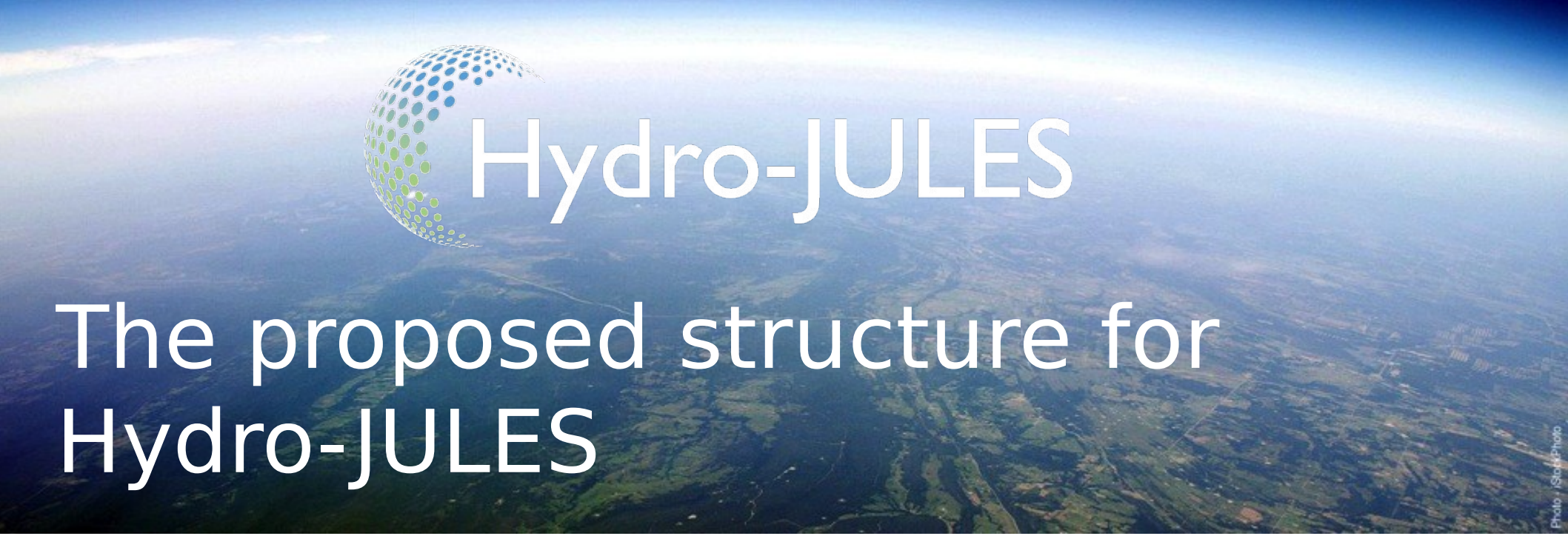


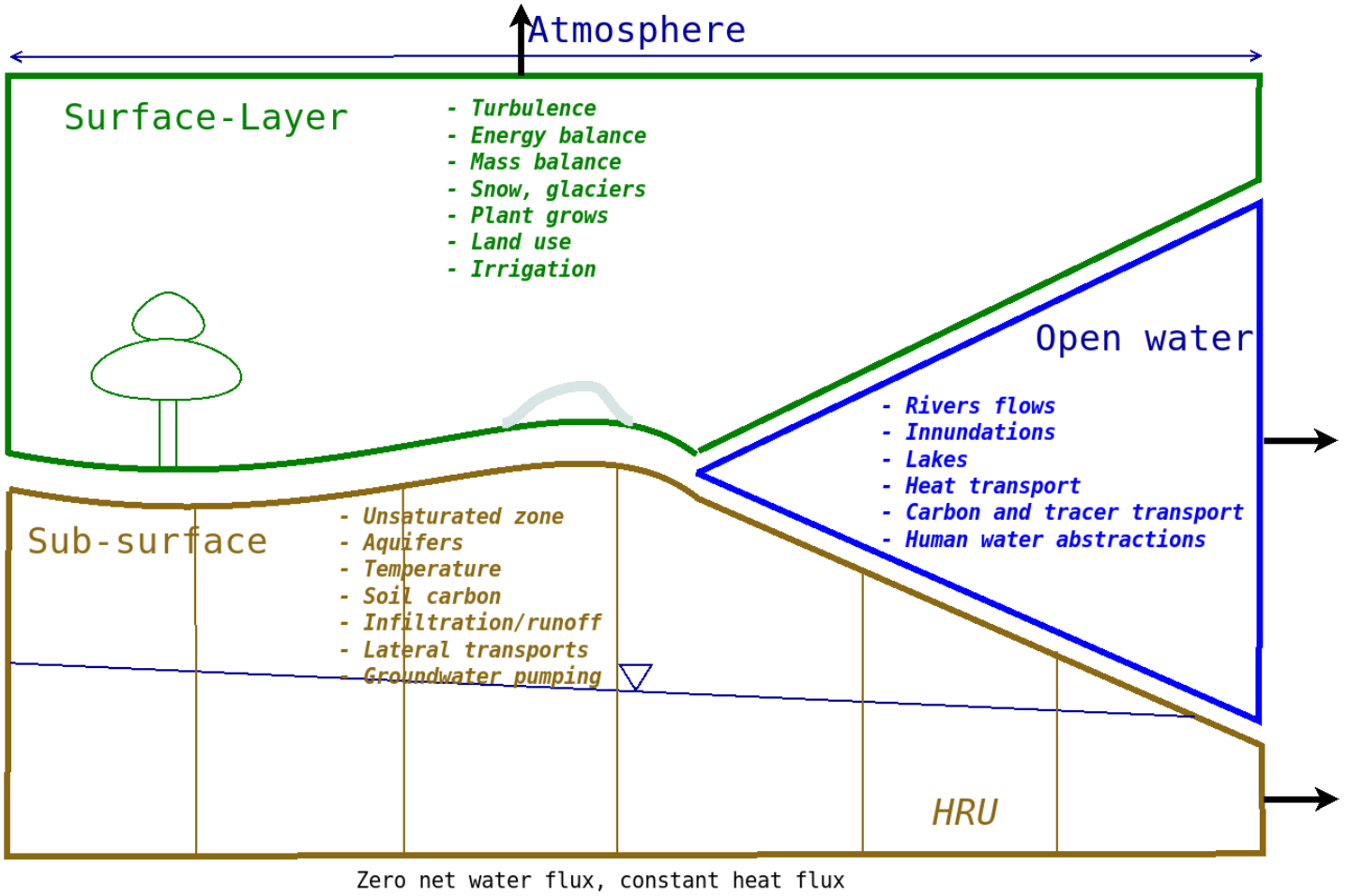
The proposed structure for Hydro-JULES

- A series of meetings and workshop between LSM modellers, hydrologists and hydro-geologists has taken place.
- A new structure starts to emerge.

An LSM divided into three components

- Based on the physical and numerical constraints to represent the processes at the land surface three components were identified :
  - *Surface layer* : Interactions between the surface and the atmosphere.
  - *Sub surface* : Movements of water, temperature and constituents in the soils up to the bedrock.
  - *Open water* : Movements of water at the surface with its temperature and constituents including flooding and interactions with the sea.
- This division emerged from considering the best suited discretization of the dominant equations.

The repartition of processes



The interfaces can be “active” and implement dis-aggregation rules and exploit geographical correlations.

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The next steps

- Introduce the 2 new interfaces within JULES.
- Re-implement the current soil moisture parametrization along HRU units.
- Adapt the routing scheme to the new interfaces.
- Start implementing new representations :
  - Soil moisture and groundwater model developed in the hydrological community.
  - Coupling to the ocean and addressing flooding issues.

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