



# Water Resources Management

## Water availability and demands in the Kou River Basin



### Problem context

- Climate change leading towards a reduced reliability in annual rainfall which affects the water supply for irrigation purposes in the Kou basin
- Insufficient water supply for the rice irrigation schemes due to illegal water tapping by (horticulture) farmers
- Limited insight in water availability/provenance and current water use and demands in the Kou basin.
- The Water Authorities have insufficient capacity to deal with operational problems like maintenance or daily enforcement of activities in the area
- Farmers mainly focus on crops that have a high annual water demand

### (possible) research questions

1. How and to what extent do water availability and water use and demands match in the Kou River Basin?
2. To what extent does illegal farming along the River Kou contribute to the water shortage on the water balance?
3. How could institutional agreements or deals between Water Authorities and water users (mainly farmers) help to improve efficient water use in the Kou Basin?

### Requirements

- The student must have a background in Integrated water management/ Hydrology or Irrigation.
- Dependent on the interest of the student the research can have a more technical approach (set up of water balance or modeling study) or a more socio-economic approach in which qualitative research on water use and distribution by farmers is carried out
- Basic knowledge of the French language is required

### Outputs of the proposed study

Study that provides local water authorities with knowledge on the functioning of the water system and provides recommendations (measures) to further improve the demands of all water users.

Host institute(s): Waterschap Aa en Maas, Waterschap Hunze en Aa's (Netherlands) and Agence de l'Eau du Mouhoun (Burkina Faso)

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