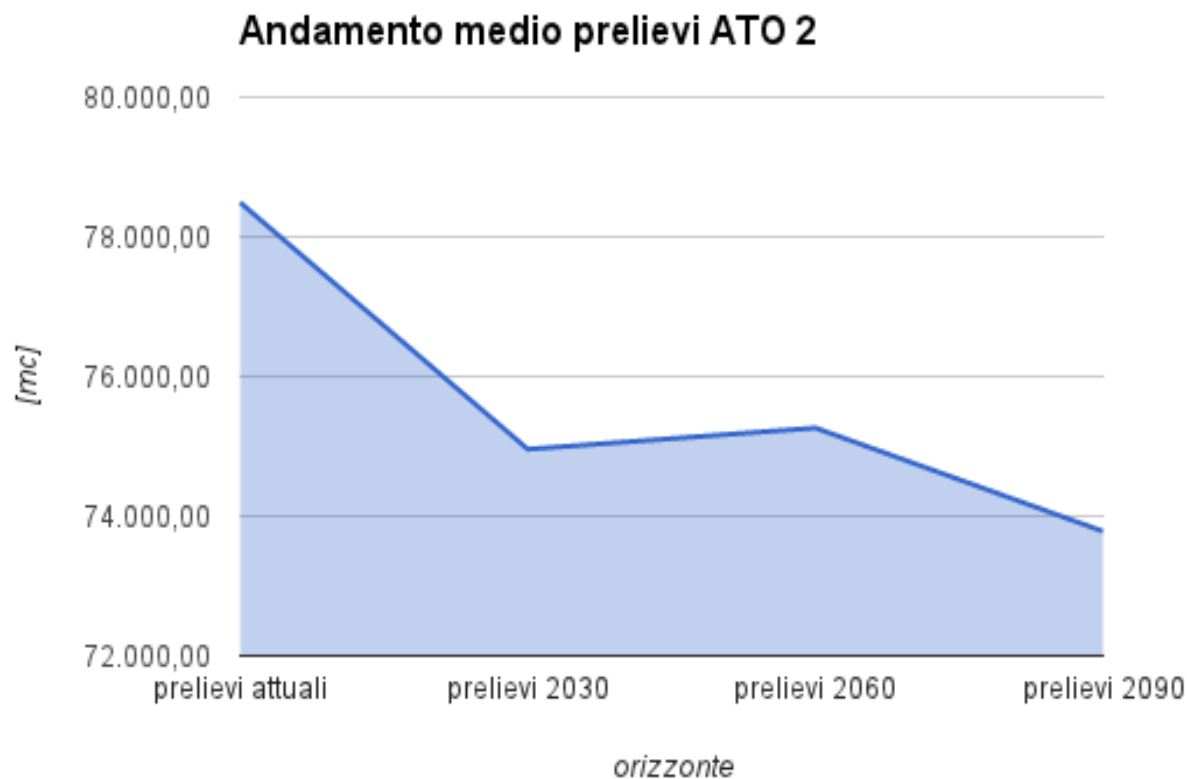
Bilancio Idrico Acque sotterranee

2013





Applicazione alle fonti di approvvigionamento idrico (ATO 2)





Thank you!

- Grazie
- Gracias
- Grazas