

Studies & Reports of the Month

February 2026 | Issue 2

This month's evidence hits hardest on land and money. Two landmark studies quantify livestock's dominance over global ecosystem destruction - driving two-thirds of grassland and wetland conversion and 42% of all commodity-driven deforestation. New analysis from Foodrise finds that EU subsidies directed 580 times more to beef and lamb than to legumes, and an IPBES assessment confirms finance flows harming nature outpace those protecting it by 33:1, with agriculture being one of the most damaging sectors.

Alongside these key findings, converging evidence on cost, nutrition, and institutional adoption reinforce that the bottleneck to food systems transformation is not evidence, but implementation.

Contents

Studies:

1. “Overlooked and Overexploited: Extensive Conversion of Grasslands and Wetlands Driven by Global Food, Feed and Bioenergy”

PNAS

Grasslands and wetlands are disappearing at nearly 4x the rate of forests, with two-thirds of that destruction tracing back to livestock supply chains. The most comprehensive supply-chain evidence yet that land governance can no longer stop at the treeline.

2. “Global Patterns of Commodity-Driven Deforestation & Associated Carbon Emissions”

Nature Food

The most rigorous global deforestation attribution model ever built finds that cattle pasture drives 42% of all commodity-driven deforestation and more than half its carbon emissions. Yet the regulatory frameworks meant to stop it are largely looking the other way.

3. “Cost and Affordability of Plant-Based Diets: Global Evidence from 2000 to 2025”

Academia Nutrition & Dietetics

Across the world, whole-food plant-based diets consistently cost 16–40% less than omnivorous diets. The bigger obstacle: high-income country consumers believe the reverse is true.

4. “Micronutrient Intake and Status of Adults Consuming Plant-Based Meat Analogues or Animal-based Meats as Primary Protein Source: An 8-Week Randomized Controlled Trial”

Clinical Nutrition

The first RCT to measure biological micronutrient status finds that fortified plant-based meats were consistently more nutrient dense than animal-based meats, which did not generate a significant increase in the status of a single nutrient in comparison.

5. “Fishing Ban Halts Seven Decades of Freshwater Biodiversity Decline in the Yangtze River”

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A commercial fishing ban on the Yangtze River tripled fish biomass and halted seven decades of biodiversity decline within two years, providing the strongest evidence to date that structural policy intervention can reverse ecological collapse in even severely degraded aquatic food systems.

6. “Nutritional Adequacy of the EAT-Lancet Diet: a Swedish Population-Based Cohort Study”

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Seven different methods for measuring the same sustainable dietary pattern produced substantially different conclusions about micronutrient adequacy, showing that debates about plant-forward diets often reflect measurement disagreements vs. nutritional reality.

7. “Processed Meat and Colorectal Cancer Poll”

Physicians Committee for Responsible Medicine / Morning Consult. National survey, n=2,202.

Nearly half of US adults don't know processed meat is classified in the same cancer-risk category as tobacco. Once aware, 64% support warning labels.

8. “Perceptions and Willingness to Reduce Meat Consumption Among Consumers in the United Arab Emirates: A Cross-Sectional Analysis”

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Willingness to reduce meat didn't vary by age, income, or education - the low-readiness profile is universal, suggesting policymakers and companies should focus more on the power of redesigning food environments vs. awareness campaigns.

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Converting all 1.5 billion ha of global cropland to conservation agriculture, the authors argue, is the most scalable, ready-to-deploy agricultural practice for returning to within planetary boundaries.

Reports:

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Foodrise

Groundbreaking granular analysis finds that EU subsidies directed 580 times more money to beef and lamb than to legumes in 2020, with animal foods capturing 77% of the entire CAP budget.

11. “Impact and Dependence of Business on Biodiversity and Nature's Contributions to People”

Intergovernmental Science-Policy Platform on Biodiversity & Ecosystem Services (IPBES)

Global finance flows harming nature outpace those protecting it by 33:1 with agriculture among the sectors doing the most damage. Voluntary business action cannot close the gap.

12. “Local Food Actions for a Cooler Future: 2025 Indicators Report”

Sustainable San Mateo County

Food causes 17% of household emissions in San Mateo County but appears in only 3 of 19 local Climate Action Plans - staff simply don't know where to start. This report's progression model from public education through binding procurement standards is worth replicating.

13. “Balanced Proteins - State of the Category”

Food Systems Innovations

Sixty-five-plus companies are quietly blending plant protein into conventional meat products, reducing beef content by 30-50% while cutting costs and maintaining consumer satisfaction.

Also: selected news of developments across markets, policy and health.

Studies

1. Overlooked and Overexploited: Extensive Conversion of Grasslands and Wetlands Driven by Global Food, Feed, and Bioenergy Demand

Lesiv, M. et al. PNAS (2026). · DOI: [10.1073/pnas.2521183123](https://doi.org/10.1073/pnas.2521183123)

KEY TAKEAWAY: Livestock's footprint accounts for roughly two-thirds of global non-forest ecosystem conversion – with grasslands and wetlands being destroyed at nearly 4x the rate of forests – making demand reduction for animal products a conservation imperative. The strongest evidence yet for expanding land-use frameworks beyond deforestation.

About

The first global geospatial analysis to simultaneously map natural non-forest ecosystem conversion to both pasture and cropland (2005–2020), attribute it to specific agricultural commodities, and trace conversion through supply chains to end uses and market destinations, using two 30m-resolution satellite datasets and a physical trade accounting model.

Key evidence

- **~67% of non-forest conversion is linked to the livestock supply chain:** 50% driven by pasture expansion and 17% by feed crop production – making animal agriculture the dominant driver of destruction in the world's most overlooked ecosystems.
- **Feed crops drove 51–68% of all cropland-driven conversion** in five major agricultural economies (Brazil, Argentina, US, China, EU), with about 80% of Brazil and Argentina's feed-related conversion destined for export.

Implications for food systems transformation

For policymakers, investors, and conservation advocates, this data reframes land-use governance from a forest-only conversation to one that must include grasslands and wetlands – and places dietary demand reduction at the center of that conversation. The export telecoupling data is directly relevant to agricultural transition risk assessment for lenders with exposure to pastureland in Brazil and Argentina, and provides strong evidence for extending the EU Deforestation Regulation to non-forest ecosystems.

Gaps and next steps

The analysis reports proportional contributions rather than absolute area estimates, and pasture conversion cannot be attributed to specific livestock species. Data quality is lower for India, where some conversion may reflect intensification of existing low-input agriculture rather than new clearing. An important next step is demand-side scenario modeling: what would a 20% or 40% reduction in animal product consumption mean for non-forest conversion rates globally?

2. Global Patterns of Commodity-Driven Deforestation and Associated Carbon Emissions

Singh, C. & Persson, U.M. *Nature Food*, 7, 138-151 (2026). · DOI: [10.1038/s43016-026-01305-4](https://doi.org/10.1038/s43016-026-01305-4)

KEY TAKEAWAY: A new global model provides the most methodologically rigorous evidence to date that pasture expansion – primarily for cattle production – drives 42% of all commodity-driven deforestation and 52% of associated carbon emissions.

About

The model, covering 179 countries and 184 commodities, integrates high-resolution satellite data with national and subnational agricultural statistics to produce 9,332 unique country-commodity deforestation-carbon footprints from 2001 to 2022, advancing significantly on prior approaches that relied on coarse statistical methods or covered only selected commodities.

Key evidence

- Pasture expansion, primarily for cattle, drove 42% of all commodity-driven deforestation and 52% of associated carbon emissions globally from 2001 to 2022 – **the single largest commodity driver by a factor of roughly 2.5 and 3.5x**, respectively, generating approximately 1 GtCO₂ annually across 5.5 million hectares.
- Staple crops (maize, rice, cassava) collectively account for ~11% of global commodity-driven deforestation – exceeding cocoa, coffee, and rubber combined – yet remain absent from the EU Deforestation Regulation and most monitoring frameworks.
- Approximately **30% of agricultural deforestation is embedded in internationally traded goods**, with the EU accounting for 14% of all globally traded deforestation-risk agricultural commodities.

Implications for food systems transformation

This study assigns a price tag to deforestation's greatest driver: cattle pasture alone is responsible for roughly 1 billion tonnes of CO₂ annually across 5.5 million hectares of cleared forest. For policymakers, the cattle dominance figures are suitable anchors for policy briefs and financial risk assessments. For investors and companies setting science-based emissions targets (SBTi FLAG (the Forest, Land, and Agriculture guidance for corporate climate commitments), this data provides essential inputs for country-risk benchmarking under the EU Deforestation Regulation and directly supports calls to extend the regulation beyond its current commodity scope.

Gaps and next steps

Only 12-15% of deforestation estimates come from high-confidence spatial data; the majority relies on statistical attribution representing risk rather than verified causation, and data quality is systematically lower in Africa. Carbon emission estimates are, by the authors' own description, conservative and considerably lower for cattle-driven deforestation emissions than other studies. The study does not disaggregate soybean deforestation by end use (animal feed vs. direct human consumption) and frames solutions in terms of supply-chain monitoring vs. demand-side shifts.

3. Cost and Affordability of Plant-Based Diets: Global Evidence from 2000 to 2025

Goldman, D. & Nagra, M. *Academia Nutrition and Dietetics*, 3(1) (2026). · DOI: [10.20935/AcadNutr8137](https://doi.org/10.20935/AcadNutr8137)

KEY TAKEAWAY: Institutional food service transitions and subsidy reform arguments are strengthened by consistent evidence that plant-forward diets cost 16–40% less than omnivorous diets in middle- and high-income settings – yet a persistent consumer misperception that plant-based eating is expensive remains a significant barrier.

About

A narrative review synthesizing 17 primary studies published between 2000 and 2025 across empirical expenditure studies (RCTs and observational), economic modeling, and consumer spending patterns, covering evidence from the US, Germany, Portugal, UK, Mexico, Iran, Canada, New Zealand, and global multi-country models.

Key evidence

- In a US RCT (n=244), a low-fat vegan diet reduced food costs by 16% over 16 weeks; a crossover trial found whole-food plant-based diets cost \$9.78/day versus \$15.72/day for omnivorous baselines.
- A large US survey (n=24,537) found vegetarians spent approximately \$11 less per week on food after adjusting for demographics; in a London university food service, plant-based meals cost GBP 1.49 versus GBP 2.31, with meat accounting for 63–75% of recipe costs.
- Cost advantages are concentrated in middle- and upper-income contexts; the EAT-*Lancet* reference diet remains unaffordable for an estimated 1.58 billion people globally, with barriers concentrated in Sub-Saharan Africa and South Asia.

Implications for food systems transformation

This analysis has direct implications for institutional food service transitions, where cost savings from plant-forward menus are demonstrable and actionable. The whole-food versus processed distinction is critical for credible communications: messaging should consistently lead with affordable staples (legumes, grains, vegetables) rather than allowing expensive specialty products to define the cost narrative. Price reductions for plant-based products ranked among the top determinants of dietary change willingness, reinforcing the case for the VAT and subsidy mechanisms documented in studies covered in our January [digest](#).

Gaps and next steps

The review does not address externalized costs – healthcare, environmental damage, subsidies – which represent the strongest economic case for dietary transition. A formal systematic review with meta-analysis is now warranted given the size of the evidence base.

4. Micronutrient Intake and Status of Adults Consuming Plant-Based Meat Analogues or Animal-Based Meats as Primary Protein Source: An 8-Week Randomized Controlled Trial

Fu, AS et al., *Clinical Nutrition* (2026). DOI: [10.1016/j.clnu.2026.106610](https://doi.org/10.1016/j.clnu.2026.106610)

KEY TAKEAWAY: *The first RCT data on biological micronutrient status finds fortified plant-based meats consistently more nutrient dense than animal-based meats; the latter did not generate a significant increase in the status of a single nutrient in comparison. This study adds to a growing body of research establishing that PBMA substitution reduces LDL cholesterol, total cholesterol, and body weight.**

About

This study in Singapore (n=81 completers) substituted habitual protein foods with either animal-based meats or protein-matched commercial PBMA and measured dietary micronutrient intake, biological status via blood biomarkers, and bone mineral density.

Key Evidence

- **Plasma B12 was significantly higher** in the PBMA group at 8 weeks (382.6 vs. 357.8 pmol/L, $P=0.004$), with a **similar pattern for folate** (32.1 vs. 23.6 nmol/L, $P=0.003$), attributed to superior bioavailability of supplemented cyanocobalamin.
- Sodium remained consistently elevated across diets, but with PBMA diets reaching 164% of the recommended intake vs. 117% for animal-based meat diets.

Implications for Food Systems Transformation

The B12 finding reframes the most common clinical objection to plant-forward dietary transitions from nutritional deficit to nutritional advantage. Combined with meta-analytic evidence of lipid and weight benefits and no adverse effects across any trial, the evidence supports PBMA inclusion in institutional food environments on nutritional adequacy grounds alone. The sodium concern should drive further reformulation advocacy vs. category dismissal.

Gaps and Next Steps

No trials exist in nutrient-insufficient populations, where bioavailability differences for calcium and iron would actually be detectable. No RCT has compared PBMA against traditional whole plant proteins (legumes, tofu, tempeh), which would clarify whether the analogue format offers health advantages beyond consumer acceptability.

* Supporting references: Fernandez-Rodriguez R et al. (2025), De Bie TH et al. (2025), Crimarco A et al. (2020) and Toh DWK et al. (2024).

5. Fishing Ban Halts Seven Decades of Biodiversity Decline in the Yangtze River

Xiong, F., Li, Z., Olden, J.D., Cooke, S.J. et al. *Science* 391, 719–723 DOI: [10.1126/science.adu5160](https://doi.org/10.1126/science.adu5160)

KEY TAKEAWAY: A basin-wide structural policy intervention reversed seven decades of freshwater biodiversity collapse across all 6,300 km of the Yangtze river (China), providing the strongest evidence to date that ambitious, science-based fisheries closures can halt and begin reversing ecological decline even in severely degraded aquatic food systems.

About

This study evaluates the effectiveness of the Yangtze River Fishing Ban, a 10-year full commercial fishing ban implemented in 2021. Researchers assessed fish communities across 57 mainstem river reaches before and after the ban using a massive longitudinal dataset of fish surveys and taxonomic profiles, combined with structural equation modeling to isolate drivers of change.

Key Evidence

- **Total fish biomass tripled (median increase of +209%) within two years of the ban**, with large-bodied species showing the strongest recovery (+232%). Species richness, evenness, and body condition all improved significantly across all reaches of the river.
- **The ban required recalling 111,000 fishing boats and resettling 231,000 fishers** at a cost exceeding \$2.74 billion across 11 provinces – a scale of structural intervention with no parallel in freshwater conservation. Compliance was achieved through strict enforcement including river police and penalties.
- Modeling confirmed the fishing ban as the primary driver of recovery, with concurrent improvements in water quality, riparian habitat, and hydrological management providing additional contributions. **Recovery extended to endangered species:** the Yangtze finless porpoise population increased by roughly one-third between 2017 and 2022.

Implications for Food Systems Transformation

This study is a landmark demonstration that structural policy intervention can reverse long-term ecological decline in aquatic food systems. The total fishing ban is an effective emergency measure for preventing extinction of freshwater species and serves as a global model for large-scale river conservation. It proves that biodiversity loss in even severely degraded systems still experiencing dam-related fragmentation can be reversed through strong, science-based policy interventions. For food systems actors, the implication is direct: voluntary and incremental approaches failed for decades – only a comprehensive ban achieved measurable recovery.

Gaps and Next Steps

The post-ban monitoring window is short (two to three years), so the durability of recovery remains uncertain, particularly given ongoing threats from dam fragmentation, climate change, and emerging pollutants including microplastics and pharmaceuticals. The study does not quantify the protein supply gap created by the ban or model how alternative protein sources could fill it or what aquaculture restructuring, which it discusses, would entail.

6. Nutritional Adequacy of the EAT-Lancet Diet: a Swedish Population-Based Cohort Study

Stubbendorff, A. et al. *The Lancet Planetary Health* (2026). · DOI: [10.1016/j.lanplh.2025.101416](https://doi.org/10.1016/j.lanplh.2025.101416)

KEY TAKEAWAY: Seven different methods for measuring the EAT-Lancet dietary pattern produced substantially different conclusions about micronutrient adequacy, revealing that debates about whether plant-forward diets are safe reflect measurement disagreements vs. reality. Where measurement is consistent, real-world data shows this sustainable dietary pattern provides adequate micronutrient status at high adherence.

About

Analysis of 25,970 Swedish adults using validated diet history methods - examining real eating patterns rather than theoretical diet models, with biomarker validation and systematic comparison of seven independent scoring methods for the EAT-Lancet reference diet.

Key evidence

- When energy-adjusted, high EAT-Lancet adherence showed **no inadequate micronutrient intake** - but the number of positive nutrient associations ranged from 14 to 33 (out of 34 possible), depending on the scoring method used.
- Biomarker validation showed higher adherence linked to consistent, significantly **lower folate deficiency risk** (and an inconsistent, modestly higher anemia risk in women)
- The calculated **EAT-Lancet diet exceeds recommended intake for 15 of 17 micronutrients** assessed against the Nordic Nutrition Recommendations 2023, with calcium and vitamin B12 as the two exceptions (solvable, already addressed in nutrition fortification programs).

Implications for food systems transformation

This is real-world validation that institutional food service shifts toward plant-forward menus are nutritionally viable. The study clearly shows why cherry-picking single studies produces unreliable conclusions and demonstrates that debates about the nutrition value of sustainable diets are often about measurement frameworks, not nutritional outcomes.

Gaps and next steps

The study uses 1990s Swedish data in a context where fortification practices have since changed. The high-income, high-baseline-micronutrient population means findings do not generalize to food-insecure contexts.

7. Processed Meat and Colorectal Cancer: U.S. Poll

Physicians Committee for Responsible Medicine / Morning Consult. National [survey](#), n=2,202 (February 2026).

KEY TAKEAWAY: *Almost half of US adults remain unaware that processed meat is an IARC Group 1 carcinogen, with awareness concentrated in higher-income and more educated populations. Warning label policy for processed meat could have broad public support (64%) and is reachable – but first requires correcting a massive awareness gap: Those most at risk remain the least informed.*

About

Nationally representative survey of 2,202 US adults ($\pm 2\%$ margin of error), weighted by educational attainment, age, race, region, and ethnicity, measuring public awareness of the processed meat-colorectal cancer link, information sources, and support for warning labels.

Key evidence

- 55% of adults correctly identified processed meat as increasing colorectal cancer risk; **45% were unaware** – an awareness gap comparable to public understanding of the tobacco-lung cancer link before the 1964 Surgeon General's [Report](#).
- **Awareness varied by 30-33 percentage points** across income and education levels.
- Just 33% received this information from a healthcare professional.
- After being informed, **64% supported cancer-risk warning labels on processed meat** (37% strongly), with only 9% opposed.

Implications for food systems transformation

This poll provides strong evidence of a public health communication failure on diet and cancer risk. It's not just an awareness gap, but a clinical norm gap too – reinforcing a consistent, long-standing finding across the literature: there is a nutrition education crisis in global medicine. The 64% warning label support (measured after informing respondents of the IARC classification) demonstrates that the policy demand can exist once awareness is corrected. The socioeconomic gradient suggests current information channels are reaching educated, higher-income populations while leaving the most at-risk communities behind.

Gaps and next steps

Online panel methodology may underrepresent populations with limited internet access, potentially *understating* awareness gaps. The warning label support question was asked after providing the IARC classification, which may prime responses. A UK parallel (WCRF 2023, n=2,000) found 57% of UK adults similarly unaware – suggesting the pattern is not US-specific and warrants comparable surveys in Canada, Australia, and EU member states.

8. Perceptions & Willingness to Reduce Meat Consumption Among Consumers in the United Arab Emirates: a Cross-Sectional Analysis

Cheikh Ismail, L. et al. *Frontiers in Sustainable Food Systems*, 10 (2026). · DOI: [10.3389/fsufs.2026.1622234](https://doi.org/10.3389/fsufs.2026.1622234)

KEY TAKEAWAY: *Despite moderate health- and environmental-related awareness, just 7% of UAE adults are strongly willing to reduce meat consumption, across most demographics. Consumer awareness campaigns are much less likely to drive dietary change than institutional food environment design & policy.*

About

Cross-sectional web-based survey of 1,371 adults across all seven UAE emirates (February–September 2023), assessing red meat consumption frequency, familiarity with sustainable diets, willingness to reduce meat intake, and preferences for alternatives. Convenience and snowball sampling via social media; bilingual (Arabic and English) instrument.

Key evidence

- **UAE's per-capita meat supply (~60 kg/person/year)** sits well above the global average (~44 kg), almost entirely sourced through imports.
- **Health was the dominant motivator** for meat reduction (49%) vs. environment (17%).
- Willingness showed no significant variation across 13 demographic variables (age, income, education, BMI, etc.), suggesting the **low-readiness profile may be diffuse**.
- Cultural norms (44%) and taste or familiarity (34%) outweigh cost and accessibility (21%) as the leading barriers to meat reduction.

Implications for food systems transformation

The absence of demographic predictors of willingness makes the case for shifting intervention focus away from targeted awareness campaigns toward food environment design (institutional procurement, cafeteria defaults, and halal-compliant plant-based availability). The UAE's Net Zero 2050 and National Food Security Strategy may provide openings for the inclusion of the structural food environment mechanisms required to move consumption meaningfully.

Gaps and next steps

Convenience sampling limits representativeness and the online format likely over-represents educated, digitally connected respondents. The study does not disaggregate UAE nationals from the large expatriate population, who have meaningfully different dietary cultures. Future work on institutional food environments - workplace, school, hospital catering - could directly address the structural intervention gap this study identifies.

9. “Conservation Agriculture: Helping to Return to Within Planetary Boundaries”

Rockstrom, J. et al. *Global Sustainability*, 9, e11, 1-27. DOI: [10.1017/sus.2025.10045](https://doi.org/10.1017/sus.2025.10045)

KEY TAKEAWAY: In 10 years, conservation agriculture (CA) has doubled in global adoption to 200 million hectares and could sequester 0.41–0.82 billion tonnes of carbon annually if scaled to all cropland. The paper's data reinforces a known asymmetry: 77% of agricultural land supports animal production, and only 23% is cropland.

About

Led by Johan Rockstrom (architect of the planetary boundaries framework) and Amir Kassam (University of Reading), this review synthesizes over 200 sources on how CA - zero-tillage, permanent soil cover, and crop diversification - can help shift agriculture from the single largest driver of planetary boundary transgression toward Earth system stability.

Key Evidence

- CA reduces on-farm fuel use for tillage by 50–70% and, in high-output systems, fertilizer applications by 50–70% over approximately a decade.
- On degraded soils, yield increases of 50–200%+ have been observed, but more research is needed here.
- In Brazil, rehabilitated land under CA has reached 85%+ of native soil organic carbon levels.
- Livestock integration “is not required to make cropping systems sustainable, and livestock is also not universally applicable everywhere, similar to permanent living roots.”

Implications for Food Systems Transformation

CA demonstrates what well-managed plant cropland already delivers: carbon sequestration, soil regeneration, and climate resilience. The paper references the EAT-Lancet Commission and mentions that reducing livestock production could further cut emissions, though it does not model the combined scenario: better plant agriculture methods paired with a shift in land allocation away from the vast amount currently supporting animal production.

Gaps or Next Steps

This is a narrative review without systematic methodology. The carbon sequestration estimates carry wide ranges (0.1–2 t C/ha/yr) dependent on full three-principle implementation. No scenario models what CA plus dietary transition would deliver.

Reports

10. CAP at the Crossroads: Reforming EU CAP Subsidies to Support Healthy Sustainable Diets

Foodrise. Policy report with original data analysis. London. · [Link](#)

KEY TAKEAWAY: EU beef and lamb received 580 times more public funding than legumes in 2020, while dairy received 554 times more than nuts and seeds, and CAP subsidies accounted for 96% of beef and lamb producer income. The case for reforming subsidies is increasingly about fiscal accountability, in addition to the large environmental and health externalities they create.

About

Original analysis of the Leiden University CAP subsidy dataset (Kortleve et al., 2025) that presents novel, granular food-type-level breakdowns of how 2020 EU CAP subsidies were distributed on a consumption basis. The authors attribute feed crop subsidies to the animal products they support to capture hidden subsidies that simpler, production-basis analyses miss.

Key evidence

- **Animal-sourced foods received an estimated 77% of farmer subsidies** – approximately €39 billion of €51 billion – in 2020, representing roughly 23% of the entire EU budget.
- Beef and lamb received **580 times more** than legumes (€8B vs. €14M); dairy received **554 times more** than nuts and seeds (€16B vs. €29M).
- EU subsidies accounted for an estimated 96% of beef and lamb producer income in 2020, demonstrating that EU meat markets are among the most heavily subsidized in the world.

Implications for food systems transformation

This report arrives at a critical moment: the 2028-2034 CAP negotiation is actively underway and trilogue negotiations are imminent. The 580x and 554x subsidy ratios are powerful data points that speak to the EU's agricultural subsidy misalignment. The 96% subsidy dependency figure powerfully counters the arguments of food system transformation critics that governments should not influence dietary choices – they already do through CAP spending. Denmark's Plant-Based Action Plan (covering incentives, eco-schemes, public procurement, dietary guidelines, and kitchen professional training) is the standout replicable national model cited.

Gaps and next steps

Modeling assumptions for feed allocation are not detailed in the report itself. The report gives limited attention to demand-side behavioral interventions and realistic political sequencing through current far-right political headwinds in the EU.

11. Impact and Dependence of Business on Biodiversity and Nature's Contributions to People

Jones, M., Polasky, S., Rueda, X. et al. IPBES Secretariat, Bonn (2026). · DOI: [10.5281/zenodo.15369060](https://doi.org/10.5281/zenodo.15369060)

KEY TAKEAWAY: Global finance flows harming nature outpace those protecting it by 33: 1 - \$7.3 trillion in global finance actively harms nature annually vs. \$220 billion directed toward conservation. Agriculture is among the highest-impact sectors and voluntary business action alone cannot achieve the transformative change required.

About

The first intergovernmental assessment dedicated to business and biodiversity and a full methodological assessment produced by IPBES - the biodiversity equivalent of the IPCC - approved by 150 member governments. Reviews how businesses can measure biodiversity impacts and dependencies, evaluates adequacy of current methods, and lays out enabling environment conditions required to align business incentives with biodiversity outcomes.

Key evidence

- In 2023, global finance flows with **direct negative impacts on nature totaled \$7.3 trillion** (approximately \$4.9 trillion in private investment and \$2.4 trillion in public subsidies to harmful sectors) vs. just \$220 billion supporting biodiversity conservation, a **33:1 ratio**.
- Agriculture, forestry, and fishing are identified among the sectors with the highest quantified direct biodiversity impacts globally. Since 1992, per capita human-produced capital has increased ~100% while **natural capital stocks have declined by nearly 40%**.
- **Fewer than 1%** of publicly reporting companies disclose biodiversity impacts. Business-driven action has historically occurred only when regulation has required it.

Implications for food systems transformation

The highest level of intergovernmental authority has acknowledged that current conditions make biodiversity destruction profitable and protection unprofitable - a structural feature, not a market imperfection correctable by disclosure. The harmful subsidy figure (\$2.4T public, \$4.9T private), combined with agriculture's identified high-impact status, directly reinforces the case for agricultural subsidy reform and even meat taxation (documented in last month's *Nature Food* studies). It also complements a key finding from Xiong et al. (page 8) that voluntary business action is insufficient for large change.

Gaps and next steps

The report identifies agriculture's role in land use change, pollution, and biodiversity loss throughout, yet doesn't connect these findings to dietary transition as a demand-side solution. The report provides global figures that mask significant regional variation, with Africa and Oceania explicitly flagged as underrepresented. Within-sector comparisons - beef versus plant-based protein production, for example - are absent. Several key action-relevant findings carry 'established but incomplete' confidence ratings and should be cited carefully.

12. Local Food Actions for a Cooler Future: 2025 Indicators Report

Sustainable San Mateo County (2025). County indicators report. [Link](#)

KEY TAKEAWAY: Food accounts for 17% of household emissions in San Mateo County, California – the third-largest source – yet only 3 of 19 local Climate Action Plans explicitly address plant-based diets. Municipal food service transitions face minimal resistance but widespread capacity gaps, pointing to a concrete progression model (education to resolution to procurement to ordinance) as a replicable pathway for institutional food systems change.

About

Mixed-methods report combining consumption-based emissions data (EcoData Lab/UC Berkeley CoolClimate Network), a systematic review of all 19 municipal Climate Action Plans, and wide-ranging stakeholder interviews make this one of the most comprehensive county-level analyses connecting food consumption emissions to local climate planning.

Key evidence

- **Animal-derived products account for 45% of at-home food emissions**, while livestock occupies 49% of county farmland but generates only 3% of agricultural market value.
- Consumption-based emissions in San Carlos are **more than 3x production-based emissions** – traditional inventories miss the majority of food-related emissions.
- Stakeholder interviews found minimal resistance to plant-forward initiatives but **widespread lack of awareness and limited staff capacity**.
- Documented peer-jurisdiction results include New York City's plant-based hospital default (50%+ patient acceptance, 36% reduction in food procurement emissions in year one) and Stanford's 25% serving spoon reduction (18% less meat, no decline in diner satisfaction).

Implications for food systems transformation

The finding that food's policy invisibility persists even in a progressive, climate-aware, high-capacity county like San Mateo strongly suggests this gap is universal – and structurally driven by the widespread use of production-based vs. consumption-based emissions inventories. High levels of willingness, coupled with low awareness and capacity, make this a clear-cut advocacy case to make to city councils and officials given how impactful information provision and capacity building can be. The progression model (education to council resolution to procurement standards to ordinance) documented here provides a replicable institutional change toolkit applicable to any municipality.

Gaps and next steps

The Climate Action Plan review documents commitments rather than implementation outcomes. A key next step is a systematic cross-jurisdiction study measuring actual emissions reductions from municipalities that have implemented food procurement standards, moving from the commitment evidence documented here to outcome evidence.

13. Balanced Proteins: State of the Category 2025

Food System Innovations. Industry category report (2026). [Link](#)

KEY TAKEAWAY: *The first comprehensive industry analysis of "Balanced Proteins" (red meat and poultry products with $\geq 30\%$ of animal ingredients substituted for plant-based or fermentation-derived alternatives) documents 65+ companies globally, a \$5.3 billion US addressable market, and institutional adoption across hospitals, universities, and major foodservice operators.*

About

Industry category analysis combines proprietary consumer research (Schaefer, n=4,201; YouGov, n=2,001), blind taste testing (NECTAR, n=1,192), partner-reported commercial case studies from 20 institutional operators, and investment tracking. Focused on red meat and poultry – the highest-emitting and most-consumed animal meats in the US – with select European examples.

Key evidence

- Institutional foodservice is the primary adoption channel, with **documented "silent transition" successes**: Vanderbilt University switched nearly 100% of ground beef to balanced formulations, projecting 854 tons of CO₂e savings; an Ivy League university reduced beef 40% campus-wide while saving \$0.60 per patty; the Dutch Grand Prix sold 29,000 balanced burgers in three days without disclosing the substitution. UK NHS, Disney, UCLA, Compass Group Australia, and Loews Hotels are among other adopters.
- In blind taste tests, **balanced protein category leaders matched or exceeded conventional meat** liking scores in 4 of 10 product categories. European retailers are normalizing the category through value pricing – Lidl Netherlands prices balanced beef 33% below conventional; Lidl Belgium reports 1 in 4 burgers sold are now balanced products.
- The consumer research shows 63-76% concept appeal when framed around taste, health, and familiarity, with health and sustainability scoring highest – but the top barrier is not concept rejection: 47% cite "no clear reason to buy," indicating a **value proposition communication failure vs. a product problem**.

Implications for food systems transformation

The report seeks to make the case that blended products are the most commercially advanced low-friction pathway for reducing meat's environmental footprint at institutional scale, with the "silent transition" cases demonstrating that operators can reduce beef 30-50% while maintaining satisfaction and reducing costs (and bypassing the consumer behavior change bottleneck). This positions institutional procurement – not consumer persuasion – as the near-term lever (reinforcing the procurement-based pathway documented in the Sustainable San Mateo County report on page 15). The category also offers meat producers a managed transition pathway that partially preserves existing assets.

Gaps and next steps

The report does not compare balanced products against fully plant-based alternatives on environmental metrics. Independent verification of institutional outcomes and head-to-head environmental comparison with plant-based alternatives are two high-priority evidence gaps.

News

Industry & Markets

- [Tesco reports plant-based food returning to growth in the UK](#) - the first time in several years - with growth attributed to protein, fibre, and whole food demand.
- [Oatly announces its first full year of profitable growth](#) as a public company.
- [Alt protein investment fell 20% in 2025](#), dropping below \$1B for the first time since 2018.
- [Cornell review](#) outlines how fungal fermentation can turn agricultural and food-processing waste into high-protein foods, framing a model where low-value byproducts become locally produced meat alternatives.
- [IPES-Food's "Head in the Cloud" report](#) exposes how AI and digital agriculture are concentrating corporate control and how "farming by algorithm" can undermine climate resilience and food sovereignty.

Policy & Institutions

- [France updated national dietary guidelines](#) to recommend limiting meat and increasing plant protein.
- [The UK government withheld key findings](#) from a commissioned report warning nature loss could wipe out 12% of GDP - more than twice the hit from the 2008 financial crash - with severe risks to food and water security creating potential for mass mortality events.
- [Canadian food industry lobbying secured exemptions](#) from Canada's new mandatory "High in" warning labels for dairy and ground meat products high in saturated fat and sodium.
- [Helsinki committed to a 50% plant-based target by 2030](#) through its "Better Half" campaign.
- Poland's Ministry of Health issued a [binding regulation](#) guaranteeing fully plant-based meals for all children in public schools and kindergartens.
- [NYC is the second-largest institutional food purchaser in the U.S.](#), behind the Department of Defense, and yet its procurement system still shuts out the producers it claims to support.
- [210 US doctors and researchers wrote an open letter](#) challenging new US dietary guidelines.
- [Canada: 160 healthcare professionals wrote a letter](#) calling for processed meats to be removed from schools and hospitals.
- [EU vote pending on banning meat-like terms](#) for plant-based products.

Health & Nutrition

- [A large retrospective study](#) in the Journal of Clinical Nutrition found no clinically meaningful differences in growth between vegan and omnivorous infants by age two.
- [The largest-ever cancer analysis](#) of vegetarian diets (1.8M people) linked vegetarian diets to lower risks for five cancers, and a higher colorectal risk in vegans, though the latter finding (based on 93 cases) is not statistically significant.
- The American College of Lifestyle Medicine [updated its dietary position](#) to recommend "whole food plant-predominant" diets as the standard for health.
- [Norwegian EAT Foundation to wind down](#) in 2026 while exploring new pathways for flagship initiatives.