



# ecoesione

Social  
Cohesion in  
the Ecological  
Transition



**Societal impact to  
energy transition,  
acceptability and  
social barriers**

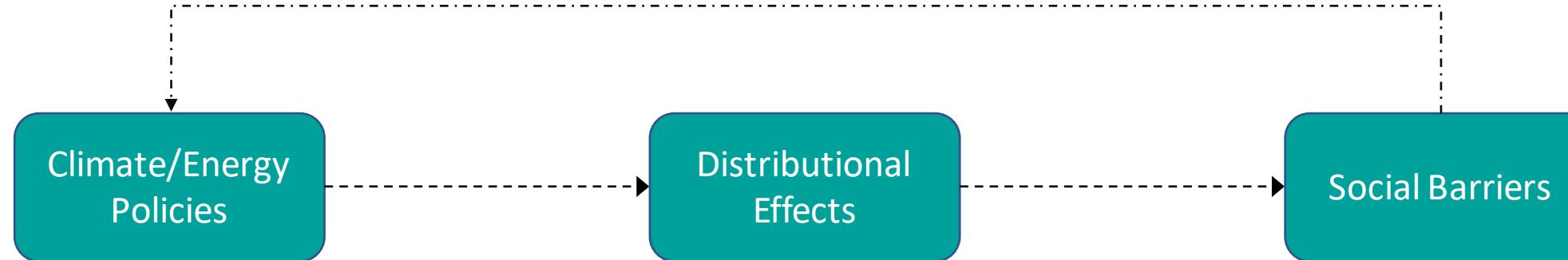
The 6th Low Emission Advanced  
Power (LEAP) Workshop  
Session 3 - Transition cost and impact

**1 Nov 2021**

Simone D'Alessandro

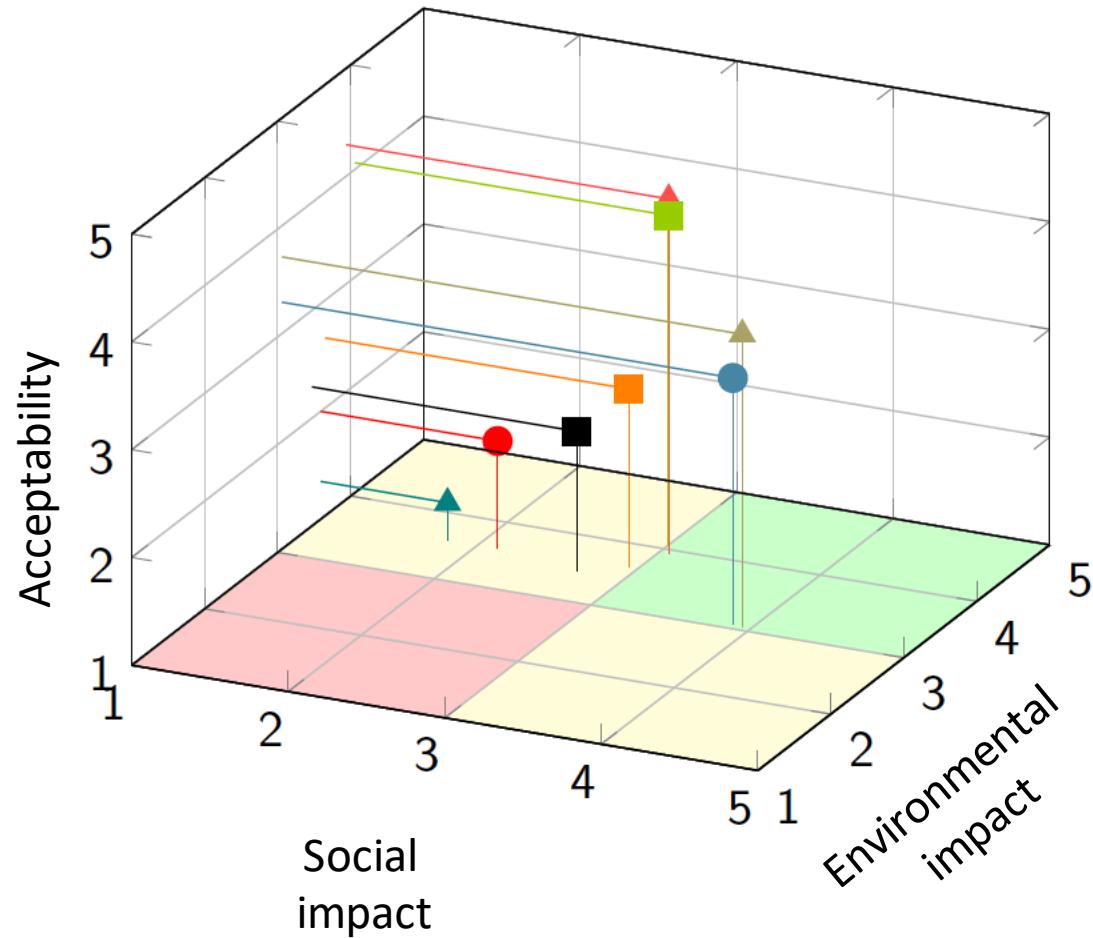


# Social barriers to the ecological transition



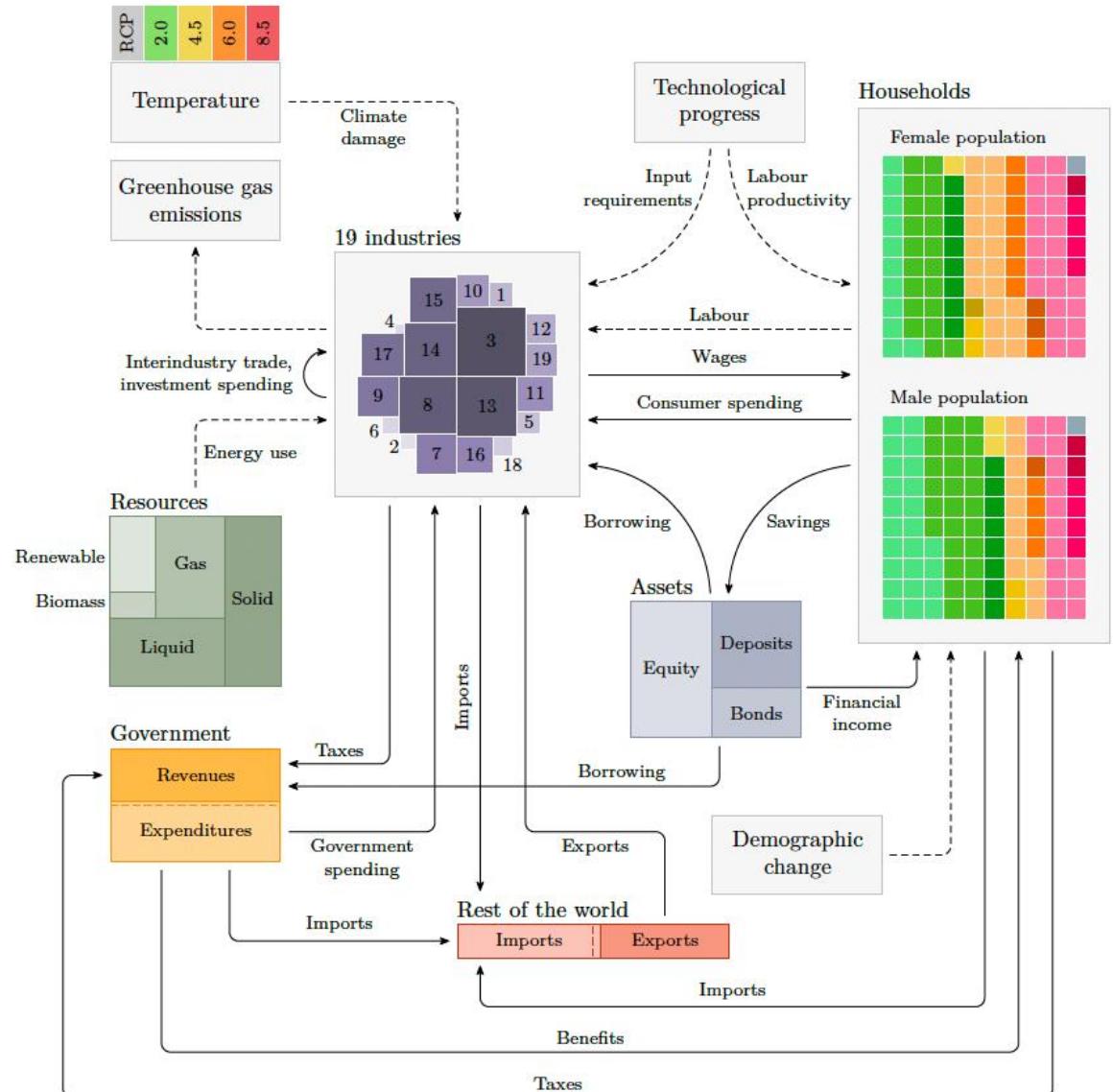
- Energy efficiency
- RES Expansion
- Electrification
- Regressive effects
- Inequality dimensions
- Justice
- Social unrest
- Behavioral lock-in
- Lack of political support

# Preliminary expert survey



- ▲ Carbon tax
- Carbon tax + redistribution
- Wealth tax
- ▲ Energy efficiency of buildings incentives
- Electric cars incentives
- Increase in electricity price + RES dev
- ▲ Public funds with a layoff freeze
- Working time reduction

# Dynamic Macrosimulation Model



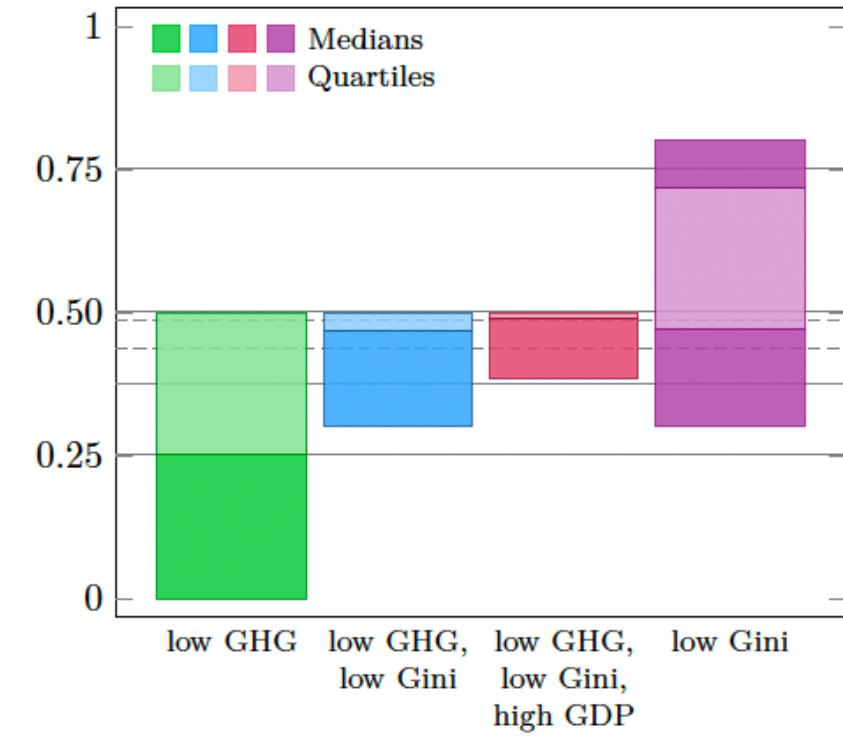
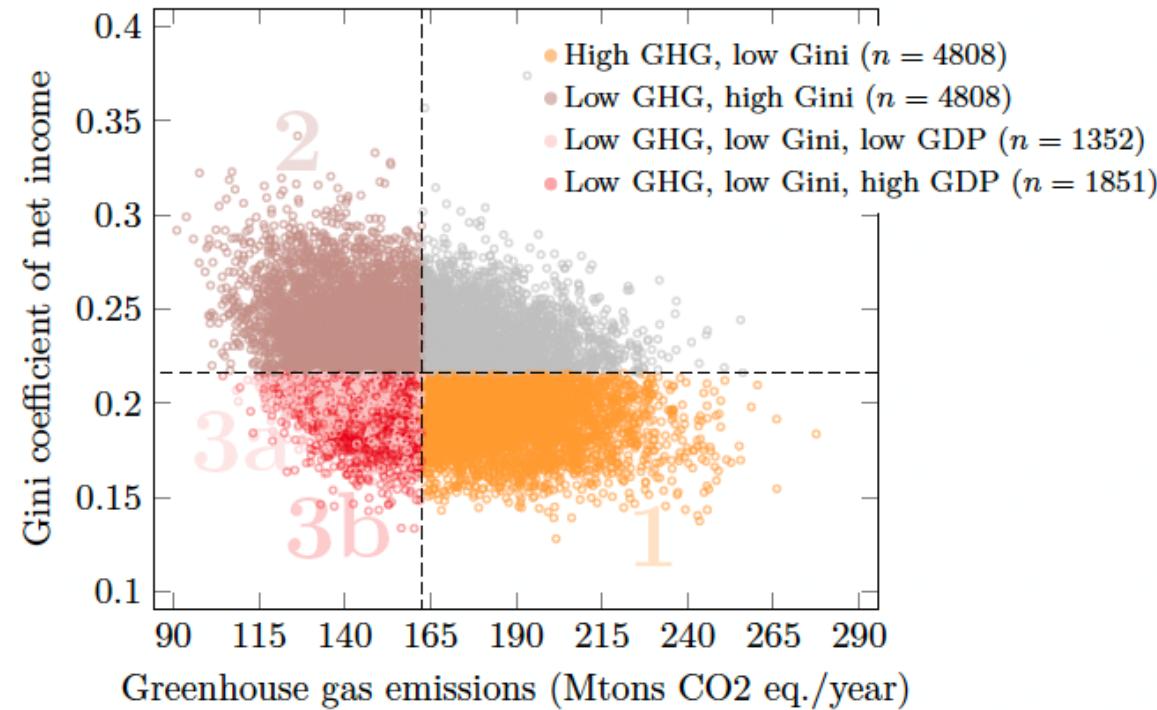
## Model overview

The solid and dashed arrows represent monetary and non-monetary flows, respectively.

The Households, Industries, Resources, Assets, Government, and Rest of the world boxes summarily represent first-period simulation results. The dashed lines in the Government and Rest of the world boxes are drawn for reference and cut the area of the rectangles in half.

Abbreviations in the Households box describe the following groups: E = employed; U = unemployed; O = out of labour force; R = retired; l = low-skilled; m = middle-skilled; h = high-skilled; C = capitalists.

# Results: Emissions, Inequality and Growth



## The Inequality-Emission Tradeoff

the relation between greenhouse gas emissions and inequality at the end of the simulation run (2050). Each point represents a different simulation. The vertical and horizontal dashed thresholds are the median values calculated over all simulations.