

Snapshot: Outcomes of the Medium-term CAP Related Scenarios of the SUPREMA Project

In the medium-term assessment, Common Agricultural Policy (CAP) related scenarios were addressed with a focus on climate and environment, production as well as a change in consumer dietary preferences. In the following the results of the two medium-term scenarios will be depicted. Scenario 1 'More healthy and modern' (MHM) assumes a shift in meat consumption due to ageing population, concerns on ecological footprints, preference shift of youngsters and preferences towards a healthier consumption. The second scenario 'More green value for less money' (MVLM) assumes a CAP budget reduction while simultaneously improving greening measures within the CAP. Details can be found in Deliverable D3.2.

Scenario results

Scenario 1: 'More healthy and modern' (MHM)

The decline in meat consumption due to changing patterns results in relative small price effects for beef (ca. -1.6 % compared to the baseline in 2030) and strong ones for pork (around -21 %) in AGMEMOD whereas the numbers for CAPRI are slightly different (-12.4 % for beef and -5.6 % for pork). In the case of poultry, both models project an only small effect. The beef price decline is low because cuts in beef consumption are small in contrast to pork. Therefore, a higher impact on pork consumption and price could be expected. On the other side a price rebound effect may occur, since dropping prices may also incentive consumers to buy cheap meat. In contrast, Production changes are mainly driven by price changes. Reduced consumption affects EU production only to a smaller extent (max. -5 % for pork in AGMEMOD). Also the beef production is projected to decrease only by a small amount up to -3.4 % in CAPRI. Following this, the EU has more room to export, especially pig meat. The poultry production remains almost untouched. In line with the assumed decrease in meat consumption the per capita consumption of red meat is projected to decline in both models by a level of -8 to -9 % compared to the baseline in 2030. The decline in red meat consumption leads to some substitution and also to slight shifts in production towards white meat (poultry). All results are summarised in Table 1.

Table 1 | Impacts of the scenario 'MHM'

Product		Percentage (%) deviation form baseline in 2030	
		AGMEMOD	CAPRI
Beef	Production	-0.32	-3.44
	Consumption per capita	-8.95	-8.32
	Price	-1.57	-12.44
Pork	Production	-4.98	-3.80
	Consumption per capita	-8.57	-8.75
	Price	-20.80	-5.64
Poultry	Production	0.04	-0.3
	Consumption per capita	-0.29	-0.90
	Price	-2.31	-0.99

Assessing the climate impact of the changing consumption patterns first analyses linking the models AGMEMOD with MITERRA can be seen in Figure 1. The results show that transition of the average EU diet towards a more sustainable pattern will lead to emission reductions in more than half of the European territory (green coloured areas). In general, a strong shift in production and GHG emissions towards the EU13 Member States is projected. Emission reductions result mainly from a reduction in animal production, especially the pig production.

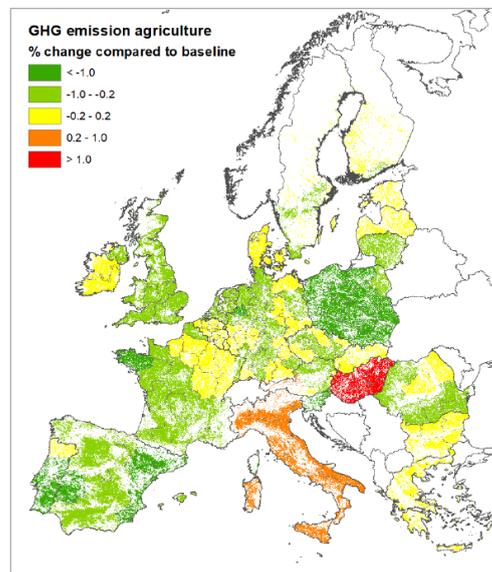


Figure 1 | GHG emission agriculture (% change compared to baseline) for Scenario 'More healthy and modern'

Scenario 2: 'More green value for less money' (MVLM)

Regarding the changes in production, the impacts are limited as can be seen in Table 2. This seems plausible as the simulated budget reduction implies a reduction in farm payments, which are however largely decoupled from production. However, for the depicted crops the reduction in VCS may nevertheless play a role. The simulated increase in ecological focus area is expected to negatively affect the available crop land, which will especially impact the sugar beet production due to an arable land competition. Taking into account the importance of direct and coupled payments for especially the beef sector, both models might underestimate the potential impact of the simulated coupled payment reduction. The limited impact on production continues to have only minor impact on other variables. Due to minor price changes upon the projected production reduction the per capita consumption is hardly affected. As expected from the supply reduction due to a CAP budget decline and increasing EFA areas, prices are projected to increase. In line with the minor production decreases, the price decreases are very limited. The Only exception is the price projection in AGMEMOD. This could be a result of the structure of substitution patterns between meat and dairy products in the AGMEMOD demand module, as well as from rounding errors in the model solver routine (precision factor).

Table 2 | Impacts of the scenario ‘MVLN’

Product		Percentage (%) deviation form baseline in 2030	
		AGMEMOD	CAPRI
Beef	Production	-0.02	-0.22
	Consumption per capita	-0.00	-0.10
	Price	-0.01	0.41
Dairy	Production	-0.04	-0.10
	Consumption per capita	-0.00	-0.01
	Price	0.03	0.07
Sugar	Production	-0.01	-0.92
	Consumption per capita	-0.01	-0.00
	Price	-0.08	0.07

Assessing the climate impact of the changing consumption patterns first analyses linking the models AGMEMOD with MITERRA can be seen in Figure 2. The CAP scenario leads to a net reduction in crop/animal product output, which results in a positive environmental impact through a reduction of EU28 emissions. The model results confirm that the changes in CAP measures assumed, can contribute to EU sustainability (ammonia and N-leaching), biodiversity (ammonia), and climate (CH₄, N₂O, greenhouse gas) objectives. Nevertheless, Figure 2 also shows red regions with increased agricultural GHG emissions due to potential substitution effects in production. This underlines the importance to take into account potential impacts of substitution in animal production and land use changes when evaluating the (net) impact of such policies as spill-over

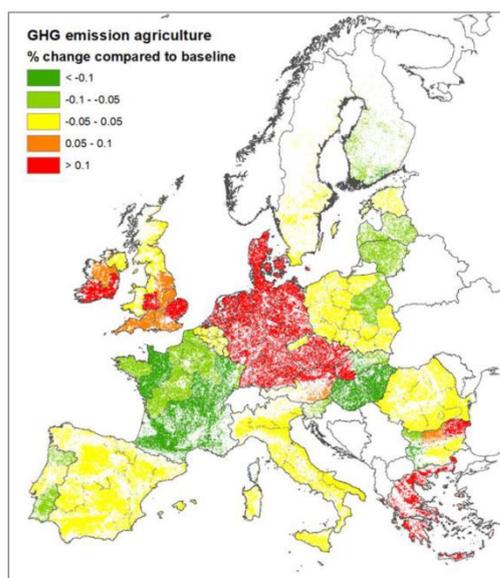


Figure 2 | GHG emission agriculture (% change compared to baseline) for Scenario ‘More green value for less money’

effects can make a difference. For a more detailed description of the Medium-term baseline and CAP related scenario results refer to Deliverable 3.2 and to the presentation held during the 3rd stakeholder workshop future prospects.

References:

Jongeneel, R., Gonzalez Martinez, A., Lesschen, J. P., Blanco, M. (2020) Deliverable 3.2: Agricultural policy scenario description and divergence analysis. Project Support for Policy Relevant Modelling of Agriculture (SUPREMA). Online: <https://www.suprema-project.eu>.

Jongeneel, R., Gonzalez Martinez, A., Lesschen, J. P., Blanco, M. (2020) AGMEMOD modelling within SUPREMA. Medium-term scenario - Background information & selected results. Presentation held during 3rd Stakeholders’ Workshop Strategic Prospects. Project Support for Policy Relevant Modelling of Agriculture (SUPREMA). Online: <https://www.suprema-project.eu>.