TITAN

Transparency solutions for transforming the food system

Summary of interesting publications on topics relevant to the TITAN project

May 2025

ENABLING INFORMED CHOICES BY CONSUMERS

Publications

ARTICLE

Springe Nature

A political economy analysis of the legislative response to unhealthy food and beverage marketing in Chile, Canada and the UK

United Nations bodies call for legal responses to restrict children's exposure to unhealthy food marketing; however, few governments have introduced legislative controls. This research studies the underlying political economy influences that impacted the introduction of legal responses.

ARTICLE

Science Direct

Healthy labels, healthy portions? The impact of favorable nutri-scores on consumers' portion size selection and food intake

While front-of-pack labels have been found to positively impact purchase intentions and food choices, their potential negative impact on portion sizes and food intake remains understudied. The research focused on the Nutri-Score, a front-of-pack label that summarizes the nutritional quality of foods with a five color-letter combination.

JOURNAL

The Lancet

Lobbying, transparency and trust: power imbalances and the failure to implement Europe's Beating Cancer Plan

In the Prevention Pillar of Europe's Beating Cancer Plan (EBCP), the European Commission made a series of commitments to promote better health for all, including proposals for new legislation on food and alcohol labelling. However, the implementation of these commitments has been paralysed.

ARTICLE

BMC Public Health

Process evaluation of Project Daire: a food environment intervention that impacted food knowledge, wellbeing and dietary habits of primary school children

Project DAIRE was a randomised-controlled, factorial design trial which aimed to improve children's health-related quality of life, wellbeing, food knowledge and dietary habits via two multi-component interventions: Nourish and Engage.

ARTICLE

Science Direct

Does label information reflect product properties? A Swiss case study of plant-based milk alternatives

The first aim of this study was to investigate the number and types of front-of-pack labels for plant-based milk alternatives in the Swiss market.

ARTICLE

Nature Food

Global food retail environments are increasingly dominated by large chains and linked to the rising prevalence of obesity

Here they examine trends in retail food environments from 2009 to 2023 across 97 countries, exploring associations with changes in obesity prevalence.

ARTICLE

The Conversation

The 'sustainable' cod in your shopping basket may be no such thing – new study reveals mislabelling

Cod sold in some European supermarkets is being mislabelled and is actually fished far from its claimed origin, according to a new study. We sampled cod sold in Germany, Spain, France and the UK and found that about 30% of it originated in a different location.

ARTICLE

Annual Reviews

Food Fraud: Causes, Consequences, and Deterrence Strategies

This review presents the conditions that enable fraudulent activity in agri-food supply chains (such as asymmetric information, imperfect certification processes, supply chain complexity, and weak monitoring and enforcement systems) and discusses recent efforts to document and deter food fraud and the growing theoretical and empirical literature on the economics of food fraud.

ARTICLE

Nature Food

Updated nutrient profiling system underlying nutri-score (Uns-Nps) and colorectal cancer risk

This study investigated the association between the updated Nutrient Profiling System (uNS-NPS), underlying Nutri-Score, and Colorectal Cancer (CRC) risk.

PAPER

OECD

Developing food labels for improved health outcomes

Simplified nutrition labelling policies provide supplementary nutritional information in an easy-to-understand label displayed on food products at the front-of-pack. Insights into simplified nutrition labelling policies.

ARTICLE

EFSA

FFRAUD-ER: Development of a computational model for identifying Food Fraud incidents as drivers for Food Safety Emerging Risks

The primary objective of this project was the development of a computational model aimed at identifying food fraud incidents as drivers for food safety emerging risks, in alignment with EFSA's activities on environmental scanning.

ARTICLE

Science Direct

Goal-framing theory and sustainable food choices: Leveraging spillover to activate moral goals

This scenario-based survey experiment with 669 consumers tested whether an environmental message between lunch and dinner would increase stated plant-based dinner choices.

ARTICLE

Science Direct

Does TikTok contribute to eating disorders? A comparison of the TikTok algorithms belonging to individuals with eating disorders versus healthy controls

TikTok employs sophisticated algorithms to deliver users increasingly personalised content over time. We investigated the potential for these algorithms to exacerbate eating disorder symptoms by analysing 1.03 million TikTok videos delivered to 42 individuals with eating disorders (76 % anorexia nervosa) and 49 healthy controls over one month.

PAPER

Sage Journals

Can social media be used to increase fruit and vegetable consumption? A pilot intervention study

The current pilot study aimed to investigate whether exposure to healthy eating (vs. control) social media accounts can shift normative perceptions about what others eat, eating intentions and self-reported food consumption.

ARTICLE

Cambridge University

Complementarity between the updated version of the front-of-pack nutrition label Nutri-Score and the food-processing NOVA classification

The objective of the study was to compare the initial and the updated versions of the front-of-pack label Nutri-Score (related to the nutritional content) with the NOVA classification (related to the degree of food processing) at the food level.

ARTICLE

BEUC

Better safe than sorry

BEUC position paper on how to keep children safe online in the EU.

Reports

REPORT

INFORMAS Canada

2025 INFORMAS Canada report

The 2025 INFORMAS Canada report aims to benchmark the status of food environments in Canada and identify the most significant gaps where food environments do not support healthy eating, thereby identifying areas for strengthening policy. The report also examines how food environments in Canada may contribute to improving or exacerbating dietary and health inequities.

REPORT

University of Hertfordshire

A methodological review of UK food ecolabels

This report is a methodological review of food ecolabels that are currently operating or are expected to operate in the UK.

REPORT

EHL

Food and Well-being 2025

This report analyzes emerging consumer behaviors and actionable strategies to help hospitality players align their operations with evolving market dynamics while promoting health, sustainability and community engagement.

SUPPLY CHAIN SUSTAINABILITY

Publications

REPORT

Planet Tracker

Food Giants & Fertiliser Risk: A call for greater corporate disclosure

In this report, Planet Tracker searched the company filings of 45 of the largest food system companies globally (with aggregate revenues of USD 2.6 trillion) for evidence that food producers (upstream), manufacturers (midstream), and food retailers (downstream) are highlighting fertiliser-related risks to investors and other stakeholders.

ARTICLE

Nature Food

Climate change threatens crop diversity at low latitudes

Analyses of future potential food crop diversity have been limited to a small number of crops. Here we project geographical shifts in the climatic niches of 30 major food crops under 1.5–4 °C global warming and assess their impact on current crop production and potential food crop diversity across global croplands.

ARTICLE

MDPI

Driving Sustainability: Circular Bioeconomy and Governance in Andalusia (Southern Spain)

Environmental degradation remains an increasingly urgent challenge, leading to focused debates at the Rio+20 conference (2012) on how to operationalise sustainability. This conference's central theme was the green economy and the role of institutions in driving the transition to a more sustainable model.

ARTICLE

Science Direct

Integrating nutrition into environmental impact assessments reveals limited sustainable food options within planetary boundaries

he aim of this study was to integrate nutritional aspects in the assessment of environmental sustainability of food products against the planetary boundaries.

ARTICLE

Science Direct

Optimising agri-food supply chains: Managing food waste through harvest and side-stream valorisation

Focusing on side-stream valorisation strategies within food processing facilities, this research develops a mixed-integer optimisation model to support decision-makers in determining an optimal product portfolio and processing configuration.

Reports

REPORT

WRI

Growing Resilience: Unlocking the Potential of Nature-Based Solutions for Climate Resilience in Sub-Saharan Africa

This report analyzed nearly 300 nature-based solutions (NBS) projects across sub-Saharan Africa from 2012 to 2023.

REPORT

PAI

Sustainability report

This year's Sustainability Report illustrates how they are refining our approach to sustainability in response to change.

REPORT

OECD

Measuring Carbon Footprints of Agri-Food Products

What would it take to achieve widespread and reliable information on carbon footprints of agri-food products? This report argues that eight building blocks are essential.

REPORT

planA

Return on investment of decarbonization

This whitepaper explores the business case for decarbonisation, the decarbonisation market potential, the challenges of decarbonisation, transitioning to a decarbonised economy, and the future outlook.

REPORT

BCG

Why Investing in Climate Action Makes Good Economic Sense

Without the investment necessary to limit further global warming, the economic growth and resilience on which the world relies will be severely diminished along with societies' ability to achieve their broader goals. This analysis suggests that the cumulative economic output could be reduced by 15% to 34% if the global average temperature is allowed to rise by 3°C by 2100 rather than being limited to below 2°C.

REPORT

Watershed

The State of Corporate Sustainability 2025

This report seeks to arm companies with the information they need to make smart investments in sustainability— right now, in this unique time.

REPORT

WMO

State of the Global Climate 2024

Authoritative scientific information and knowledge is necessary to inform decision-making in our rapidly changing world, and this report provides the latest science-based update on the state of our knowledge of key climate indicators.

REPORT

Interreg North Sea

The Green: Your Guide to Sustainable & Thriving Retail Practices

In this handbook, you'll find inspiring case studies, practical tips, and even a tailored toolkit designed to empower you as a local changemaker.

REPORT

Marine S. Council

Small Pelagics Yearbook

This Yearbook provides analysis of the global market for these species and outlines the challenges they currently face, such as the impacts of climate change and disagreements over quotas.

REPORT

Elucid

Elucid Annual Report

In just three years, Elucid has improved healthcare access for thousands of farmers and their families, strengthening health and financial security by integrating health into global supply chains.

REPORT

EEB

EEB assessment on agriculture in the EU National Energy and Climate Plans (NECPs)

EEB assessment on agriculture in six final EU National Energy and Climate Plans (NECPs).

REPORT

Planet Tracker

Brazil's Fertiliser Risks: Identifying innovation and investment opportunities

This report examines the climate and nature impacts of Brazil's 2022 National Fertiliser Plan (Plano Nacional de Fertilizantes or PNF).

REPORT

Marine S. Council

Sustainable Tuna Yearbook 2025

Released to coincide with World Tuna Day (May 2), the second tuna yearbook offers an authoritative analysis on the world's market for sustainable tuna.

DEVELOPMENT & IMPLEMENTATION OF NEW TECHNOLOGIES

Publications

ARTICLE

MDPI

Spectroscopy, a Tool for the Non-Destructive Sensory Analysis of Plant-Based Foods and Beverages: A Comprehensive Review

In this review, NIR and imaging-based techniques coupled with chemometrics based on artificial intelligence and machine learning for sensory evaluation are documented.

ARTICLE

Science Direct

Innovation and technology for achieving resilient and inclusive rural transformation

This paper examines the shifts needed in the development, adoption and scaling of innovation and technology to achieve resilient and inclusive rural transformation across farming systems and value chains.

ARTICLE

Science Direct

Importance of malaxation conditions to virgin olive oil polar phenolic compounds content

This review highlights recent technological advances in VOO extraction, particularly the impact of malaxation on PPCs.

ARTICLE

UiT Munin

Algorithmic Governance for Food Supply Chain Transparency: an Umbrella Review

This study reports findings from an umbrella literature review of empirical research on digital technology for transparency in food supply chains.

ARTICLE

Wiley

Nutritional intelligence in the food system: Combining food, health, data and AI expertise

This article describes existing examples of NI within the food system and future opportunities.

ARTICLE

Springer Nature

Knowledge flows in industry 4.0 research: a longitudinal and dynamic analysis

This study meticulously analyzes 10,176 articles to investigate the thematic evolution and knowledge transfer mechanisms within Industry 4.0.

ARTICLE

Science Direct

Economic evaluation of lettuce traceability systems in mitigating foodborne illness risks

Foodborne illnesses in fresh produce markets pose a significant public health risk. Although traceability systems are recognized for their potential to mitigate contamination impacts, the economic benefits of such systems remain underexplored. This study addresses this gap by evaluating the value of traceability in managing foodborne illness outbreaks using lettuce as a case study.

Reports

POLICY BRIEF

Lisbon Council

Achieving the Digital Double Dividend

this policy brief starts off by describing why govtech is crucial to addressing some of Europe's fundamental challenges. It then provides an in-depth analysis of the GovTech4All pilots to extract lessons learnt. Finally, it identifies eight priority actions.

REPORT

Quantum Technologies: Key Strategies and Opportunities for ICT Leaders

WEF

In collaboration with Accenture, the report Quantum Technologies: Key Strategies and Opportunities for ICT Leaders outlines the benefits and addresses the risks, offering potential solutions by case studies and policy frameworks based on industry case studies and expert insights.

REPORT

Climate Collective

Indigenous Peoples and Data Sovereignty

IPs are often marginalized in research, technology development, and data interpretation, relegated to low-level roles, or tokenized in FPIC processes, community engagement, and capacity building.

REPORT

TU Delft

EU Deforestation Regulation, challenges for businesses and authorities and the potential role of Digital Product Passports and Digital Infrastructures

This paper provides an overview of some current developments, reports, and pilots related to Digital Product Passports.

TAKING THE FOOD SYSTEM APPROACH

Publications

ARTICLE

Climate Farmers

European Agrifood Systems Map

The purpose of this systems map is to illustrate key dynamics that shape the agrifood systems' behaviour, and lock it into producing undesirable societal and environmental outcomes.

ARTICLE

EU

Unlocking the full potential of behavioural insights for policy

This report examines the transformative role of behavioural insights (BI) in EU policymaking, advocating for integrating BI early in the policy cycle to enhance policy effectiveness.

ARTICLE

EU

A quest for questions: The JUSTRA as a matrix for navigating just food system transformations in an era of uncertainty

This perspective proposes the just transformation matrix (JUSTRA), which integrates justice and transformation concerns using an interrogative approach.

PAPER

Wiley

Grassroots Initiatives as Political Actors: Scaling, Captureand Constituency in Food Policy Councils

This paper argues that understanding how GIs achieve this impact requires viewing them as political actors and recognising multi-stakeholder governance platforms as inherently political spaces.

PAPER

EFSA

Translating data into policy informing decisions: current and future perspectives from the European Food Safety Authority (EFSA)

This paper provides insights into EFSA's data-related activities and future perspectives in different key areas of EFSA's 2027 strategy.

ARTICLE

Science Direct

Integrating sustainability into helix models for eco-innovation: The eco-5HM

A systematic review of 153 publications linking helix models with sustainability was conducted to provide an overview.

ARTICLE

Wiley

Framing just transition: The case of sustainable food system transition in Finland

This paper analysed how stakeholders frame justice in deliberating policy measures needed to support just transition in agricultural land use and dietary changes, the cornerstones of building healthier and climate friendlier food systems in Finland.

ARTICLE

Science Direct

Global analysis reveals persistent shortfalls and regional differences in availability of foods needed for health

This study traces historical and projected changes in global food systems toward alignment with the new Healthy Diet Basket (HDB) used by UN agencies and the World Bank to monitor the cost and affordability of healthy diets worldwide.

Reports

REPORT

WHO

In brief: risk assessment of food allergens: priority food allergens

The Risk Assessment of Food Allergens Part 1: Review and Validation of the Codex Alimentarius Priority Allergen List Through Risk Assessment provides a structured, quantitative assessment framework and recommendations for which foods should be included in a global priority list of food allergens.

REPORT

OECD

Public Policy Evaluation: Implementation Toolkit

This OECD toolkit on public policy evaluation offers practical guidance for government officials and evaluators seeking to improve their evaluation capacities and systems, by enabling a deeper understanding of their strengths and weaknesses and learning from OECD member country experiences and trends.

REPORT

EEA

European Climate Risk Assessment

The first European Climate Risk Assessment (EUCRA) identifies 36 climate risks that pose a threat to Europe's energy and food security, ecosystems, infrastructure, water resources, financial stability, and people's health.

REPORT

U. of Reading

Regulatory Tools for a Healthy and Sustainable Diet

The report aims to chart the regulatory tools that exist in the UK, and those that could be used from elsewhere, to transform the UK food system to one which is both healthy and sustainable.

REPORT
CGIAR

Accelerating innovation and impact in EU-Africa collaboration for sustainable food systems

This policy brief focuses on the critical importance of fostering the uptake and impact of research and innovation (R&I) in agrifood systems, particularly within the context of EU-Africa collaboration.

REPORT
EIT Food

Innovation Impact Report

An initial benchmark of EIT Food's contribution to created benefits with a focus on climate change and healthcare cost mitigation.

REPORT
GLOBE

Assessment of local government policies for creating healthy, equitable and environmentally sustainable food systems

The purpose of this document is to provide guidance in implementing the Local Food Systems Policy Index (Local Food-EPI+) tool and process. It is intended for use by local governments in Australia.

ARTICLE
IEEP

From Farm to Fork: Policy actions for sustainable and healthy EU diets

This policy brief explores the most effective demand-side interventions, drawing on existing evidence and the recommendations of the Strategic Dialogue, to outline key priorities for action at both the EU and Member State levels.

REPORT
One Planet

Titans of Industrial Agriculture

How a small handful of giant transnational corporations has come to dominate the farm inputs sector, why it matters, and what can be done about it.

PAPER
Agora Agriculture

Towards food policies that support healthy and sustainable consumption

This policy paper aims to inform national policymakers in the Member States and at EU level about the potential of demand-side food policies.

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