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# SEMINAR

**Monday, December 3, 17:00 h, ETH Hönggerberg HIL E10.1**

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## **How to control overpumping of aquifers**

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Abstract:

Overpumping of aquifers mainly for irrigated agriculture is an unsustainable practice found in numerous regions of the world. While economists advocate non-regulation free market outcomes, here the point of view is argued that an early control of overpumping is a better choice. Consequences of overpumping are numerous including drying up of wetlands, die-off of phreatophytic vegetation, soil subsidence, seawater intrusion and increase of pumping energy requirements. We particularly note the value of a well-filled aquifer as a means of buffering increased climatic variability expected under climate change. While control of a surface reservoir is easy, the control of ten thousands of wells is a challenging task. It can be tackled with new technologies which have recently become available.

Experience from an SDC-funded cooperation project in China is presented. It covers two pilot regions. In both cases a system with the three elements monitoring, data analysis/modelling, and policy implementation has been designed. While the control scheme in the first pilot region, the Heihe Basin is showing first positive results, the second pilot in North China plain is ongoing and just entered its second phase.

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