Integrated modelling / LISAH

Objectives: simulating ecosystem services (agricultural yield, runoff to impoundments, infiltration to subsurface aquifers) by accounting for sub-hour processes at the agricultural field resolution.

Method: designing and implementing an integrated model that includes crop dynamics and hydrological processes (runoff / lake / aquifer) distributed manner (hydrological connectivities)

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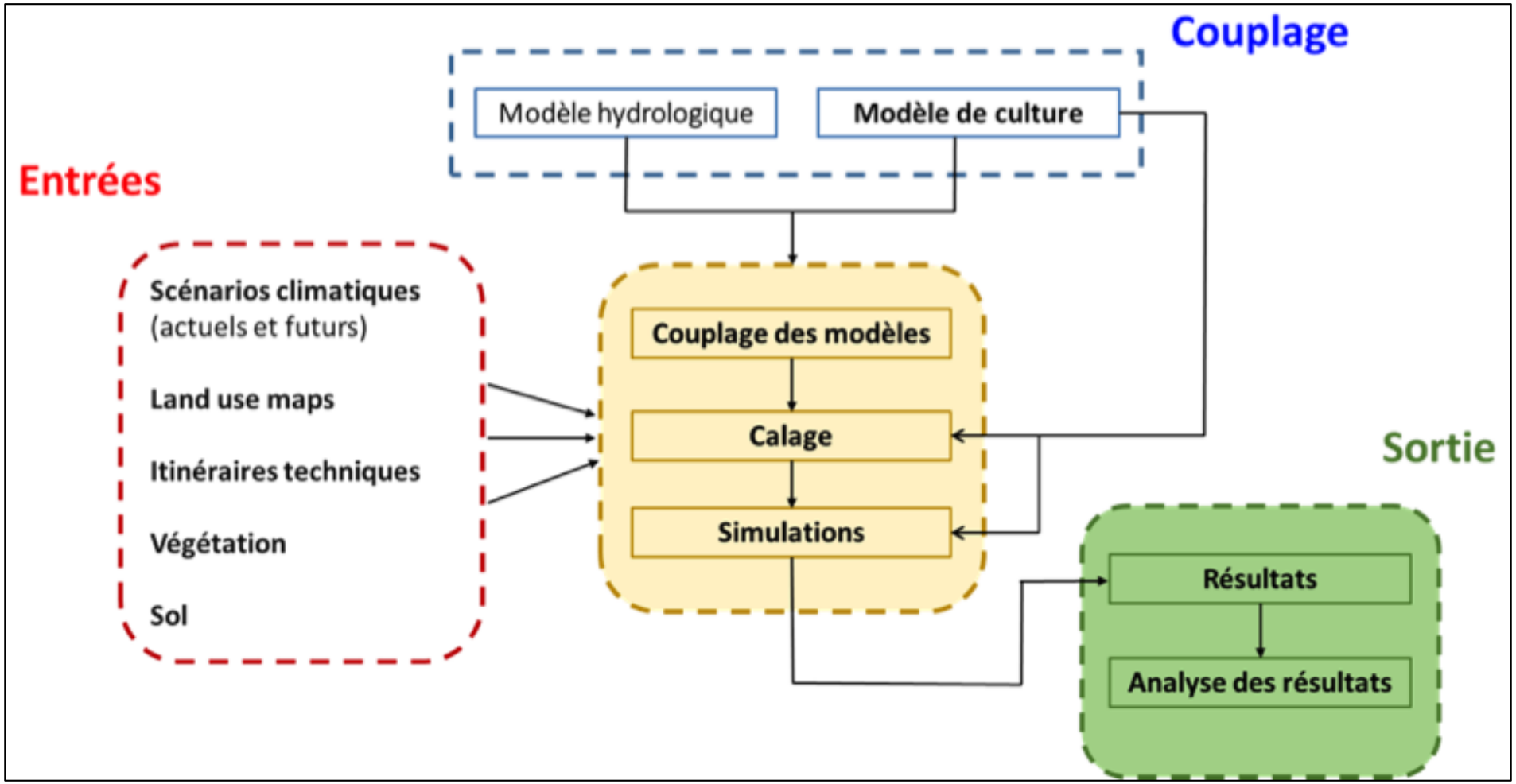
Means

- Available dataset, almost analysed in TK2.1
- Available models: MHYDAS for surface hydrology, DAHM-reservoir for lac-aquifer exchanges, AqYield (+C02) or SAFYE for crop dynamics
- Available coupling platform: OpenFLUID
- 1 forthcoming ALTOS post-doc wo will works on (1) the integration of the three aforementioned processes, (2) the multi-process based calibration, and (3) the numerical simulation on the basis of scenarios
- 1 ongoing PHD who works on coupling surface hydrology / crop modelling

Integrated modelling / LISAH



Integrated modelling / LISAH

Partnership

- INRGREF

Roadmap

- Need to clarify overall objectives, including, for each process, which resolution, which parameterization strategy (e.g., soil infiltrability ?), which calibration / validation strategy (temporal window, requested data, calibration procedure)
- Need to articulate between PhD and post-doc
- Need to define post-doc profile and to find a candidate.

Integrated modelling / LISAH

Difficulties

- Difficulty to brainstorm internally at LISAH because of the confinement and individual situation of many of the key colleagues in the project.
- Risk of rushing into action on the wrong track.
- If brainstorming with only a few people, risk of non-adherence/ incomprehension of others about the choices made.
- Postponement of the brainstorm until the resumption of activities (May-June?).
- Means postponing the recruitment of the post doc until the beginning of the school year at best, probably in the autumn.