

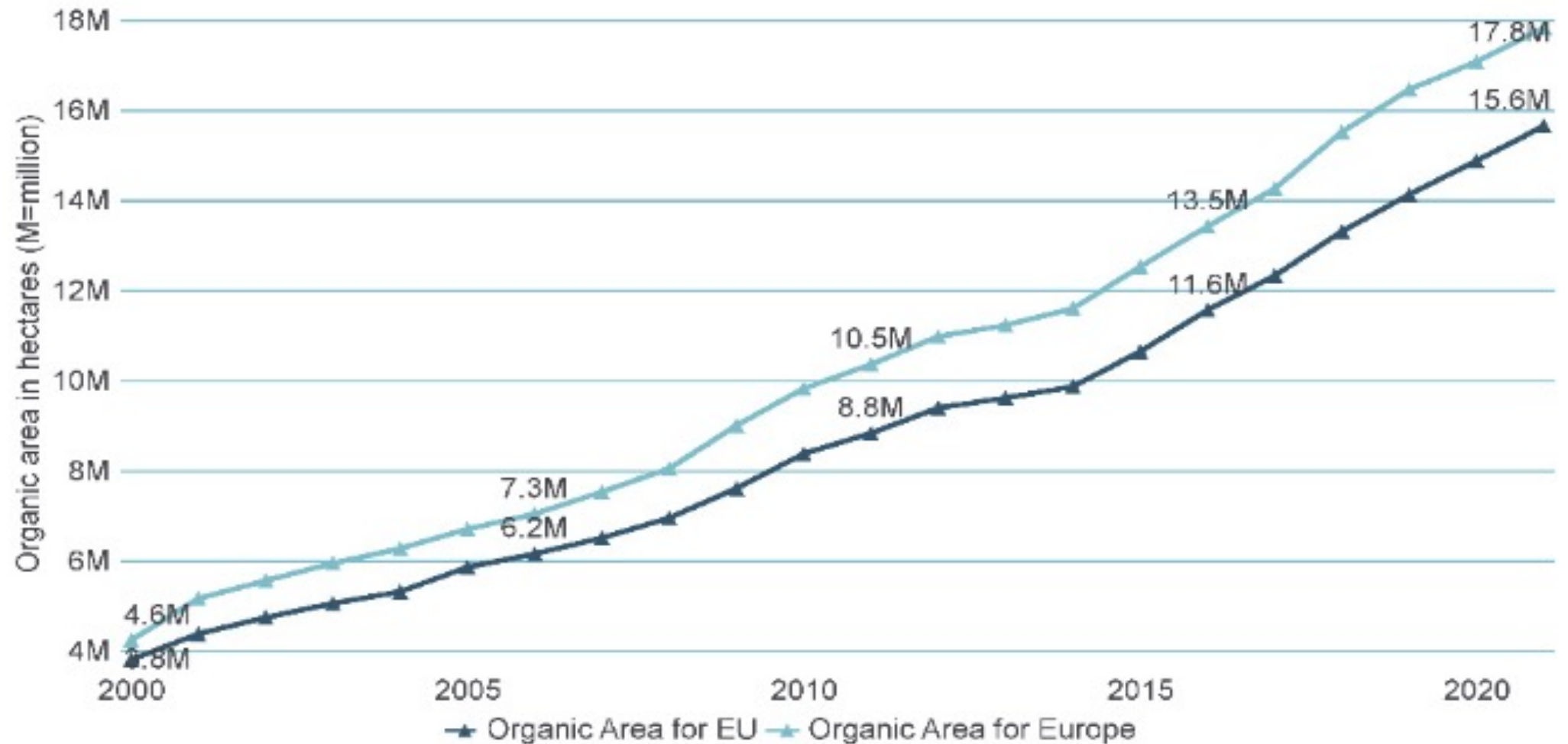
Environmental impacts of 25% organic land in the EU – a preliminary assessment

Nicolas Lampkin and Katrin Padel

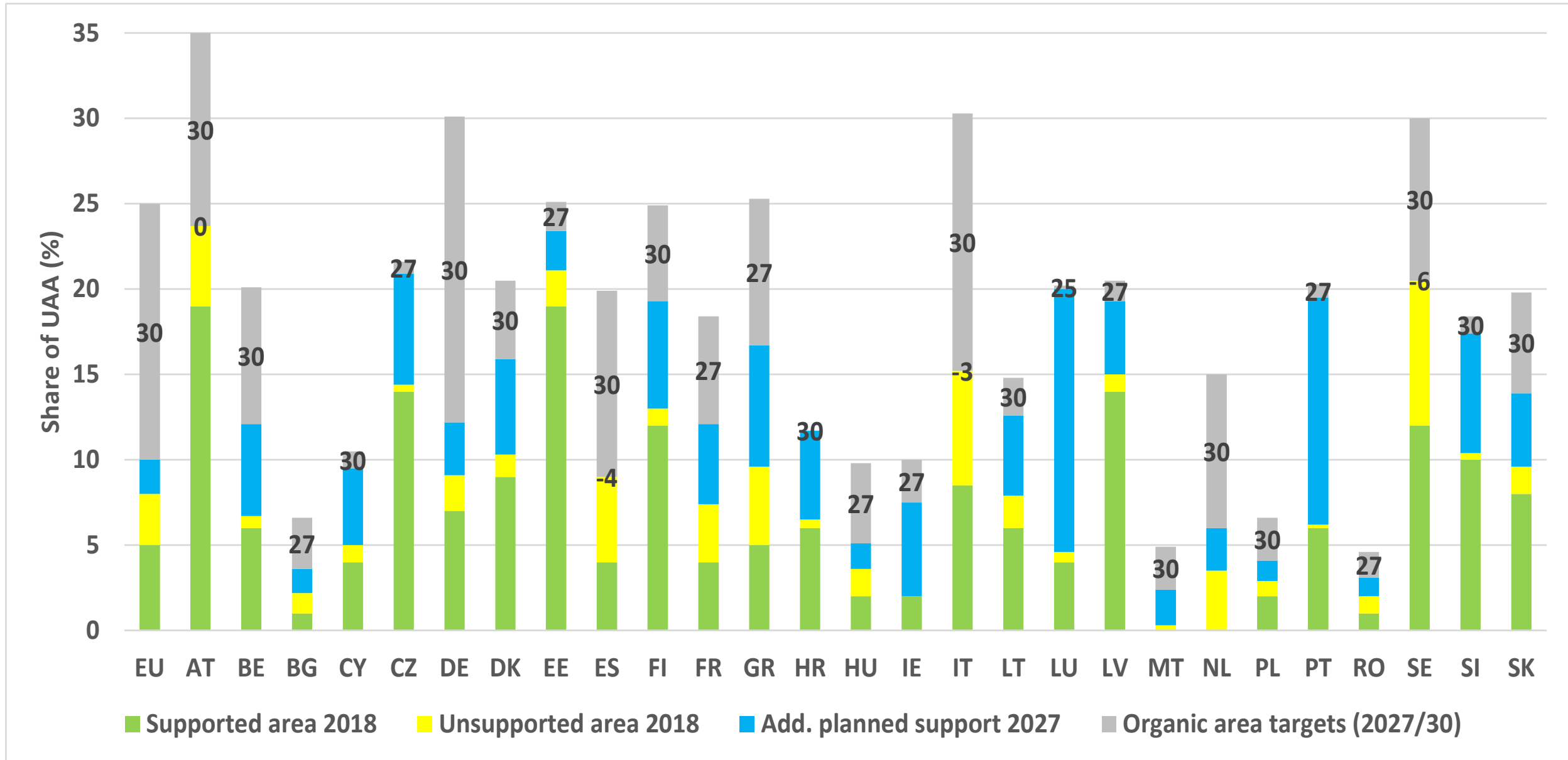
Organic Policy, Business and Research
Consultancy



Organic production growth in the EU and Europe - doubling every 10 years, markets trebling



Additional national organic land area share targets, 2027/2030 (grey)



Implications for land area targets

- EU Commission targeting 25% by 2030
- Member states individually targeting almost 20% of EU27 UAA by 2030
- Linear growth trend forecasts 16% by 2033 based on 2017-2021 actuals
- 15-20% likely and achievable by 2030, 20-25% possible by 2033
 - given increased policy commitments from MS from 2023
 - consistent with doubling every 10 years track record
- But what does this mean for the environment?

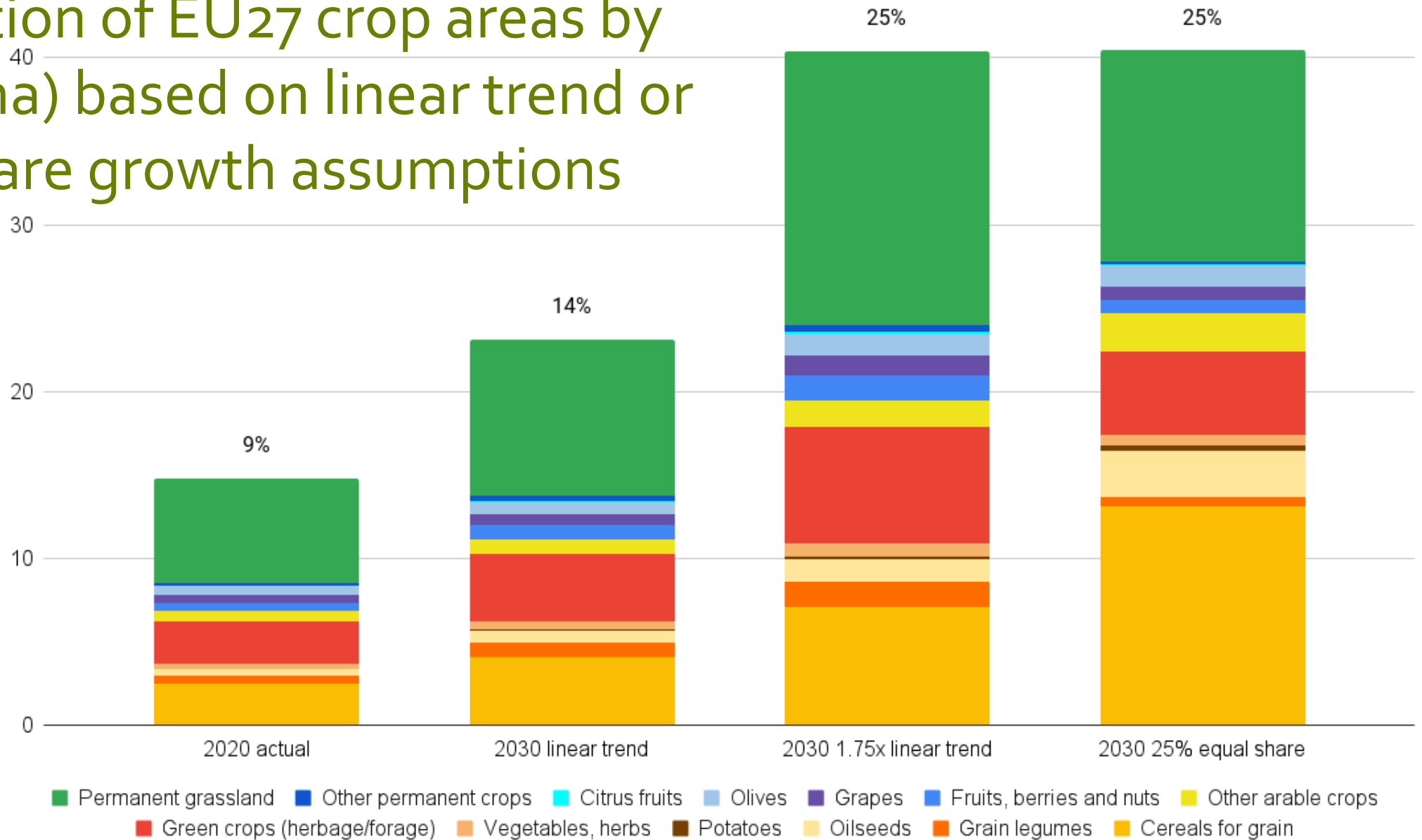
Comparison of different scenarios with no organic farming

1. Baseline 2019/20
2. Business as usual linear trend growth based on 2016-2020
3. 1,75 times linear trend growth to reach 25% by 2030
4. Equal 25% shares of different crops

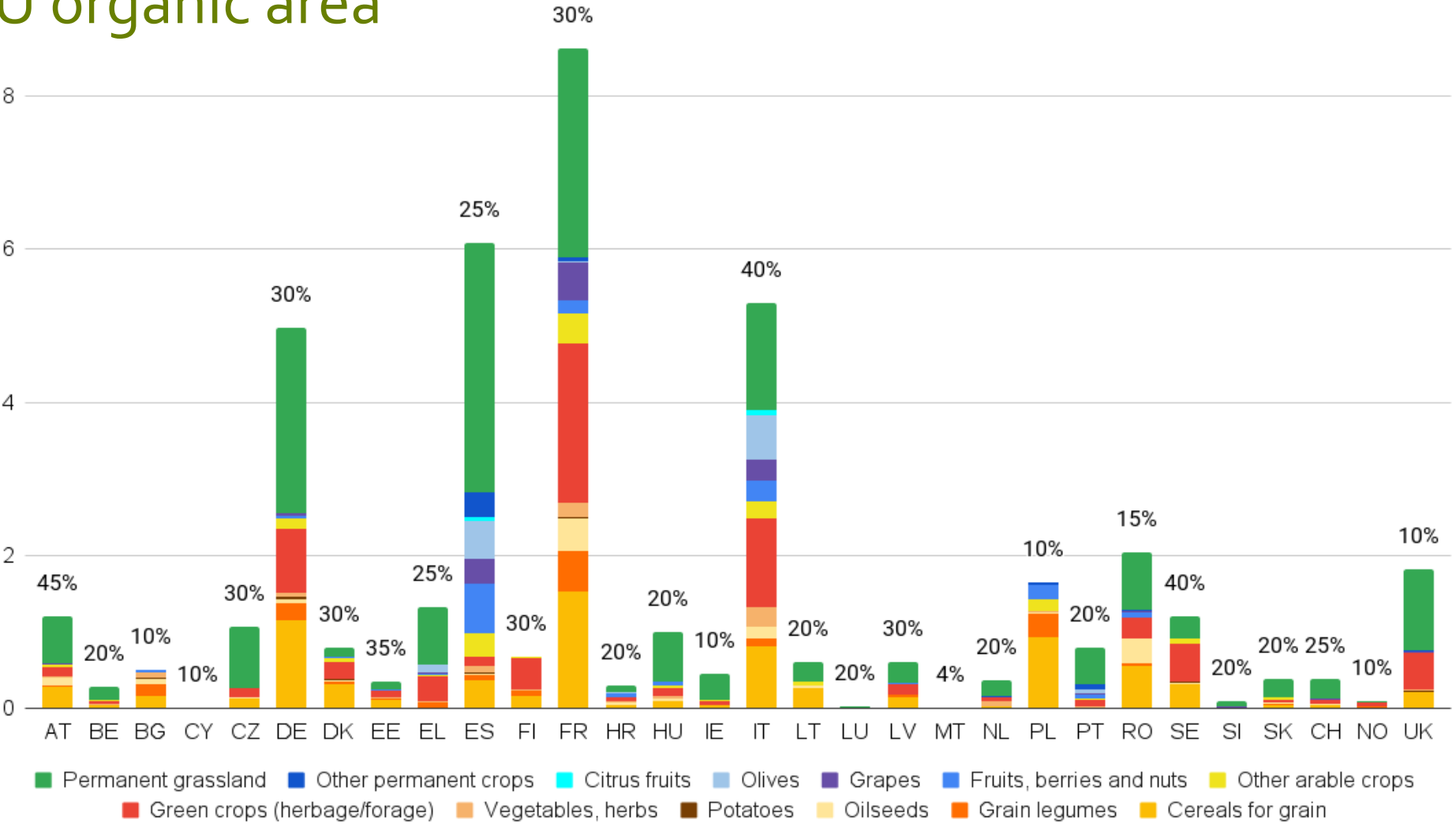
Source: Lampkin N, Padel K (2023) [Environmental impacts of achieving the EU's 25% organic land by 2030 target: a preliminary assessment.](#) IFOAM Organics Europe, Brussels



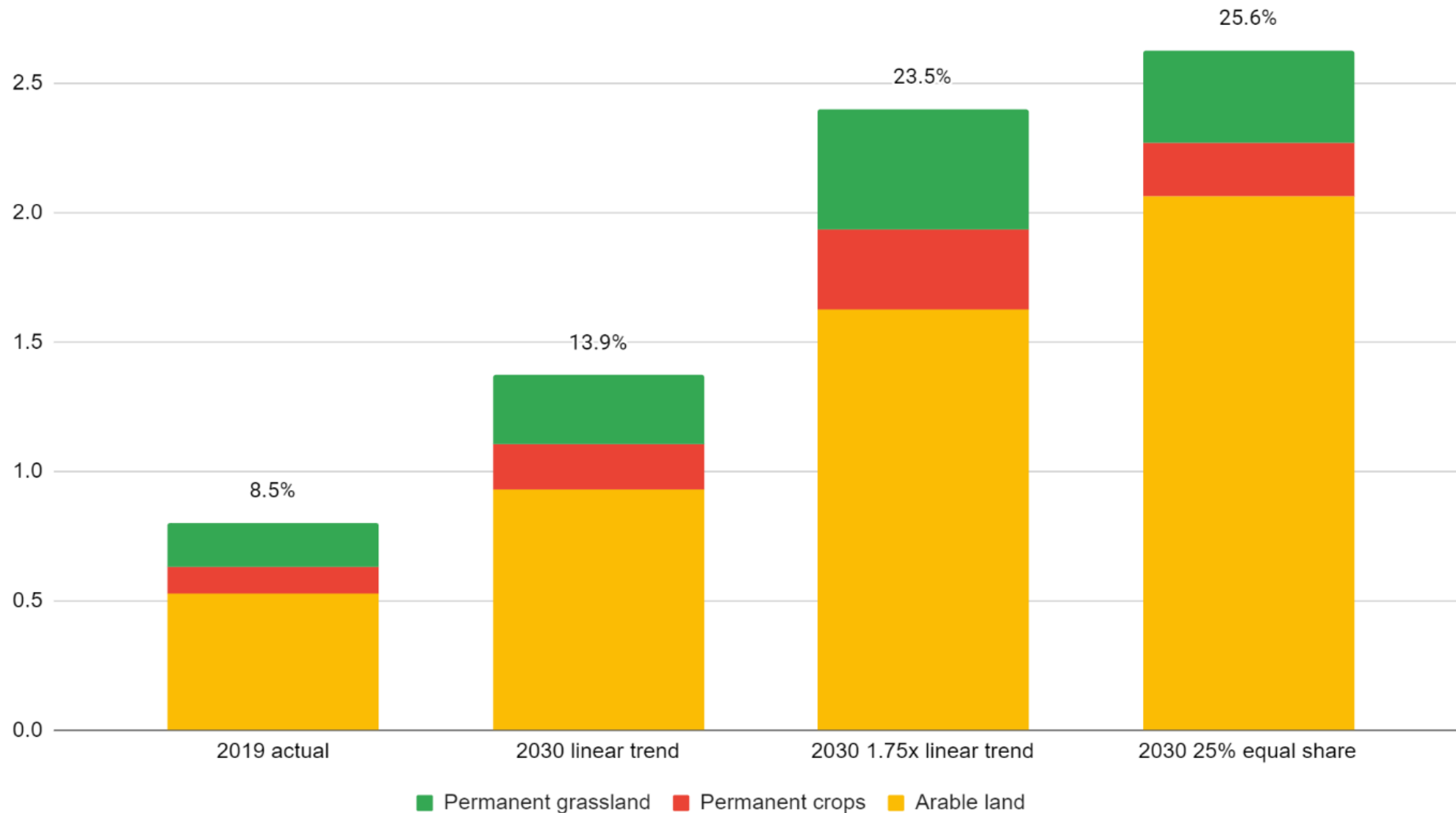
Distribution of EU27 crop areas by type (Mha) based on linear trend or equal share growth assumptions



Large variations in production distribution: Four countries (DE, ES, FR, IT) dominate with 60% of EU organic area



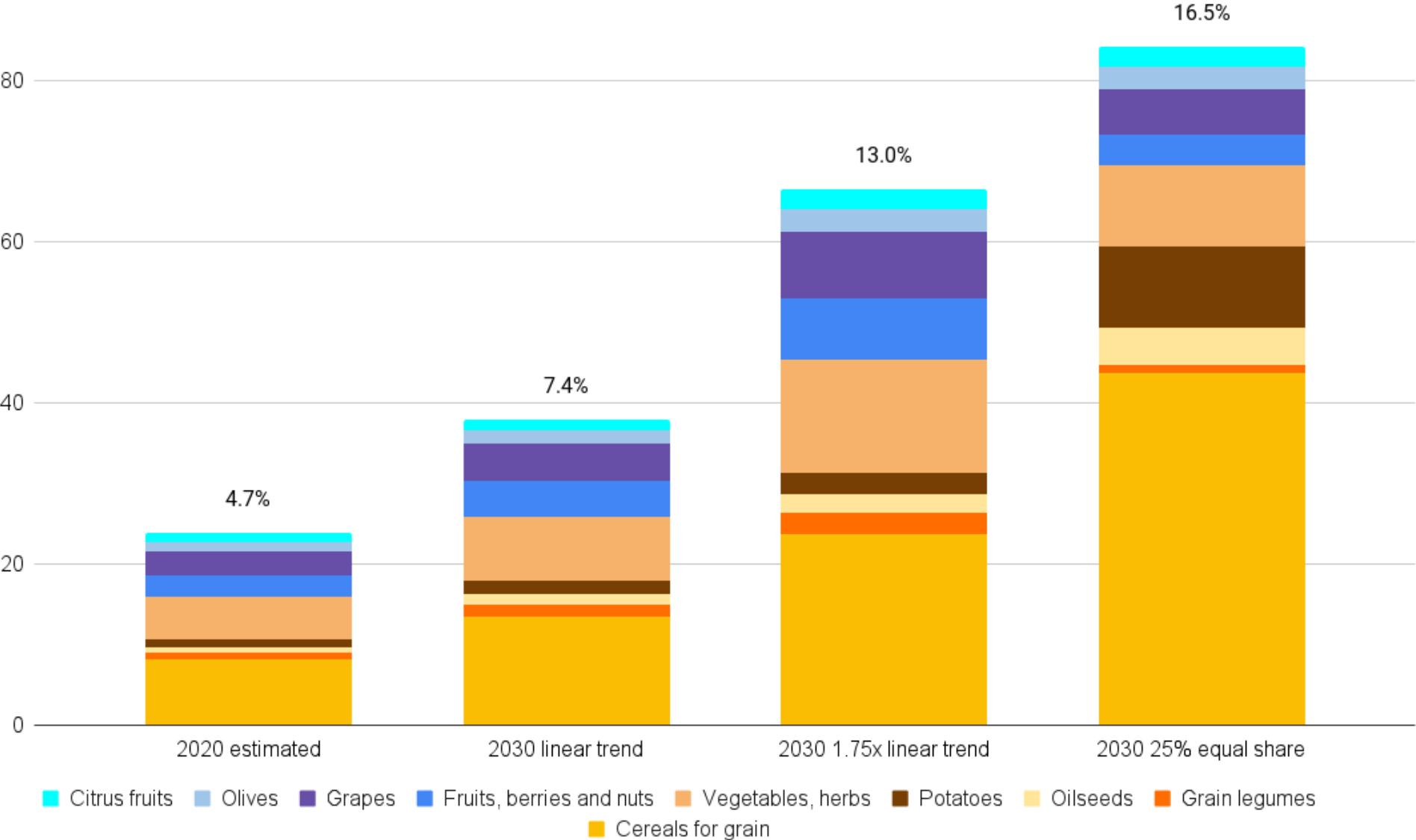
EU27 synthetic N-fertiliser use reduced by up to 2.7 Mt (26%)



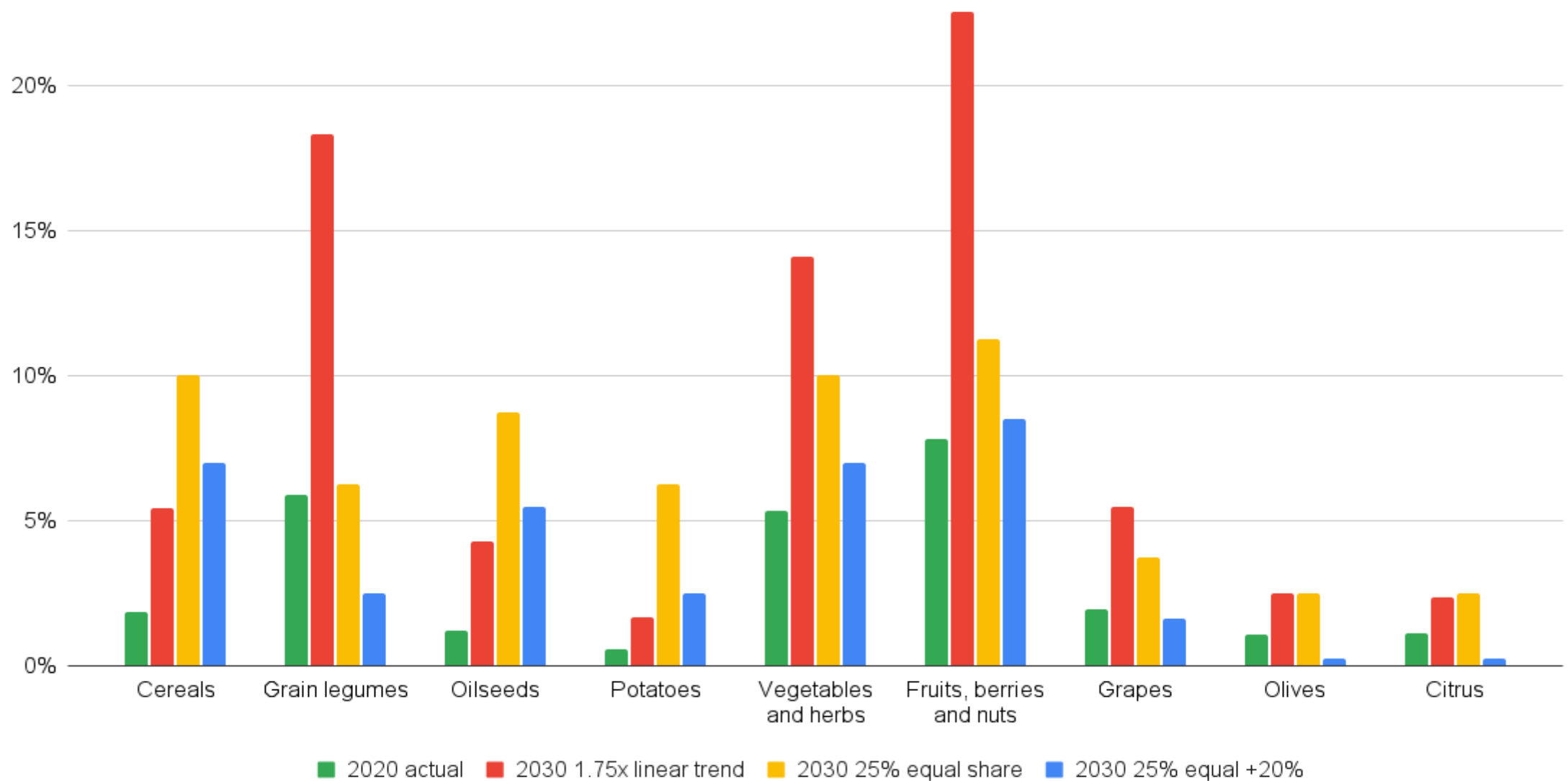
Pesticide use reduced by at least 90% on organic land

Category	Total active ingredients (kt)	Share of total active ingredients	Main substances used in organic farming
Herbicides	122	34%	None
Fungicides & bactericides	150	41%	Copper (30% of EU total), Sulphur
Insecticides & molluscicides	50	14%	Pyrethrum, Ferric phosphate
Growth promoters	10	0.3%	Negligible (citrus oils for storage)
Other	30	8%	Mineral & vegetable oils
Total	362	100%	

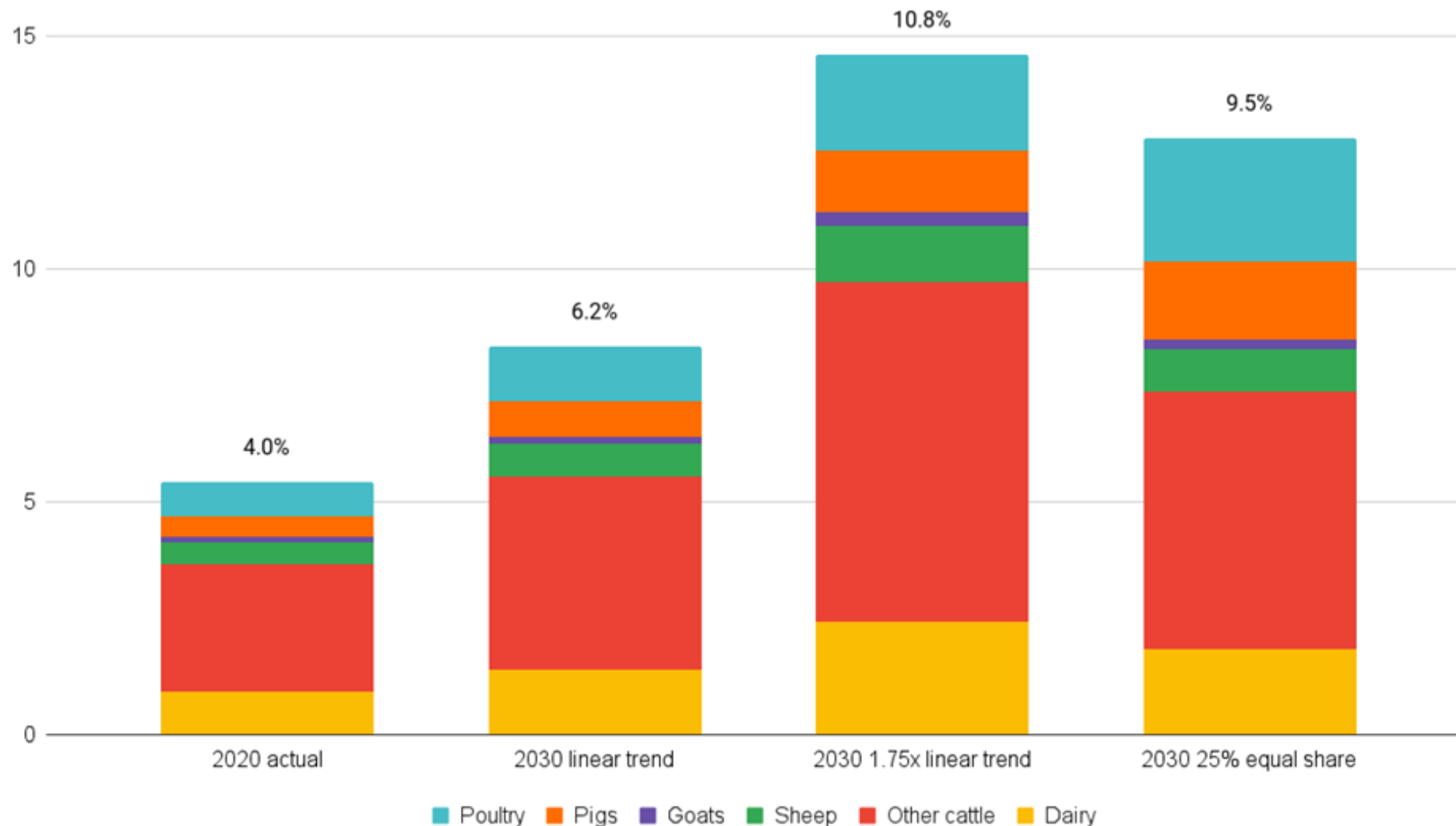
EU27 organic crop output increases to ca. 80Mt (15%)



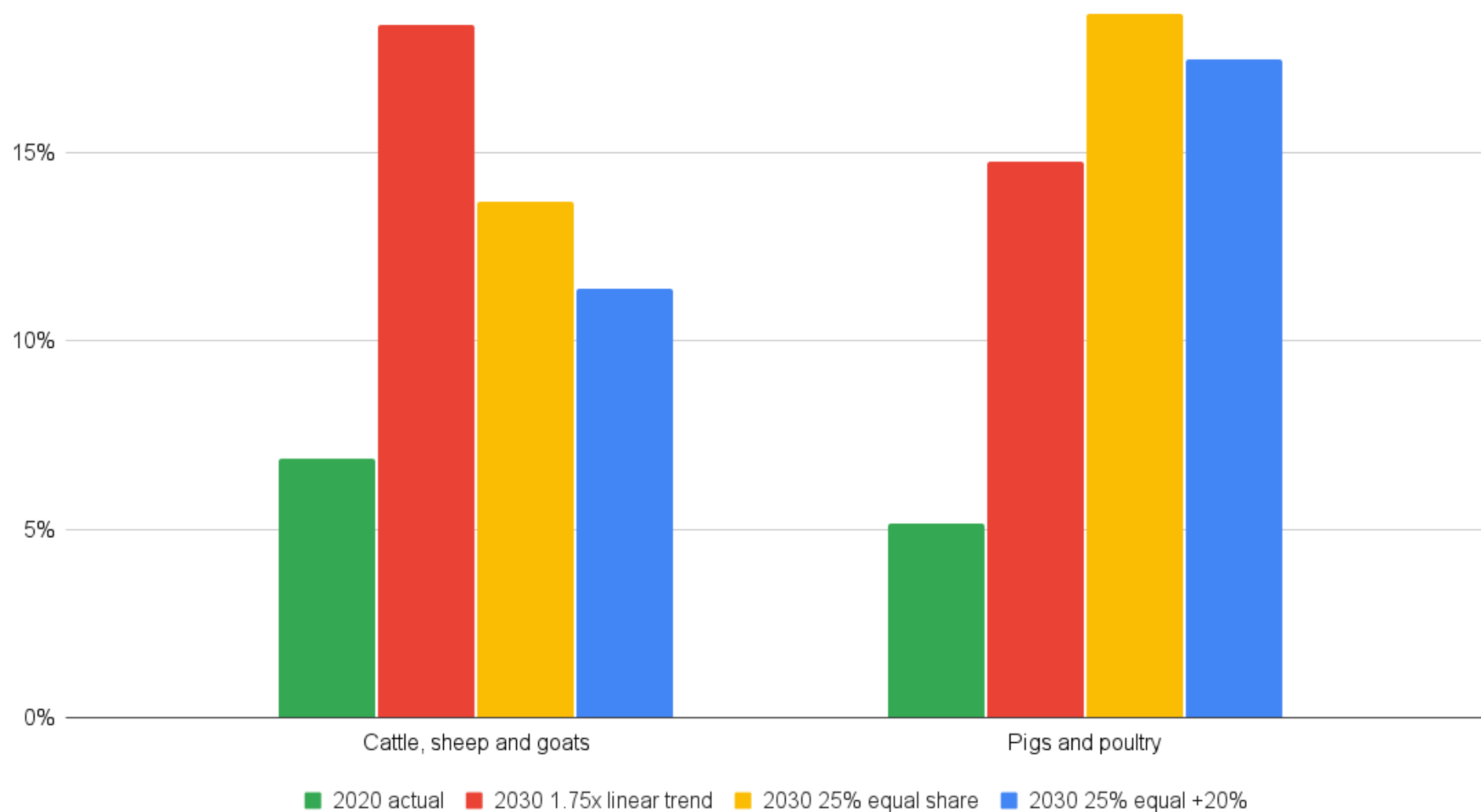
Area-related crop output reductions by crop type (%)



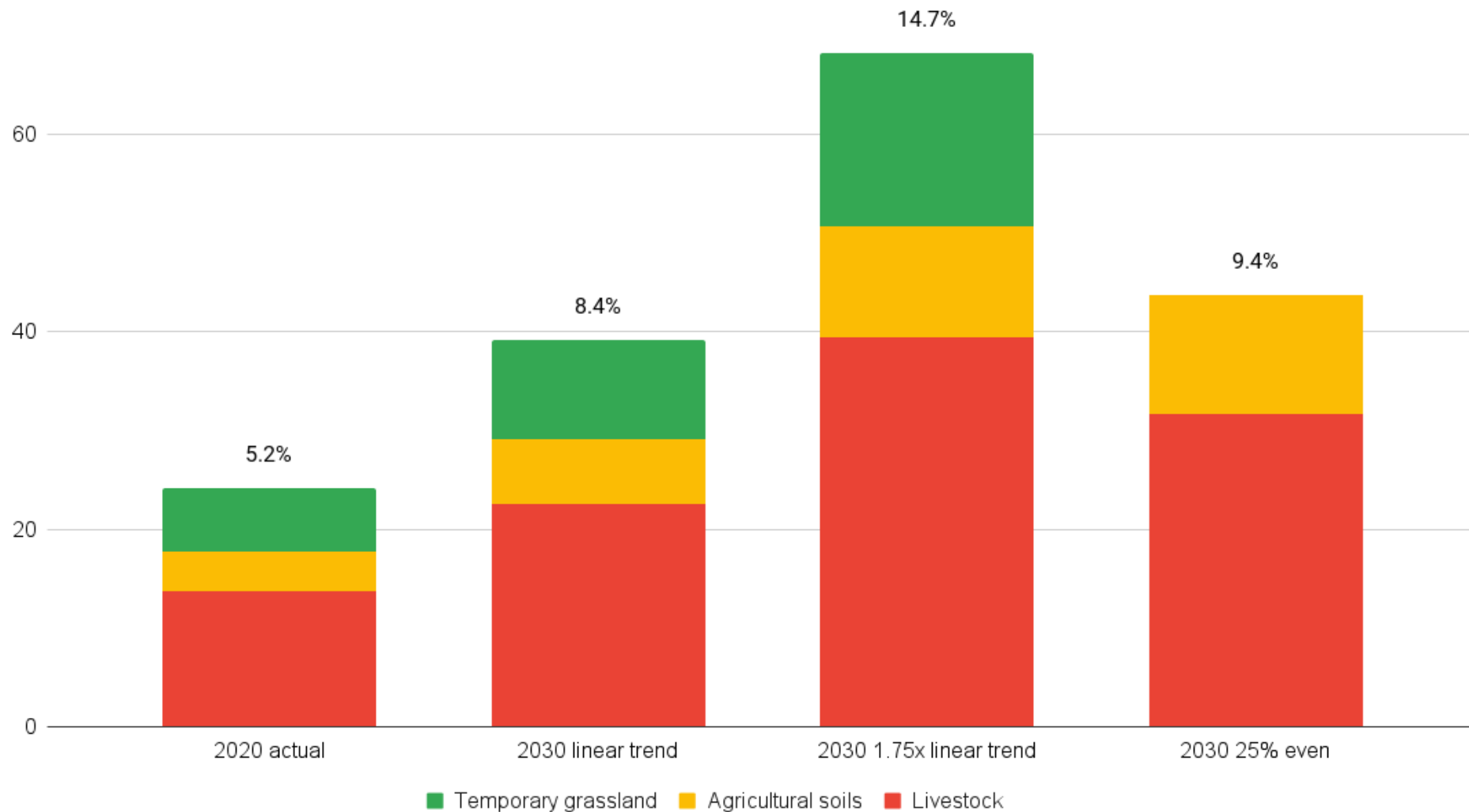
EU27 organic livestock numbers increase to ca. 13 MLU (15%)



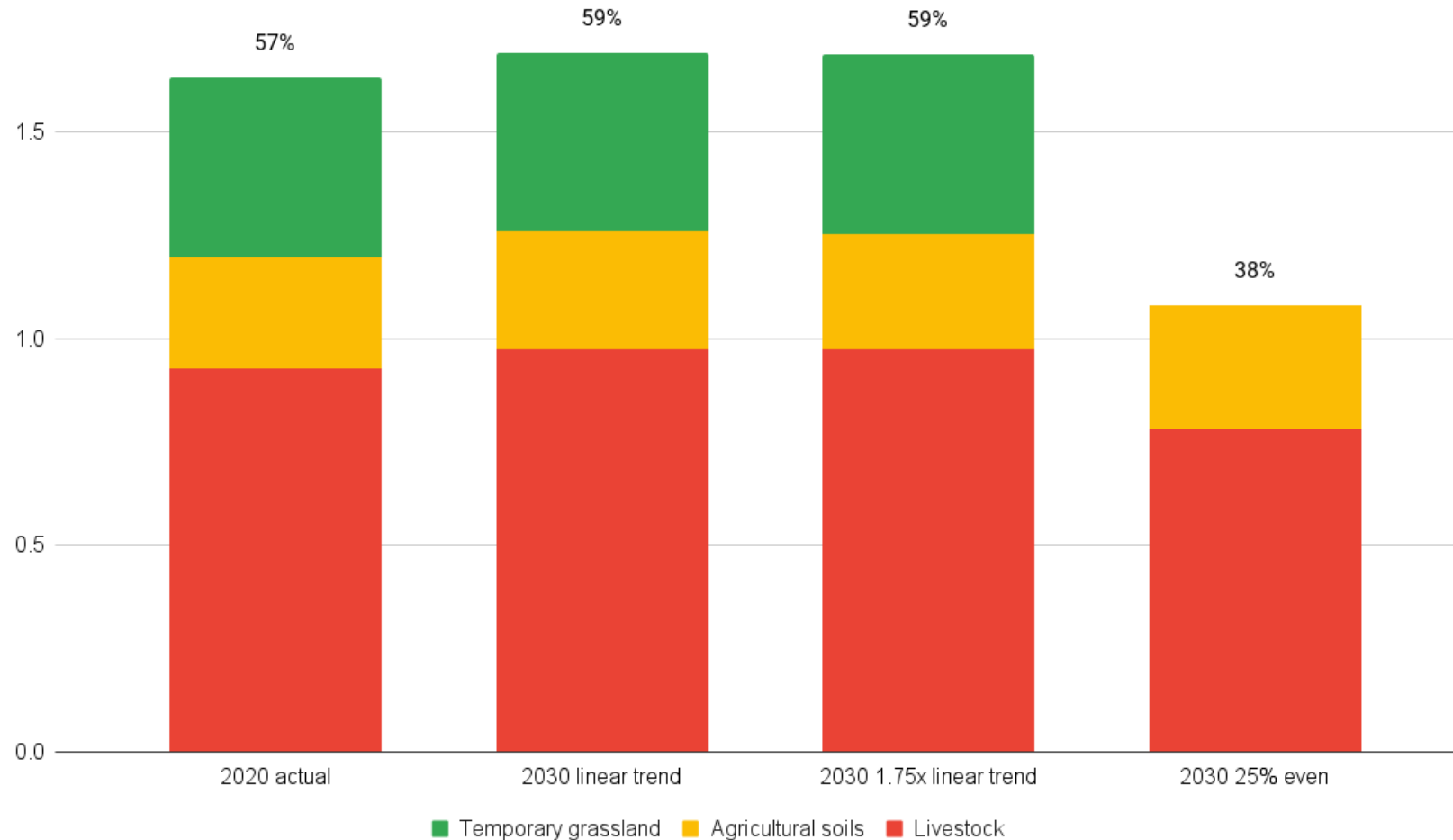
Area-related reductions in livestock output (%)



EU27 agricultural GHG emissions could be reduced by 68 Mt CO₂e, 15% of total - plus N-fert manufacturing

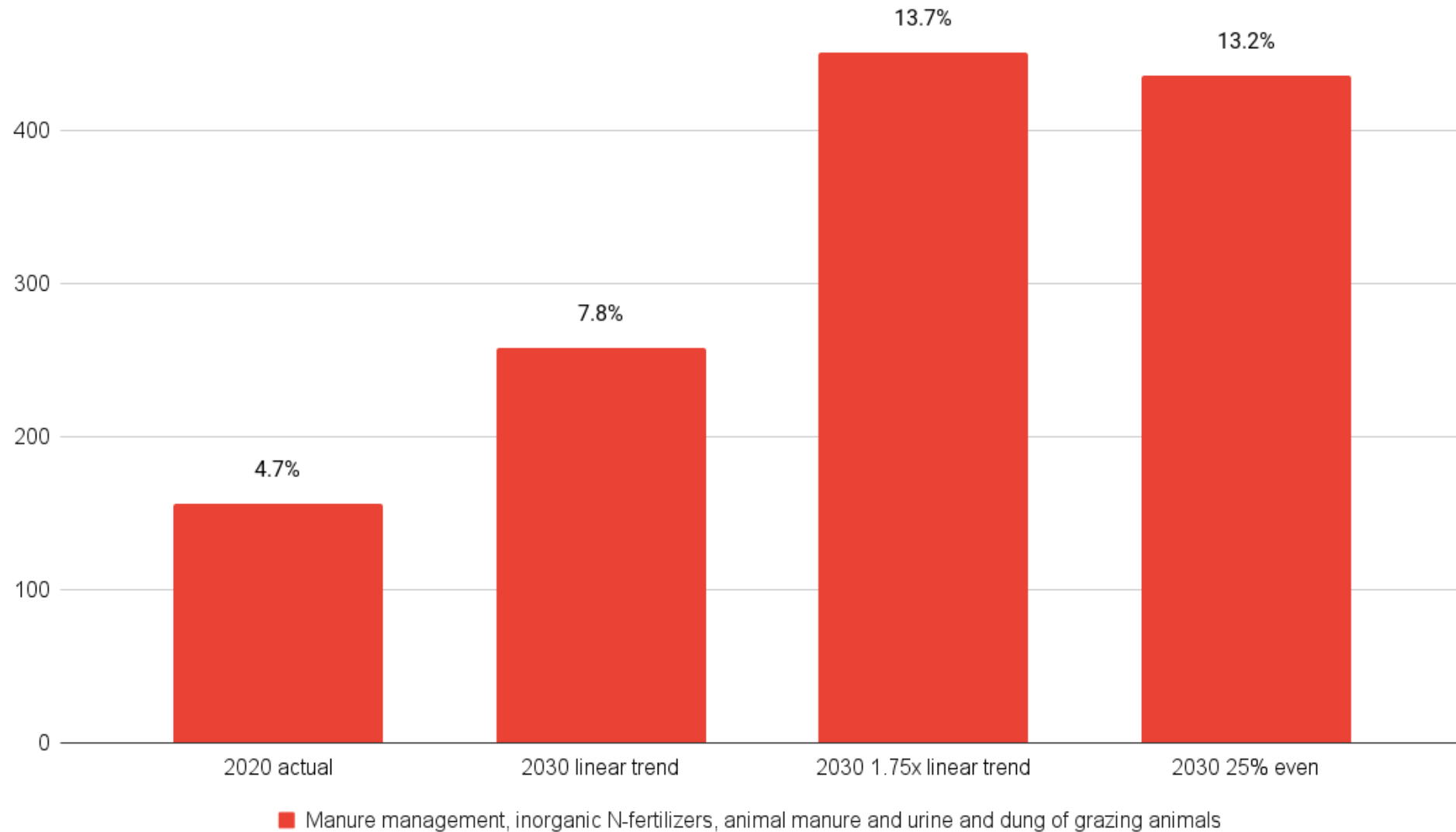


GHG emission reductions per ha of organic land (t CO₂e/ha)

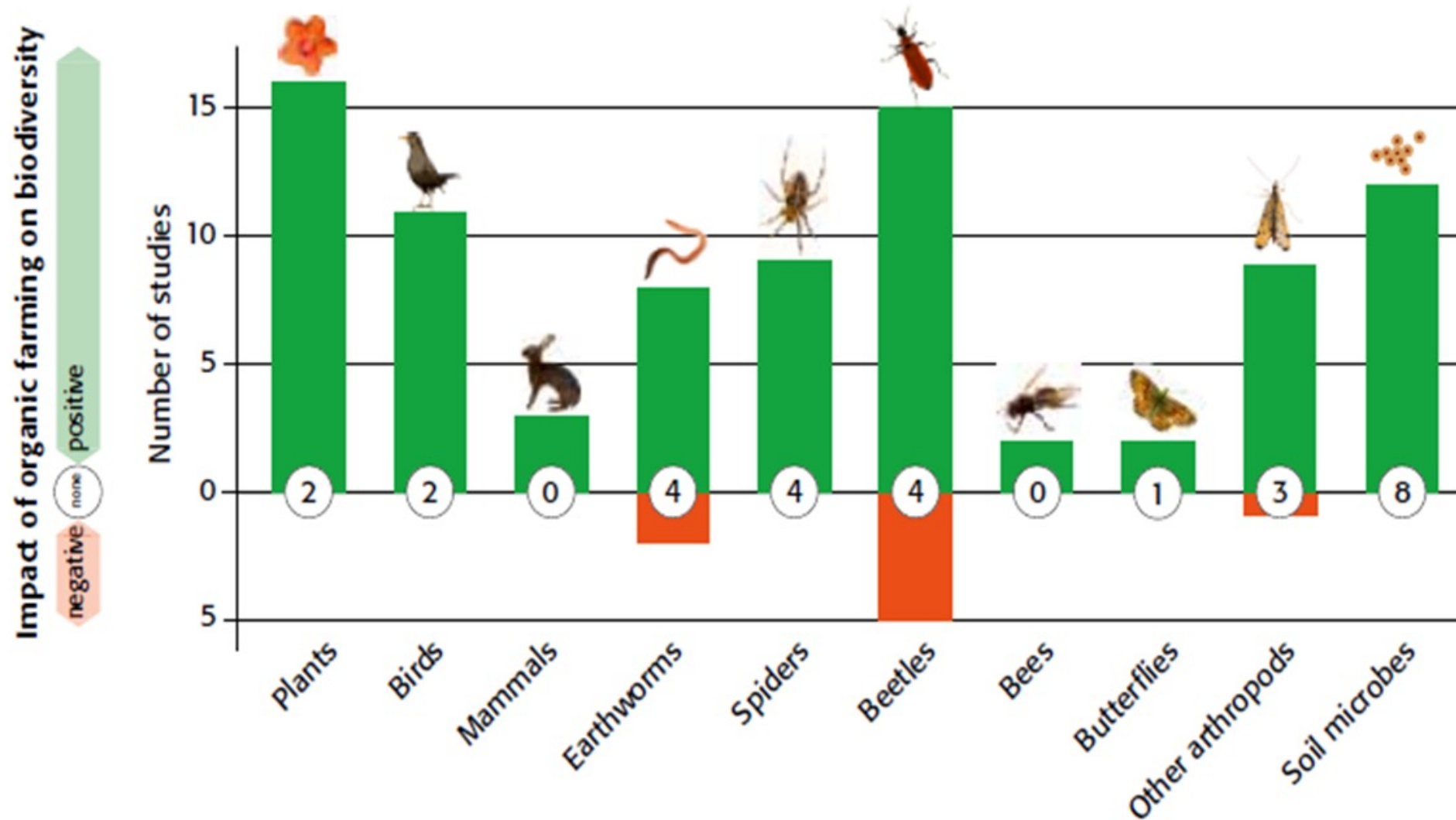


Up to 60% (1,6t CO₂e) less GHG emissions per converted ha due to reduced N-fertiliser, reduced livestock and more clover/grass leys

EU27 ammonia emission reductions up to 450 kt NH₃ (13%)



Biodiversity impacts of organic farming cover wide range of species and ecosystems



Food security

- Lower yields in industrialised countries are a reality
 - Wheat up to 40% lower, other cereals 20%, grain legumes similar, reflecting conventional N-fertiliser use
- Yield reductions can be substantially mitigated by livestock feed and food waste reductions
 - Nearly two thirds of grain produced in the EU is fed to animals
- Self-reliant, agro-ecological/organic systems help maintain long-term sustainability and reduce impacts of input supply disruptions
- Organic consumers typically use less meat and dairy products and processed food, with potential health and environmental benefits
- French studies of large consumer cohorts indicate less land required to feed typical organic consumers



Thank you for listening!

More detailed work will be conducted as part of this project led by IFOAM.

For further information contact:

Nic Lampkin niclampkin@outlook.com

or visit:

- <http://niclampkin.eu>
- <https://organictargets.eu>



Funded by the
European Union



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation