

# The True Cost of Food: Transforming Food Systems with True Cost Accounting



## Why True Cost Accounting?

Creating sustainable food systems is key to tackling environmental degradation, social inequalities and health crises. The current global food system incurs significant hidden costs, caused by impacts including high levels of greenhouse gas emissions, biodiversity loss and diet-related diseases.

True Cost Accounting (TCA) is a systems approach that uncovers hidden costs in food systems and thereby assesses sustainability and equity in food production and consumption.

By offering a comprehensive understanding of the economic, environmental, health and social impacts involved, TCA can be used to guide political reforms and enhance policy outcomes. The method also supports data-driven decision-making, helping to identify priority intervention areas and pathways for transformational change.

## The four steps of True Cost Accounting:



**1 Illuminate** impacts and dependencies



**2 Measure** impacts and dependencies



**3 Evaluate** impacts and dependencies and estimates associated costs and benefits



**4 Communicate** results in an understandable way

## High-impact foods identified through TCA analysis

High-impact foods are those that contribute significantly to environmental, health and societal burdens, leading to high costs not included at the point of sale but borne by society later.

In the PLAN'EAT project, TCA analysis highlights red and processed meat—and, to a lesser extent, certain dairy products—as high-impact foods that are major drivers of greenhouse gas emissions and diet-related diseases, thereby incurring large hidden costs.

Meanwhile, plant-based foods generally have lower external costs and thereby can be considered low-impact foods. However, some frequently consumed plant-based products like cocoa, coffee and almonds also pose environmental and social challenges with associated hidden costs.

By reinforcing evidence on healthy and sustainable diets with actual costs for society, TCA provides a strong foundation for policy decisions that support the necessary transition.

## Key recommendations and levers for change

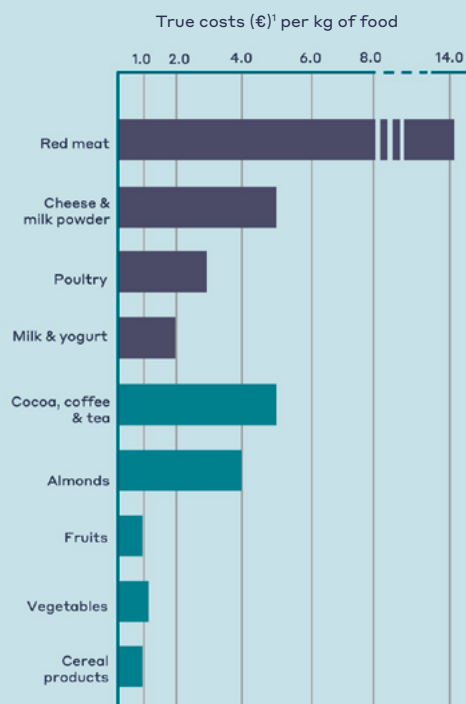
By implementing complementary regulatory, financial and information-based measures, policymakers can support and promote healthier, more sustainable diets. To enhance effectiveness, they should take a holistic approach that considers the connections between food, health, the environment and the economy.

The following recommendations illustrate how TCA can be integrated into measures to maximize impact.

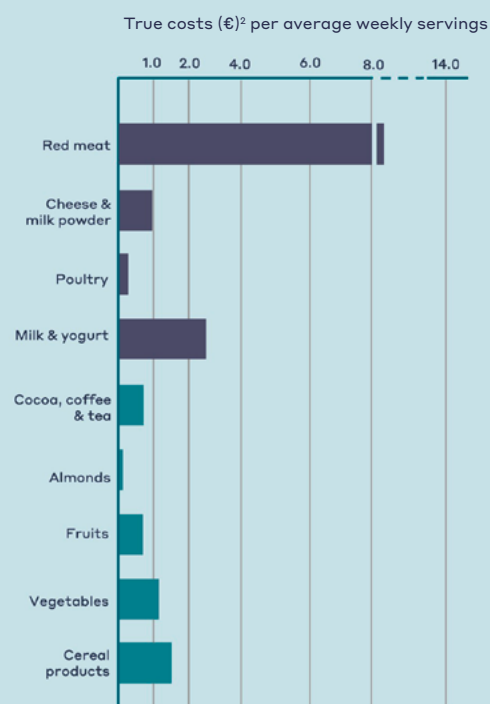
These recommendations primarily target policymakers and civil servants working in agri-food systems and related sectors—such as health, education, trade and economic policy—at EU, national and subnational levels.<sup>1</sup>

<sup>1</sup>To view the full list of recommendations, please refer to Anna Berlina, Leneisja Jungsberg, Louise Ormstrup Vestergård, Marlene Ohlau, Anthony Fardet and Olivia Riemer, "Recommendations and high impact areas for policy interventions," Deliverable 3.4 of the Horizon Europe PLAN'EAT project. Forthcoming.

## True costs of high- and lower- impact food items and groups



1. Calculated costs contain environmental costs (GHG emissions, water consumption, marine and freshwater eutrophication, terrestrial and freshwater ecotoxicity) and production-related health costs (health damage caused by ammonia emissions and emissions to air, soil, and/or water contributing to human toxicity).



2. Data on weekly servings are exemplary for Germany and based on EFSA (2022) and NVSII (2008) data.



# Policy recommendations to support the transition towards sustainable and healthy diets

## Overarching principles for holistic policy and intervention design

- Employ TCA as a systems approach
- Facilitate context-specific adaptation of policy measures

## Recommendations categorized by policy instruments

### Regulatory measures

- Incorporate TCA perspectives in public procurement
- Regulate marketing of high-impact foods
- Revise accounting standards for governments and businesses
- Align trade policies with sustainability goals
- Advocate for TCA-based global trade standards
- Enforce food waste prevention as a priority

### Fiscal and financial measures

- Adjust food pricing based on different TCA-informed models
- Introduce fiscal incentives for sustainable production
- Leverage sustainable finance mechanisms by incorporating Environmental, Social, Governance (ESG) criteria into investments
- Provide economic support to farmers transitioning to agroecology
- Allocate financial support for plant-based proteins and sustainable food innovation

### Information-based measures

#### 1. Information efforts

- Incorporate TCA into national dietary guidelines
- Promote healthy and sustainable diets:
  - Promote reduced consumption of red/processed meat and dairy
  - Promote minimally processed foods and plant-based protein sources
  - Promote increased variety of foods
  - Advocate for sustainable certifications

#### 2. Educational efforts

- Integrate a holistic sustainability approach into school food and nutrition curriculum
- Equip teachers with knowledge and skills to promote informed, healthy and sustainable food choices
- Foster adult education (including parents) on food nutrition and sustainability

#### 3. Increased supply chain transparency

- Explore integrating the true costs of food into food labelling

## Way forward

Building a resilient, equitable and environmentally responsible food system requires coordinated efforts from policymakers, industry and consumers across all governance levels, while clear, accessible information is essential for informed decision-making. TCA facilitates an integrated approach combining regulation, financial support, education and consumer empowerment, all of which is key to building a food system that prioritizes public health, environmental sustainability and social equity. Furthermore, enhancing the effectiveness of TCA in policymaking requires future research focused on expanding primary data collection, developing standardized methodologies, and improving consumer transparency through true-cost pricing models.

## About the project

PLAN'EAT is a Horizon Europe project that seeks to facilitate the transition towards healthy and sustainable dietary behaviour through an in-depth understanding of the underlying factors and drivers and the development of innovative, effective recommendations, tools and interventions addressing different agri-food system actors. PLAN'EAT aims to implement a systemic approach at the macro (food system), meso (food environment) and micro (individual) levels. Various socio-cultural and geographic contexts across Europe will be considered by implementing nine living labs in different European areas, five pan-European food value chain consultation and working groups, and national and pan-European policy labs. As part of a consortium of 24 partners, TMG is leading work on True Cost Accounting (TCA) to analyze the environmental, socio-economic and health impacts of European diets and their associated costs. This component of the project includes:

- analyzing the availability of TCA data
- developing a database of the impacts and true costs of 2,000+ food products consumed in Europe
- assessing the true costs of three different European dietary patterns
- providing recommendations for using TCA for holistic food systems policy and the development of national dietary guidelines

This policy brief is based on the forthcoming Deliverable 3.4 of the PLAN'EAT project: Anna Berlina, Leneisja Jungsberg, Louise Ormstrup Vestergård, Marlene Ohlau, Anthony Fardet and Olivia Riemer, "Recommendations and high impact areas for policy interventions" (to be published in late 2025).

The synthesis report summarizes key evidence of the sustainability challenges associated with European diets, in relation to health, the environment and social issues, and to provide overarching recommendations of what can be done in these domains to move towards more sustainable diets. It integrates key findings from the contributions of several working groups and three project internal reports, based on a series of literature reviews and modelling studies with regional details, while also integrating international dietary recommendations for human and planetary health. The reports provide country-specific analyses of environmental and health impacts and outline the linkages between food consumption and social sustainability in EU member states.

The overarching goal is to provide a holistic picture of the impacts of prominent dietary patterns in the EU and to provide guiding principles for healthy and sustainable diets, helping to create clearer direction for consumers, policymakers and food professionals for the necessary dietary transition. The report is part of the PLAN'EAT project's efforts to enable European stakeholders to identify hidden positive and negative impacts along the food value chain and transform economic systems in the long term by providing (policy) recommendations on how to reduce and eventually internalize negative externalities (via True Cost Accounting).



### TMG – Think Tank for Sustainability

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