

Appendix 1:

What might a technovegan and agroecologist alliance look like?

The technovegan and agroecologist alliance is likely to result in land use patterns similar to those described in scenario one in Green Alliance's *Shaping UK land use* (January 2023) report, which aimed to balance climate, nature and food outcomes.¹ The figures quoted below are based on UK-specific modelling, but similar trends should be observed in countries with broadly similar land use patterns.

Land use

Land use patterns follow a 'three compartment' model. This balances food, nature and climate priorities by farming the best agricultural land at high yields, restoring nature on the least productive land, and farming the rest agroecologically.

Agroecology would increase significantly (from three per cent to 60 per cent of farmland in the UK).² Reduced meat consumption, enabled by alternative proteins, frees up space for semi-natural habitat and more extensive, lower yielding agroecological farming.³

Diet change

Meat consumption and production halves as alternative proteins replace processed meat, which makes up half of all the meat in UK diets.⁴ Structured cuts of meat, like steak and roast chicken, would continue to be eaten in moderation and come from high welfare, agroecologically farmed livestock.

Nature restoration and climate mitigation

Peat restoration and woodland creation would play a primary role in reducing emissions and removing and storing carbon from the atmosphere, limiting the use of expensive engineered greenhouse gas removals (GGRs). In the UK, nature decline would stop by 2030 and wildlife populations increase by 80 per cent by 2050.⁵

Other worldviews

Sustainable intensification would have a peripheral role to play. Farmers on the best agricultural land would adopt these practices but would favour arable production due to alternative proteins taking over the market for intensively farmed meat.

Traditionalists located on the best agricultural land might drift towards sustainable intensification, while the remainder would be incentivised by incoming payments for public goods (eg ELMs in England) to adopt a more agroecological approach to farming, or transition to making more of their income through creating semi-natural habitats which Green Alliance analysis shows could be a more profitable option for many farmers.⁶

Endnotes

¹ See Green Alliance, 2023, *Shaping UK land use: priorities for food, nature and climate*

² Green Alliance, 2023, op cit, p. 17-19

³ In the UK, this results in with 10 percent of currently farmed land managed as semi-natural habitat by 2030, rising to a third by 2050. Green Alliance, 2023, op cit, p. 17-19

⁴ This is for the UK specifically; proportions likely vary by country

⁵ Green Alliance, 2023, op cit.

⁶ Green Alliance, 2023, *Farming for the future*

Appendix 2

Summary table assessing the alliances

	Technovegans + agroecologists	Technovegans + sustainable intensifiers	Agroecologists + traditionalists	Current trend: traditionalists + sustainable intensifiers
Environmental impact	Alternative proteins free up land to help agroecology and semi-natural habitat expand, supporting nature restoration and carbon sequestration.	Significant expansion of semi-natural habitat supports nature restoration and carbon sequestration. Species that thrive on farmland might suffer.	Some nature incorporated on agroecological farms, but reduction in semi-natural habitat as agriculture requires more land to maintain current food production levels. Overall negative effect.	A decline in biodiversity and an increase in agricultural carbon footprint are likely as production elements of sustainable intensification take precedence over sustainability.
Supports diet change needed to reach net zero	Processed meat is replaced by alternative proteins, whole cuts are produced agroecologically. Reduction in animal meat consumption happens without major changes to the look and feel of food.	Processed meat is replaced by alternative proteins but whole cuts are produced by sustainable intensifiers. Worst case scenario: no change in meat consumption.	Limited change or increased demand for meat and dairy.	Limited change or increased demand for meat and dairy.
Stability of alliance	Potential to be stable if approached as 'marriage of convenience'.	Could be stable in a best case scenario but could easily fall apart.	Potential to be stable due to their common 'enemy' (technovegans), but significant power imbalance.	Potential to be stable but could fall apart if sustainable intensifiers take hard stance on intensification.

<p>Public perception</p>	<p>Likely to be good. Agroecology is popular but there may be hesitancy around alternative proteins replacing processed meat.</p>	<p>Likely to be negative. Intensive agriculture is unpopular and there may be some hesitancy around alternative proteins. They are seen as destroying culturally important farming systems.</p>	<p>Ambivalent. The public is in favour of agroecology; traditionalists are perceived by the public to be similar. But it is unlikely to have widespread support if the destruction of the natural world continues.</p>	<p>Likely to be negative. The public is generally not in favour of intensive agriculture and resents the destruction of the natural world.</p>
---------------------------------	---	---	--	--