



A new estimation of water and nutrients (N & P) discharge to the Mediterranean Sea from the LPJmL model: modelling the dynamics of the land-sea nutrient transfer

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Model presentation

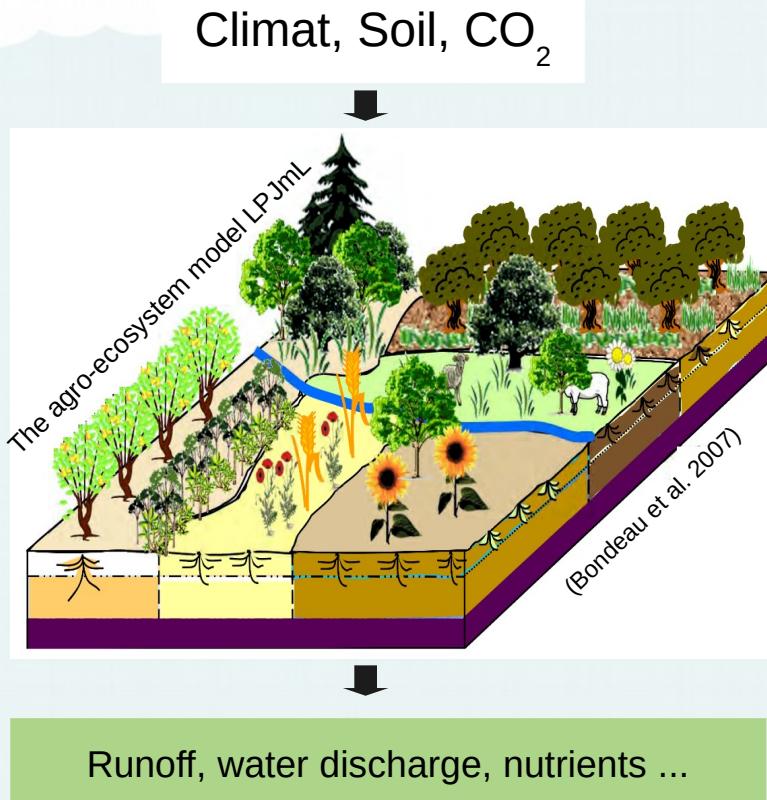
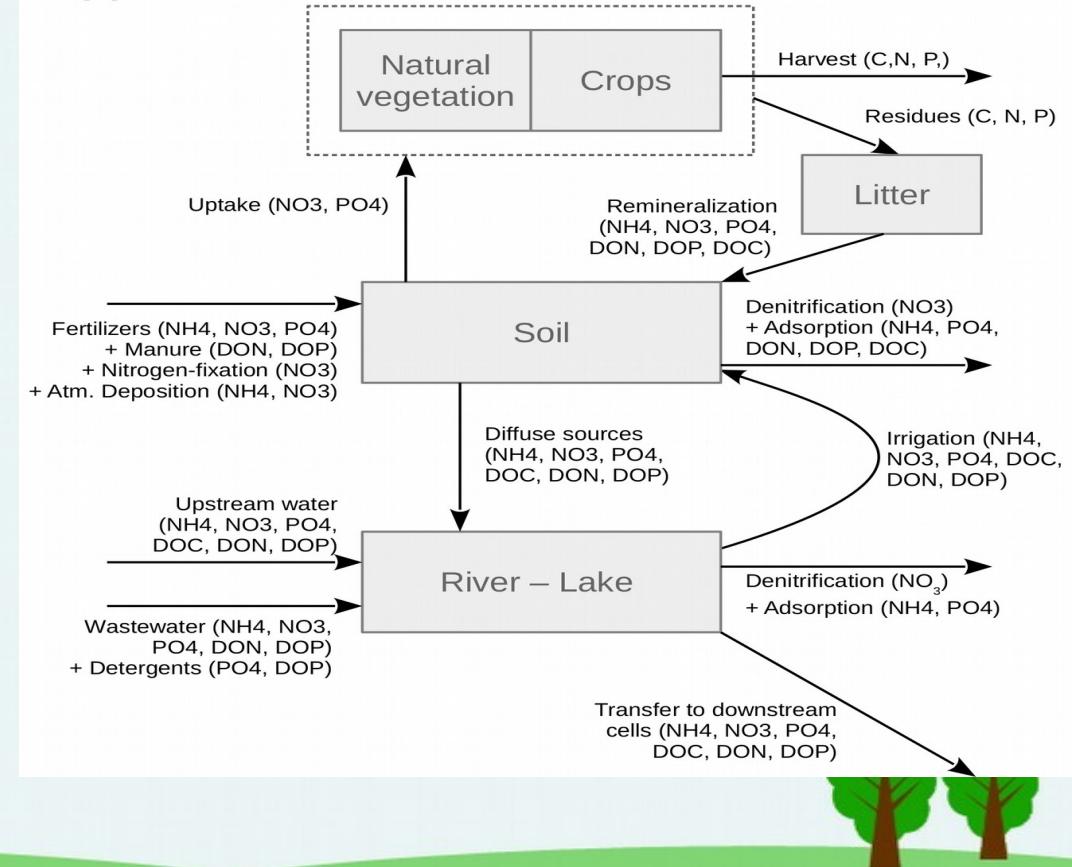


Figure 1. Transfer of nutrients in a grid cell of LPJmL.



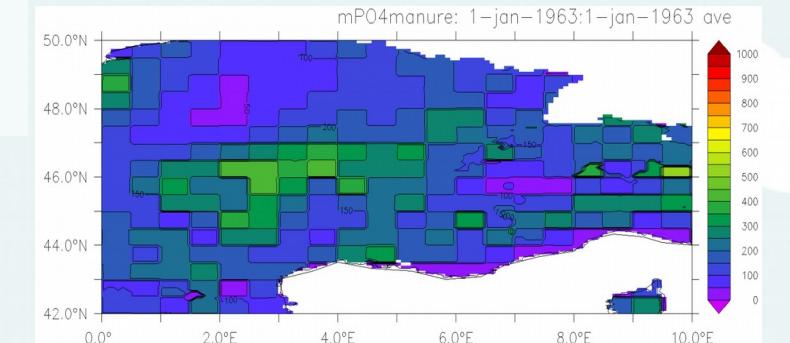
Inputs and boundary conditions : Rhône (1961-2009)



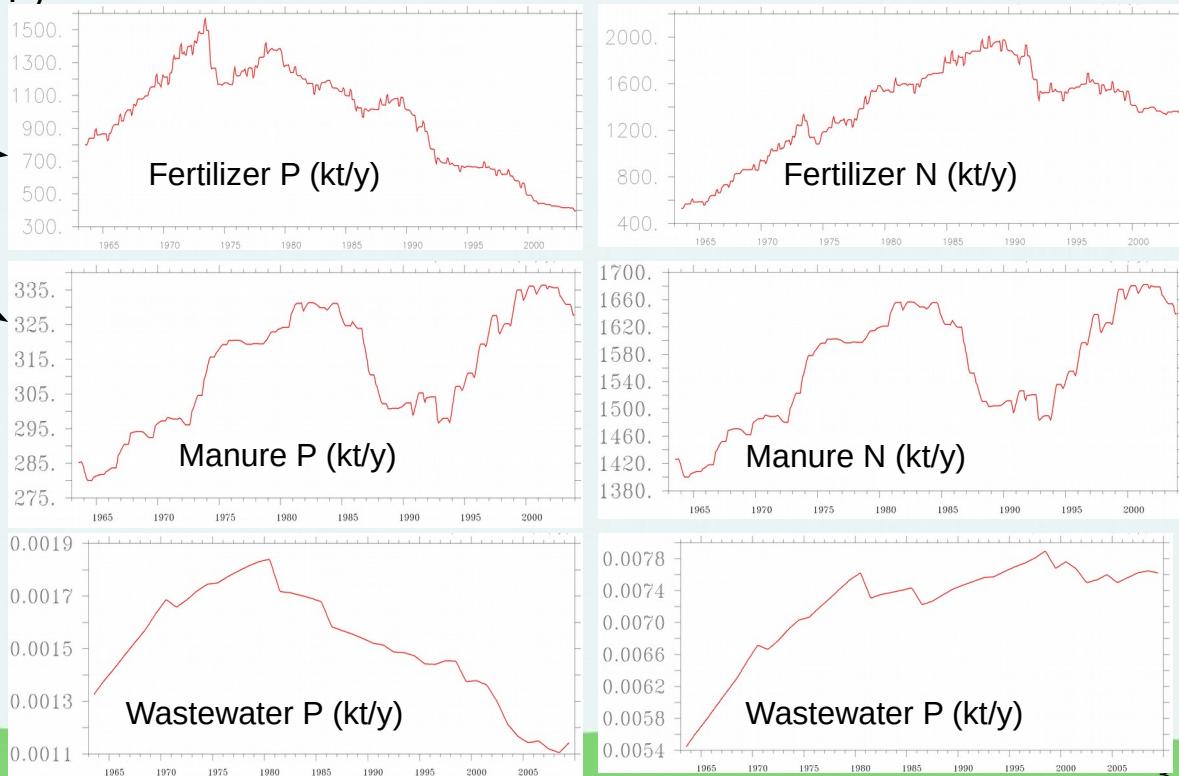
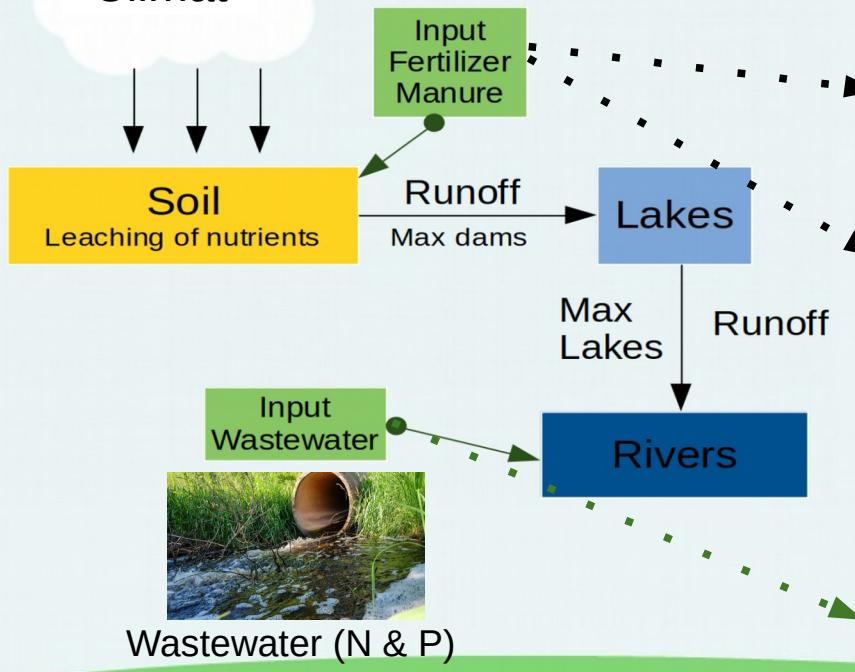
Fertilizer (N & P)



Manure (N & P)

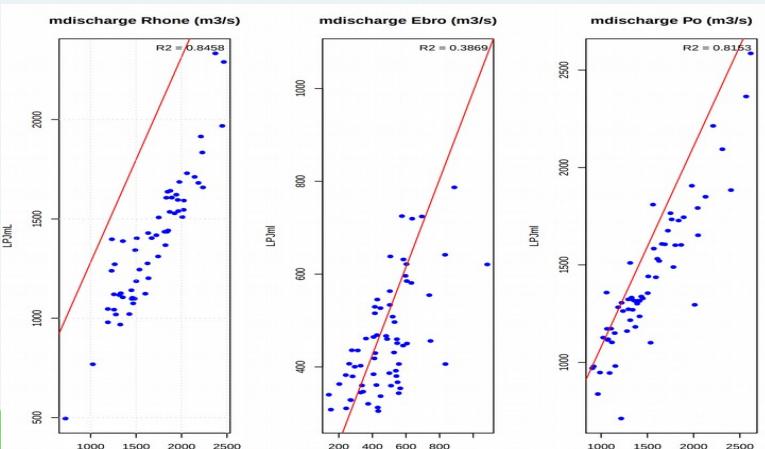
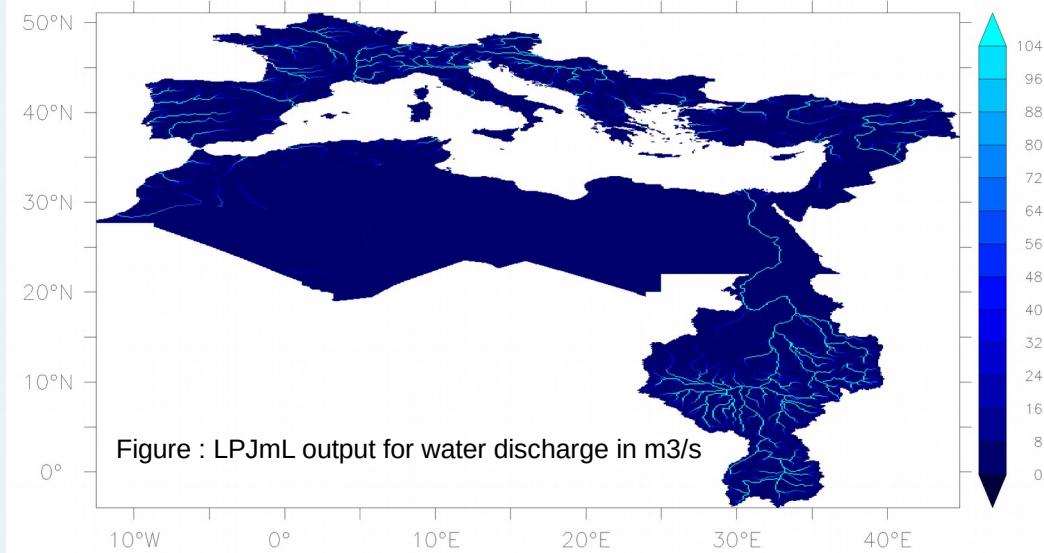
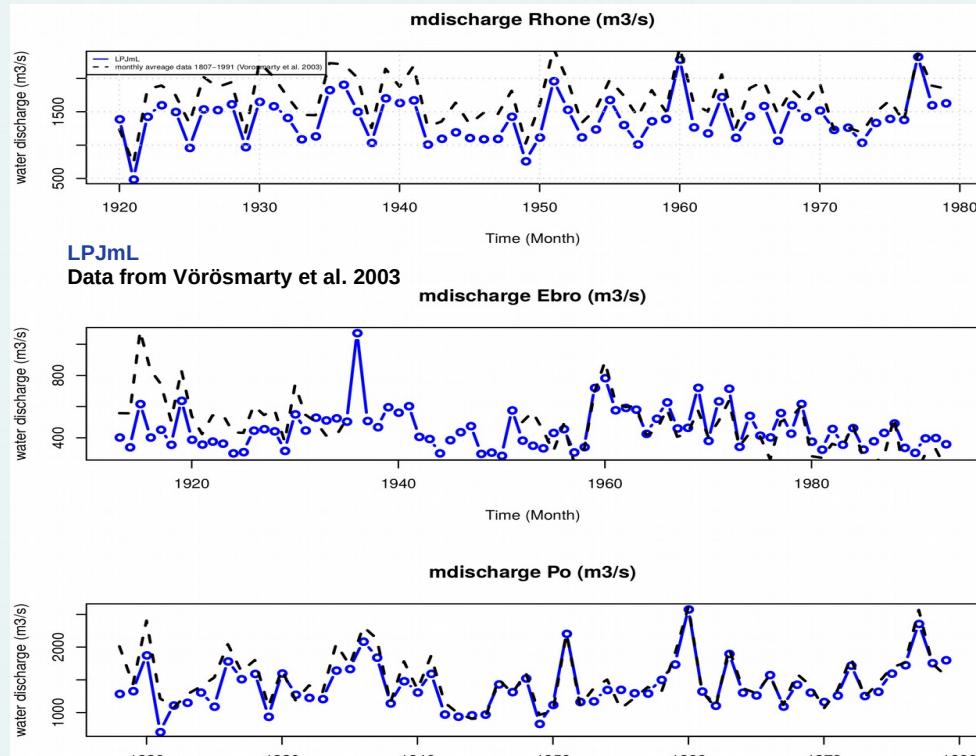


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Evaluation of simulated water discharge

The model succeeds in simulating the temporal variations of water discharge for the main rivers of the Mediterranean Sea (Rhone, Ebro and Po)



Evaluation of the simulated nutrients (NO_3 , PO_4) for the Rhône river

First basin-wide LPJmL simulation at 1/12° shows a quite good agreement between the simulated nutrients concentration (NO_3 and PO_4) and available in-situ data.

