

Snapshot: Baseline Assumptions for Models within the SUPREMA project

External drivers used in the baseline

- Exogenous variables and time horizon taken into account by each of the models of the SUPREMA family (detailed explanations below)

| Drivers | AGMEMOD | | CAPRI | | GLOBIOM | | IFM-CAP | MAGNET | | MITERRA |
|--|------------------------------------|-------------|-----------------------------|-------------|--|------|---------|---------------|------------------|---------|
| GDP & Population (Source and Coverage) | DG AGRI MTO | 2030 | DG AGRI MTO | 2030 | DG ECFIN GEM-E3 (EU) SSP Data-base (RoW) | 2050 | ** | SSP Data-base | 2020-2050 / 2100 | ** |
| | (as GLO-BIOM) * | 2030 - 2050 | (as GLO-BIOM) | 2030 - 2050 | | | | | | |
| Output prices | x (world market price projections) | | x (from AGLINK and GLOBIOM) | | | | x | | | |
| Oil price *** | x | | **** | | | | | possible | | |
| Inflation | x | | x | | | | | possible | | |
| Technological change | x | | x | | x | | x | x | | |
| Exchange rates | x | | x | | x | | | x | | |
| Time Horizon | 2030 / 2050 | | 2030 / 2050 | | 2050 | | 2030 | 2030 / 2050 | | |

* To be developed ** MITERRA and IFM-CAP are implicitly related to DG AGRI MTO through links with CAPRI and AGMEMOD *** AGMEMOD, CAPRI: generally non-agricultural input prices are assumed to be constant in real terms (only inflation increase) **** In CAPRI the oil price in the baseline is not explicit

Technological change assumptions

- Technological change is generally included as yield trend increases aligned to the DG AGRI MTO for the EU in all models except AGMEMOD (specifies explicit yield function)
- Some models include endogenous technology adoption (e.g. CAPRI for mitigation technologies for non-CO2 GHG), but also other technology representations possible

Diet and consumer behaviour

- Developments in future dietary preferences can be captured by income elasticity values or external drivers like calorie intake (GLOBIOM, MAGNET, CAPRI)

Policy representation in the baseline

- Climate policy representation is covered via bioenergy assumptions and mitigation targets either as hard constraints or as equivalent carbon prices (GLOBIOM: prices for CO₂, N₂O and CH₄ emissions from agriculture, forestry and other land use (AFOLU))
- MAGNET has a module for emission trading, renewable energy targets, biofuels mandates as well as carbon prices
- Generally, representation of agricultural policy in the RoW is not as detailed as for the EU (except MAGNET and GLOBIOM)