

The World on Our Plates

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Why fuss over food?

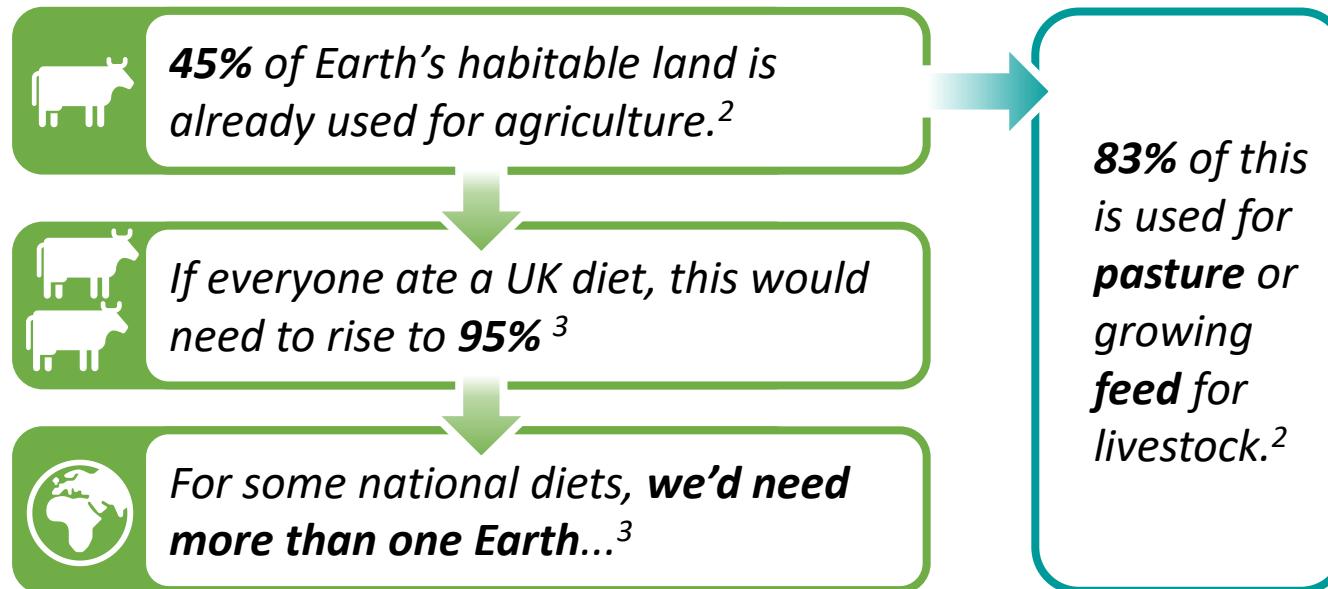
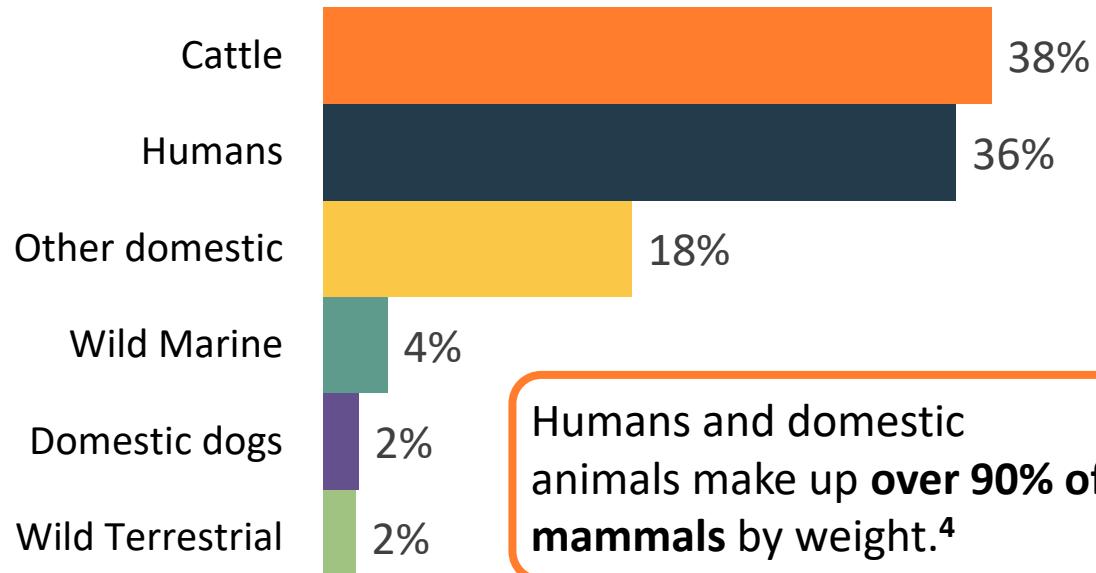
Decision-making doesn't get much more direct than lunch. But the consequences don't get much more remote than

- **health** impacts years down the line,
- the **welfare of animals** thousands of miles away, and
- **global environmental impacts**.

Forests to fields

Producing food is the **top driver of environmental degradation** because of its **land use**.¹

Meat production contributes disproportionately to this, taking **50 to 100 times as much land** as plant-based equivalents.²



Our growing appetite

Despite the impacts, global meat consumption is **increasing**. This is due to both **population growth** and an **increase in consumption per capita**.^{3,5}

Solutions on the menu?

- Livestock farming has **low potential productivity gains** compared to crops.³
- **Lab-cultured meat** faces **cost** and **nutritional concerns**, as well as huge **barriers to acceptance** – meat consumption and livestock farming carry huge cultural importance.
- A nutritionally-equivalent **plant-based diet** uses around **24%** of the land of the current global average diet (and even less compared to the average UK diet).²
- If veganism seems restrictive, even adding **eggs, fish, and poultry** would still only use **27%**.²

References

1. WWF, ZSL. 2024. 2024 LIVING PLANET REPORT. <https://wwwflpr.awsassets.panda.org/downloads/2024-lpr-executive-summary.pdf>.
2. Ritchie, Hannah. 2021. 'If the World Adopted a Plant-Based Diet, We Would Reduce Global Agricultural Land Use from 4 to 1 Billion Hectares'. Our World in Data, March 4. <https://ourworldindata.org/land-use-diets>.
3. Ritchie, Hannah. 2017. 'How Much of the World's Land Would We Need in Order to Feed the Global Population with the Average Diet of a given Country?' Our World in Data, October 3. <https://ourworldindata.org/agricultural-land-by-global-diets>.
4. Greenspoon, Lior, Eyal Krieger, Ron Sender, et al. 2023. 'The Global Biomass of Wild Mammals'. Proceedings of the National Academy of Sciences 120 (10): e2204892120. <https://doi.org/10.1073/pnas.2204892120>.
5. Our World in Data. n.d. 'Per Capita Meat Consumption by Type'. Accessed 12 January 2026. <https://ourworldindata.org/grapher/per-capita-meat-consumption-by-type-kilograms-per-year>.