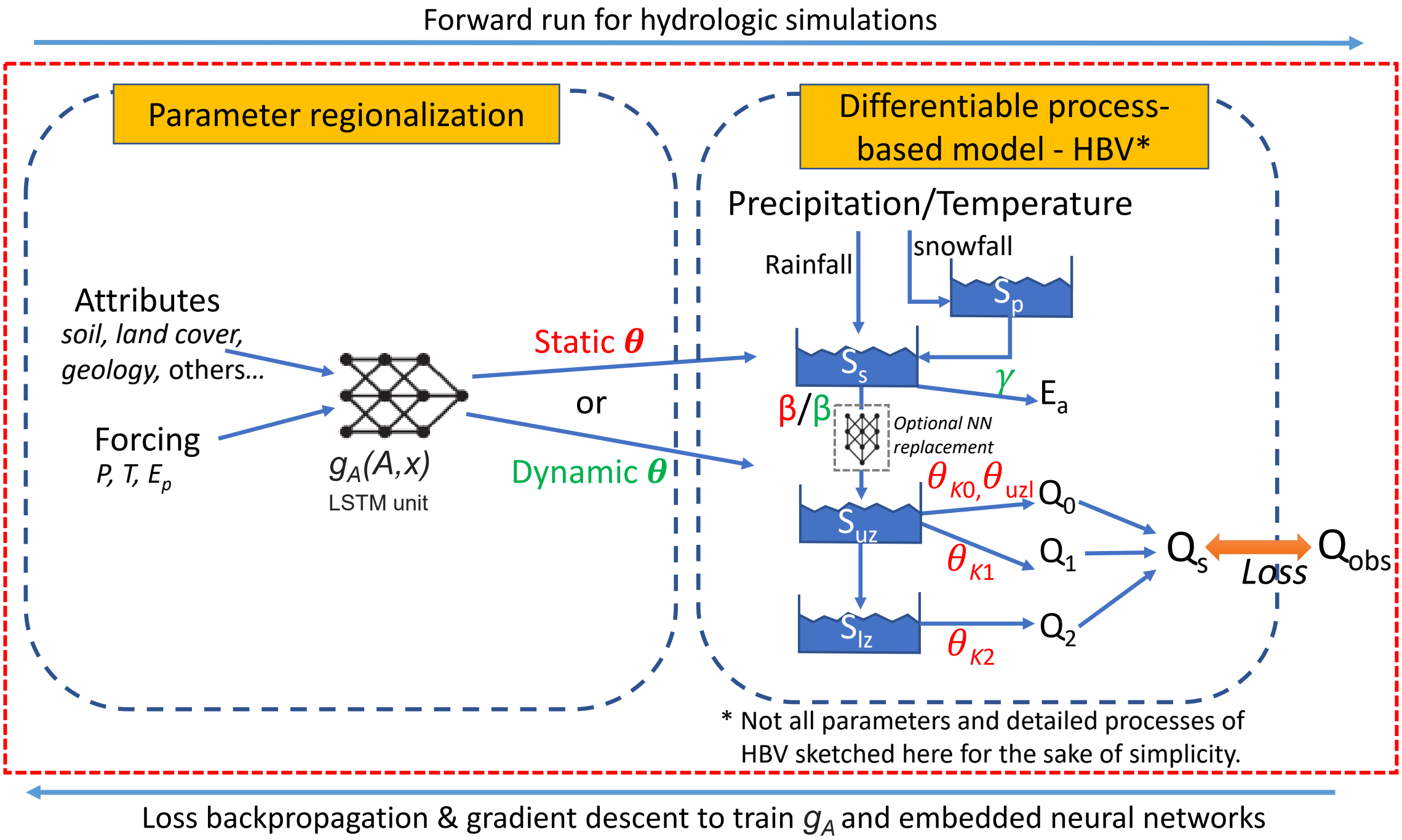
Forward run for hydrologic simulations
Parameter regionalization
Differentiable process-based model - HBV*
Attributes
soil, land cover, geology, others…
Forcing
P, T, Ep
gA(A,x)
LSTM unit
Static θ
or
Dynamic θ
Precipitation/Temperature
Rainfall
snowfall
Sp
Ss
γ
Ea
β/β
Optional NN replacement
θK0, θuzl
Suz
Q0
θK1
Q1
Qs
Loss
Qobs
Slz
θK2
Q2
* Not all parameters and detailed processes of HBV sketched here for the sake of simplicity.
Loss backpropagation & gradient descent to train gA and embedded neural networks