



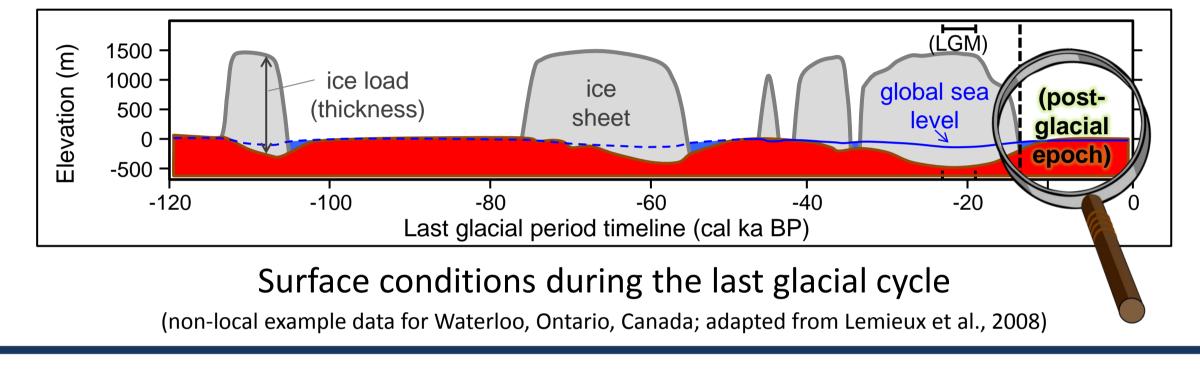
Abstract n°2343

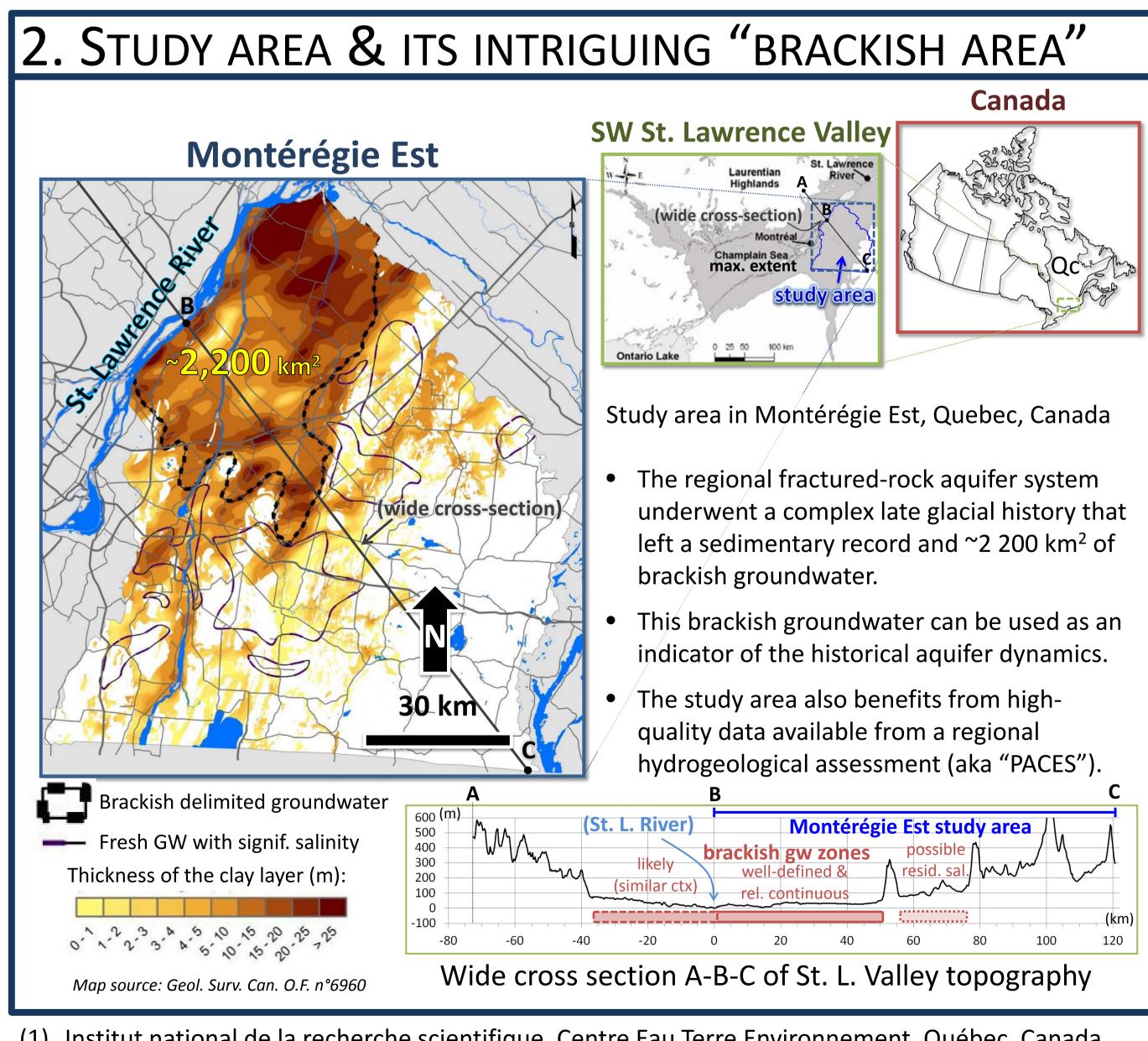
1. INTRODUCTION AND OBJECTIVES

This study aims to better understand changes in regional aquifer dynamics that followed the Champlain Sea marine incursion, ≈ 13000 years ago.

The main objectives are to:

- reconstruct the evolution of groundwater salinity and dynamics following deglaciation, using physically-based numerical models;
- identify the key palaeo-hydrogeologic processes involved;
- explain the present-day state of the system, especially the persistence 3. of brackish groundwater even at shallow depths;
- improve our understanding of high-amplitude marine transgression-4. regression effects on groundwater systems in general.





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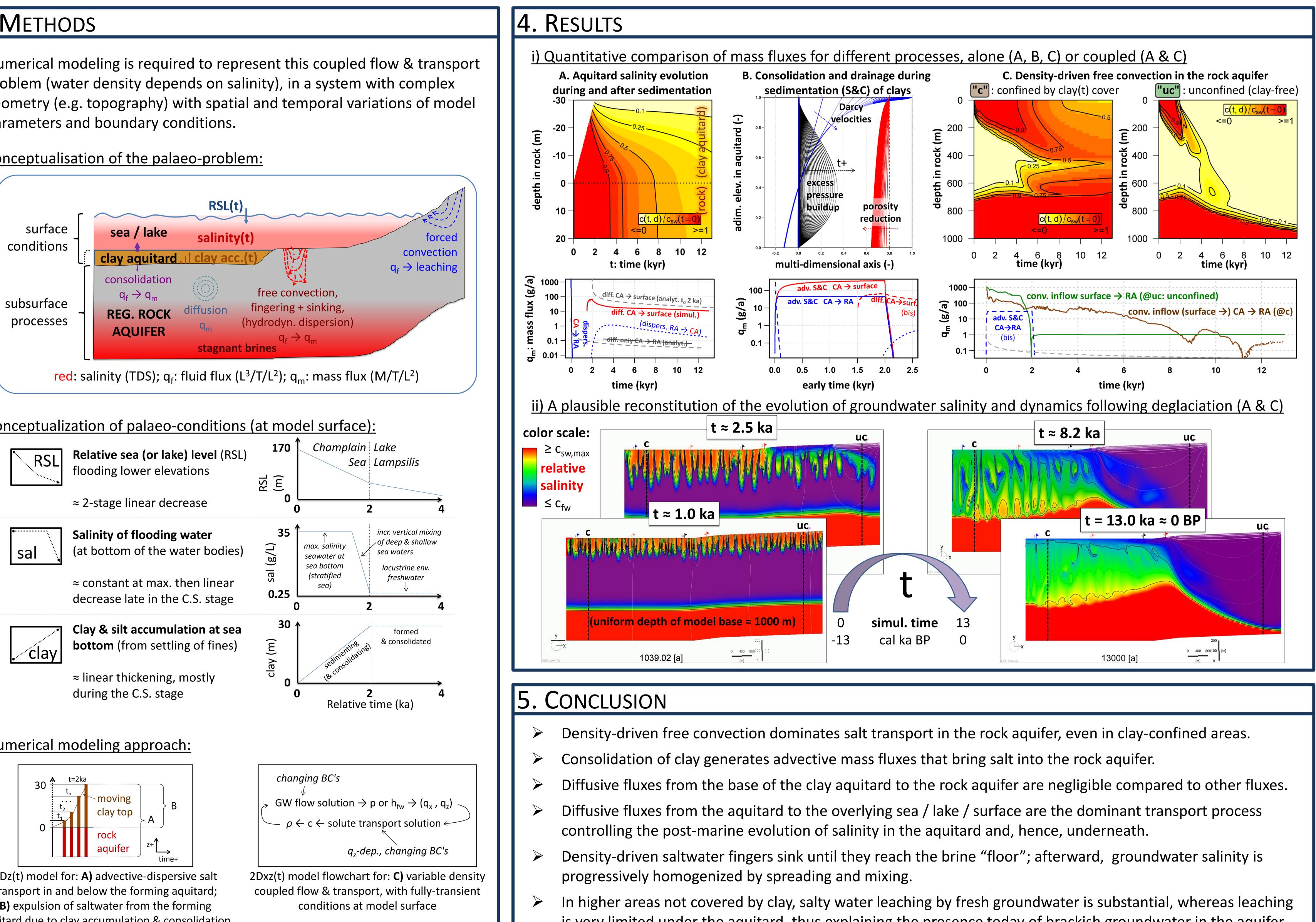
(to contact first author: marc.laurencelle@ete.inrs.ca)

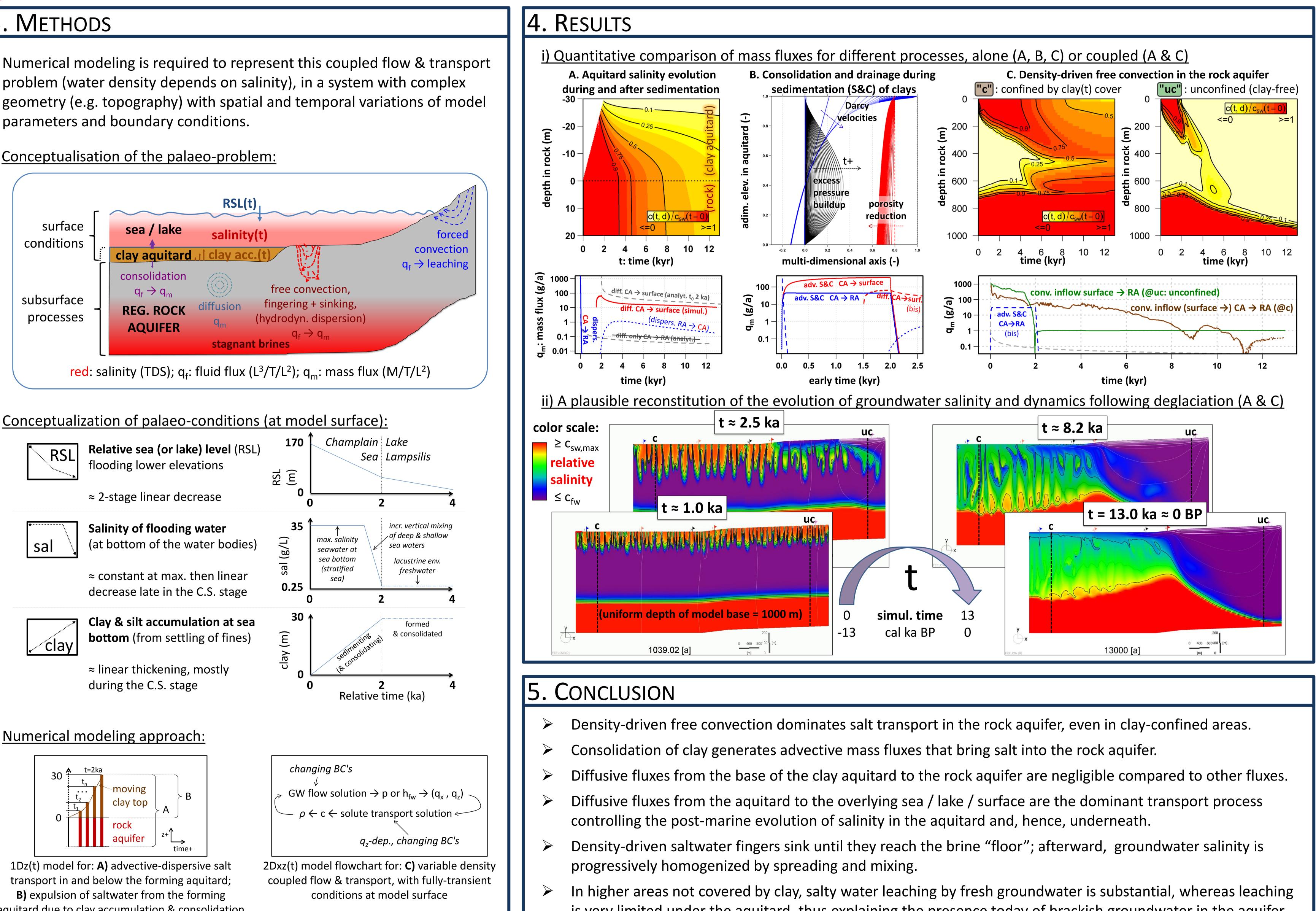
Modeling of the palaeo-hydrogeological evolution of a fractured-rock aquifer following the Champlain Sea Transgression in the St. Lawrence Valley (Quebec) UNIVERSITÉ DE RECHERCHE Marc Laurencelle^{(1)*}, René Lefebvre⁽¹⁾, John Molson⁽²⁾, Michel Parent⁽³⁾

3. METHODS

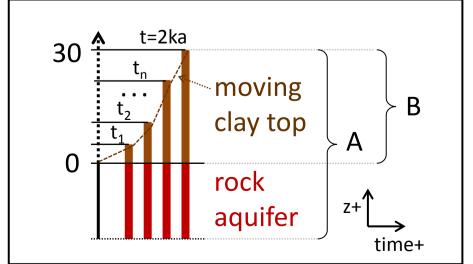
parameters and boundary conditions.

Conceptualisation of the palaeo-problem:

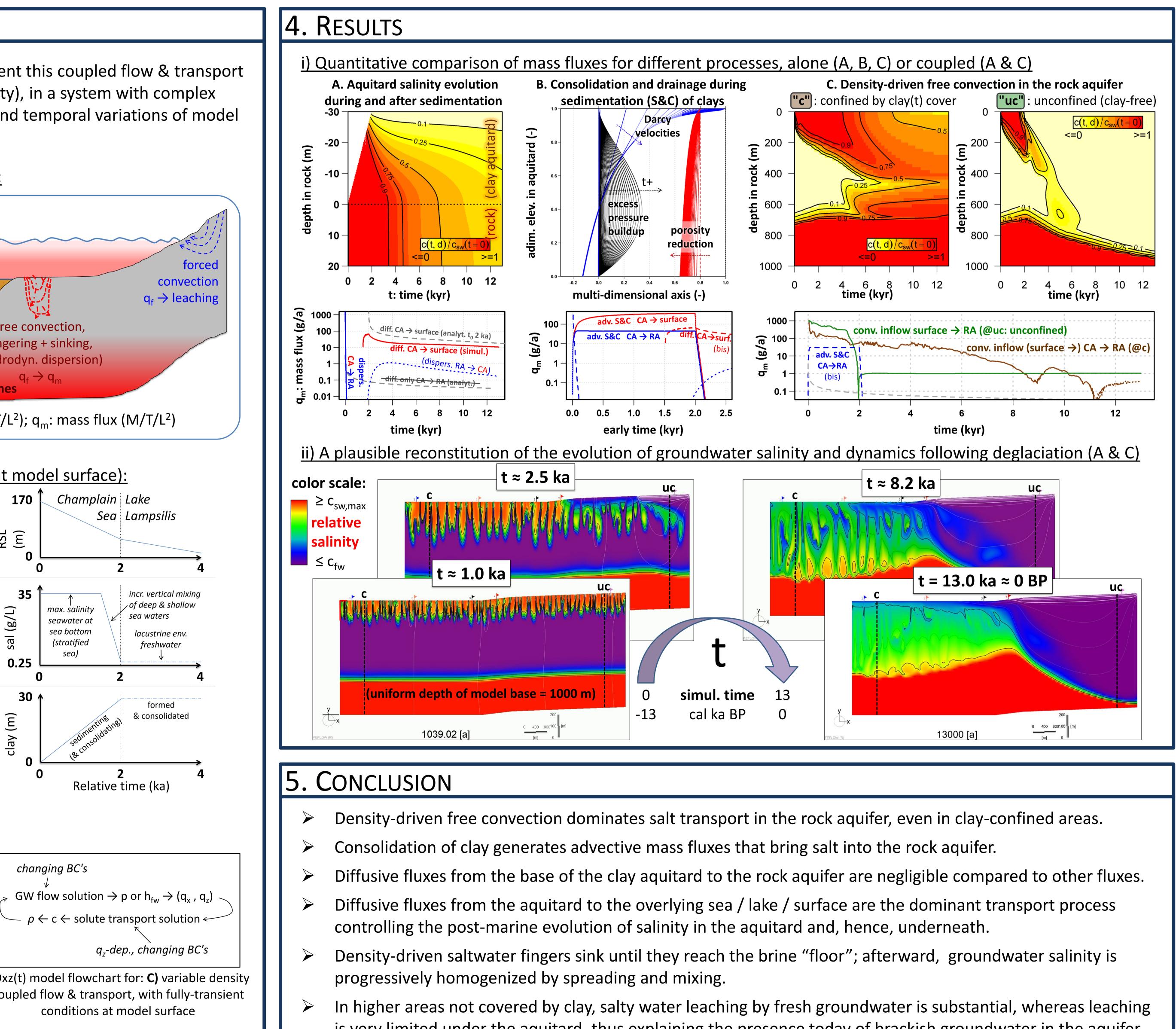




Numerical modeling approach:



aquitard due to clay accumulation & consolidation



is very limited under the aquitard, thus explaining the presence today of brackish groundwater in the aquifer.