## Question and objectives

To a what extent should we spatially differentiate an N input tax aimed at halving N fertilizer use in agriculture?

- ▶ Evaluate three public policy scenarios: EU, MS, and FADN region.

How climate change will affect policies?

- ▶ Provide estimates for **B1** climate change scenario
  ($\sim$ RCP 4.5, T $\nearrow$ of 1.1 - 2.6 °C).

- ▶ Integrates land use change feedback concerning policy and climate change impacts on agricultural profits.

Methodology: Lungarska and Chakir (2018)
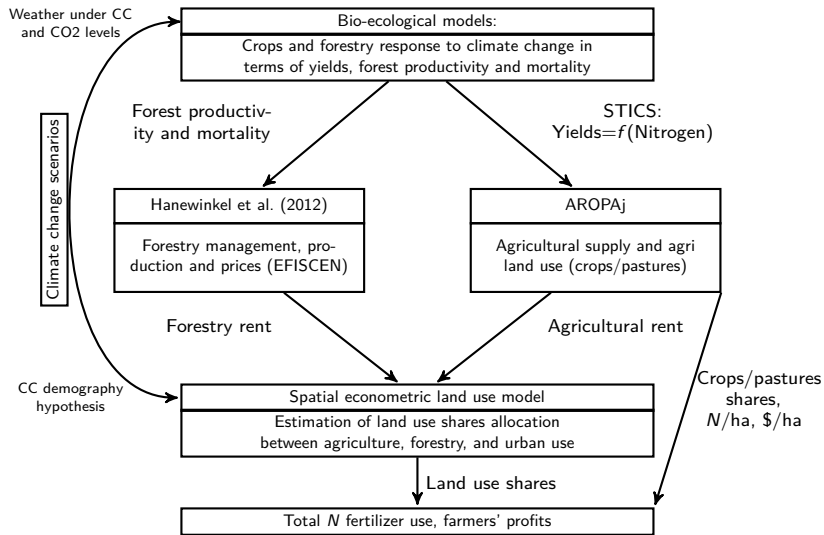
Scenario comparison

Table : Summary results for the three reduction scenarios

Scenario	$GM/GM_{baseline}$ (No LUC)	$GM/GM_{baseline}$ (LUC)
CTL 50% @ EU	26%	24%
CTL 50% @ MS	19%	25%
CTL 50% @ FADN	21%	27%
B1 50% @ EU	28%	36%
B1 50% @ MS	27%	37%
B1 50% @ FADN	28%	38%

€70 - €320 billion of damages

vs

€170 billions of gross value added in 2017.

@ BAU GM of €120 billions, cost of policy ⇒ €23 - €46 billions.