

**Session 7.03**: Agricultural and sanitation contaminants and implications for water services and health

Groundwater flow numerical modeling based on estimates of rainfall infiltration and groundwater abstraction for irrigation of cropland

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# **Research background**

#### Poster n°1860 E-Poster session at 2 PM

#### AquaVar Project

- Budget: 1.2 Million Euros
- **Duration**: 4 years (from 2014 to 2018)
- **Objective**: Design of Decision Support System (DSS) and operational implementation for Nice Metropolis
- **Component**: Hydrology, river hydraulics and groundwater hydraulics



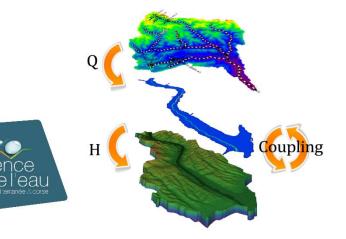
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## Main issues and outcomes

#### A problematic issue : groundwater ressource management

- Direct water recharge due to the rainfall is unknown
- Volume of the groundwater abstraction for agricultural use is unknown

#### Direct water recharge

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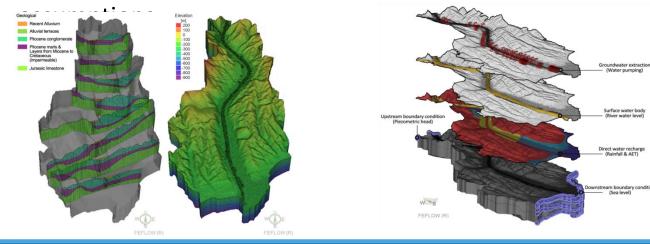
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Thornthwaite algorithm & Turc formula for actual evapotranspiration estimation

#### Groundwater abstraction for agricultural use

Estimation based on groundwater level variation under certain







### Acknowledgement

This research is currently developed within the AquaVar project. DHI is acknowledged for the sponsored MIKE Powered by DHI licence files. The authors also wish to thank Prof. Philippe Audra for his valuable inputs. The work benefited from the data provide by the Metropole Nice Côte d'Azur and Météo France.



"Choosing the right model in applied hydraulics"

- October 15th, 2016: Abstract submission: www.simhydro.org
- December 5th,
  2016: Notifications to abstract authors
- February 27th, 2017: Full paper submission



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# **Thank you for your attention**





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